



# BOYD COUNTY STRATEGIC TECHNOLOGY PLAN

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## **A. Executive Summary**

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### **Purpose**

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

### **Summary**

Boyd County’s e-Community Leadership Team is leading the way into a new economy for Boyd 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 44<sup>th</sup> in its proportion of high-tech companies, 45<sup>th</sup> in household computer use, and 43<sup>rd</sup> 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 Boyd 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 Boyd 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 Boyd 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 Boyd County by 2007.

ConnectKentucky recommends that Boyd 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 Boyd 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 Boyd 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](http://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](http://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](http://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**

Boyd County businesses and industries employ a total of 35,986 workers.

The leading industries by employment are:

1. Services with 14,823;
2. Trade, Transportation and Utilities with 8,363; and
3. Manufacturing with 3,434 employees.

The leading employers in Boyd County are:

1. KDMC (King's Daughters Medical Center) 3,400
2. Marathon Petroleum, LLC 1,047
3. AK Steel 1,042

### **The Assessment**

- **Networked Places** – In the category of networked places, Boyd County's business and industry sector is currently at stage 3 on a 0 to 5 scale with most office workers having always-on connections to the Internet at their desks, and some mobile workers having laptop computers and accessing the office network remotely.
- **Applications and Services** – In the area of technology applications and services, the business and industry sector is currently at stage 4 on a 0 to 5 scale with some businesses outsourcing most of their computer services and some employees working remotely.
- **Leadership** – In terms of technology leadership within the business community, Boyd County is currently at stage 2 on a 0 to 5 scale where some view the Internet as essential to business operations and employees are trained on basic operations.

### **The Vision**

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

- Some businesses use **Voice over Internet Protocol (VoIP)** to save money
- Some office workers have converted from desktop computers to **portable devices**
- Some office computers have webcams for **videoconferencing**
- 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 permit some employees periodically to **telework**
- Some businesses encourage employees to take **work-related classes offline**
- Employee training on **new technology** is a **priority**

## **K-12 EDUCATION**

**Ashland Independent Schools**, <http://www.ashland.k12.ky.us>, had a district enrollment of 3,163 students during the 2004-2005 school year. The mission of the Ashland Independent School District, as a standard of excellence in Kentucky and the nation, is to ensure for each student a globally comprehensive education in a positive, nurturing environment which provides individualized learning opportunities, produces responsible citizens and instills a desire for life long learning through quality instructional programs, sound fiscal management, visionary leadership and a partnership involving home, school and the community.

Ashland Independent Schools has a current enrollment of approximately 3,200 students in Kindergarten through Grade 12. They also have a preschool program that currently serves approximately 160 students. There are eight schools in the district: one high school, one middle school and six elementary schools. The district also operates an alternative school (Ashland Central School) that targets troubled and at-risk students in grades 7 through 12. Paul G. Blazer High School and George M. Verity Middle School are accredited by the Southern Association of Colleges and Schools. In an ongoing effort to include families in their children's education, our schools offer services via the Ashland Family Resource Center (Crabbe/Hatcher), The South Ashland Family Resource Center (Charles Russell, Oakview, Poage) and the Ashland Youth Services Center (Blazer/Verity).

	<b>Attendance Rate</b>	<b>Retention Rate</b>	<b>Dropout Rate</b>	<b>Graduation Rate</b>	<b>College</b>	<b>Military</b>	<b>Work</b>	<b>Voc/Tech Training</b>	<b>Work &amp; Part-Time School</b>	<b>Not Successful</b>
<b>District</b>	94.5%	1.9%	2%	87%	66.1%	2.8%	19.8%	4.4%	5.6%	1.2%
<b>State</b>	94.3%	3.3%	2.2%	81.5%	54.7%	2.6%	27.5%	4.8%	6.4%	4%

The Ashland Independent School District considers itself to be a leader in the use of technology to support teaching and learning in the classroom. Technology permeates our district with over 1,200 computers with Internet and e-mail access available in every classroom. With approximately 3,200 students in the district, Ashland Independent Schools continue to make technology an integral part of the curriculum with instructional software in all grades. This creates an environment where teachers and students become more proficient in using a wide variety of tools to enhance skills such as problem-solving, communication, collaboration, productivity and creativity. In addition, the hope is to strengthen the home-school connection by expanding district and school websites with detailed information about school activities and by making technology available to families and the community. Currently, the middle and high schools have online availability for parents through Internet Information On Demand or IIOD. Using IIOD, parents can access their child's school records on the Internet with a private ID number to view attendance, grades and homework assignments. The district also prides itself in having Project Venture, an aggressive approach to professional development that focuses on technology integration strategies through a special program for teachers.

	<b>Spending per Student</b>	<b>Student Teacher Ratio</b>	<b>Student/Computer Ratio</b>	<b>% of Classrooms with at Least One KETS Workstation With Internet Access</b>
<b>District</b>	8494	16:1	3.8:1	100
<b>State</b>	8663	16:1	3.7:1	100

**Fairview Independent Schools**, <http://www.fairview.k12.ky.us>, had a district enrollment of 746 students during the 2004-2005 school year. The Fairview Independent School District is located on the Ohio River and the western edge of Boyd County, bounded on the east by the City of Ashland and on the west by Greenup County. It encompasses a residential area, collectively known as Westwood which has no incorporated local government, but rather comes under the authority of the County Judge Executive and the Commission. The district is populated with approximately 4,300 residents.

The school enrolls students in preschool through grade 12. Students in preschool through grade 5 are housed in Fairview Elementary School, which opened in December of 2000. The elementary school offers Extended School Services and a cultural and tutoring program through its "Cool Camp" until 6:00 each evening. Cool Camp is made possible through the district's 21st Century Learning Center Grant. Fairview Elementary is recognized as a National Core Knowledge School.

Fairview High School serves students in grades 6 through 12. Students and parents in the school system are served by a combination Family Resource/Youth Service Center, which maintains an office at each school site. Fairview Elementary School, Fairview High School and the Fairview Independent District are all accredited by the Southern Association of Schools and Colleges.

	Attendance Rate	Retention Rate	Dropout Rate	Graduation Rate	College	Military	Work	Voc/Tech Training	Work & Part-Time School	Not Successful
<b>District</b>	94%	1.8%	0.6%	92.3%	66.7%	2.1%	20.8%	4.2%	4.2%	2.1%
<b>State</b>	94.3%	3.3%	2.2%	81.5%	54.7%	2.6%	27.5%	4.8%	6.4%	4%

At the elementary level, technology is used in the classroom for the Accelerated Reader Program, Writing Portfolio Instruction and as part of the regular classroom instructional day. The school has a computer lab, where younger students are taught keyboarding and older students are given a variety of activities involving the core content. PowerPoint presentations are used with the staff for PD activities and teachers and students use PowerPoint activities in the classroom. A+ Curriculum Software was purchased to provide extended instruction via technology in core content areas.

The use of technology at Fairview High School is increasing. Specialized software is provided for both individual and classroom instruction. Students make daily use of networking, word processing, Internet, professional design and graphics programs, as well as online research databases, the Kentucky Virtual Library and other specialized software in both core content and technology-based courses. Students frequently use Microsoft Office applications to create spreadsheets, a school newspaper, brochures and multimedia presentations. Students also make use of graphing calculators, online career exploration programs and digital cameras. Professional development in using technology to teach is provided regularly for faculty, as efforts are being made to meet the Kentucky Department of Education's technology standards for both students and teachers.

	Spending per Student	Student Teacher Ratio	Student/Computer Ratio	% of Classrooms with at Least One KETS Workstation With Internet Access
<b>District</b>	7978	16:1	4.1:1	100
<b>State</b>	8663	16:1	3.7:1	100

**Boyd County Schools**, <http://www.boyd.k12.ky.us>, had a district enrollment of 3,294 students during the 2004-2005 school year. The Boyd County Public School District serves approximately 3,300 students in preschool through grade 12. The district includes four elementary schools, one middle school, one high school and an alternative middle/high school educational program in collaboration with the Ramey-Estep Home (a private, non-profit Family and Children Service Organization.) Preschool programs are provided in three district schools. It is available for three and four year old children who meet eligibility requirements for Head Start and for Kentucky Preschool. Special education classes and gifted/talented programs across the curriculum further enhance the instructional climate.

Boyd County Public Schools are committed to excellence in teaching and learning. The district's teachers, principals and parents work together to create learning communities that meet high standards and provide quality opportunities. They hold high expectations for all students which is reflected in their mission statement, which is: "In partnership with and dedicated to serving our community the Boyd County Public School District will ensure that all students acquire knowledge, skills, and understanding to empower them to make appropriate life choices."

	Attendance Rate	Retention Rate	Dropout Rate	Graduation Rate	College	Military	Work	Voc/Tech Training	Work & Part-Time School	Not Successful
<b>District</b>	93.8%	1.8%	1.2%	88.1%	51.2%	3.8%	23.2%	5.7%	9%	7.1%
<b>State</b>	94.3%	3.3%	2.2%	81.5%	54.7%	2.6%	27.5%	4.8%	6.4%	4%

Technology is integrated into all aspects of the curriculum in Boyd County Public Schools. School-level Technology Coordinators, Library/Media Specialists and district staff work together to provide faculties and students with technical assistance in a variety of resources including software programs in all content areas, Internet research tools and multimedia productions. Students access computers through the library, individual classrooms and computer labs on a regular basis with the emphasis on using computers as tools for learning and for the communication of learned information. Students may join the Student Technology Leadership Program (STLP) to enhance their skills and to learn more about technology applications, uses and careers. BCHS also offers vocational courses in technology including computer applications, networking, webpage design and drafting.

	Spending per Student	Student Teacher Ratio	Student/Computer Ratio	% of Classrooms with at Least One KETS Workstation With Internet Access
<b>District</b>	10371	13:1	4:1	100
<b>State</b>	8663	16:1	3.7:1	100

Private schools in Boyd County include:

- Rosehill Christian
- Holy Family
- Calvary Christian

### **The Assessment**

In its evaluation, the Boyd 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, Boyd 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. In addition, 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. Some schools have an interactive website that offers access to homework assignments, and e-mail contact with teachers and administrators
- **Leadership** – In terms of technology leadership within the education sector, Boyd County is currently at stage 3 on a 0 to 5 scale where the school board sees opportunities to use the network to raise test scores and operate the school more efficiently.

### **The Vision**

The Boyd 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 Boyd County eCommunity Leadership Team include reaching stage 4 in the category of networked places as well as moving to stage 5 in the applications and services category and the leadership category. The vision includes:

- Some high schools 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
- Schools use the network to connect students, teachers and parents, improve learning via **online resources** and manage administrative responsibilities more efficiently
- All students meet grade level requirements in the **National Educational Technology Standards**
- **Technology training** is offered in the community
- Many high school students **use online teachers** and experts to explore subjects and execute individual learning plans
- All schools have **comprehensive plans** for learning activities **utilizing technology** in the classroom
- School districts actively **promote information technology literacy** to drive positive impacts on economic performance, skills and innovation in the classroom
- The school system plays a vital role in raising the **skill level and awareness of community** and family members

## **HEALTHCARE**

King's Daughters Medical Center (KDMC) is a not-for-profit, 385-bed regional referral center in Ashland, Kentucky, offering comprehensive cardiac, medical, surgical, pediatric, rehabilitative, psychiatric, cancer, neurological, pain care, wound care and home care services. In 2005 and 2006, Solucient, a leading information products company serving the healthcare industry, named KDMC one of the nation's top 100 hospitals.

### **Assessment**

The Boyd 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, Boyd County's healthcare sector scored a 2 on a 0 to 5 scale with some doctors regularly using computers to enter and maintain patient records. Additionally, digital instruments and imaging equipment are being acquired.
- **Applications and Services** – In the category of technology applications and services, the healthcare sector scored a 4 on a 0 to 5 scale. Most providers store patient records electronically, and some lab results and images are received electronically.
- **Leadership** – In terms of technology leadership within the healthcare community, Boyd County scored a 5 on a 0 to 5 scale. Healthcare leaders see themselves as a key part of the community's overall economic strategy, and leaders are visible and active in strategy development and implementation.

### **Vision**

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

- Most equipment has been converted to **digital**
- Desktop **videoconferencing** is routine at all hospitals and major clinics
- Telephone systems have converted to **Voice over Internet Protocol (VoIP)** to save money
- **Remote monitoring of patients** with chronic conditions is standard procedure.
- All providers allow patients to schedule appointments, view records and get advice online. All **patient records** are **stored electronically** and routinely sent electronically to distant providers to aid diagnosis and treatment for emergency patients
- **Telemedicine** routinely is used to access specialists
- **Wireless feeds** in ambulances provide real-time patient assessment to ER staff
- Healthcare leaders see themselves as 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**

The Boyd County Public Library's website, <http://www.thebookplace.org/>, provides contact information, an online catalog, upcoming events and location information. Teen Tuesday is just one of many exciting programs at the Boyd County Public Library. Teen Tuesdays is a new program created especially for area youth ages 13 to 17. Teen Tuesdays is a fun, informational program where activities, along with food, are planned and featured each month. Another exciting program for area youth is the "Heard a Good Book Lately?" project, which allows students to check out audio books, as well as an iPod for listening.

### **The Assessment**

The Boyd County eCommunity Leadership Team found that the library sector is using technology to its advantage and commends the library sector for being on the cutting edge of technology application use.

- **Networked Places** – In the category of networked places, Boyd County's Library sector is currently at stage 5 on a 0 to 5 scale with most public libraries offering a 54 mbps or faster wireless network.
- **Applications and Services** – In the category of technology applications and services, the Library sector is currently at stage 5 on a 0 to 5 scale. Public libraries allow patrons to borrow e-books over the Internet, and they also help patrons conduct research and assist with legal access to copy righted databases and publications.
- **Leadership** – In terms of technology leadership within the Library community, Boyd County is currently at stage 5 on a 0 to 5 scale where libraries continue to upgrade their facilities to offer the community the next generation in technology, services and training.

### **The Vision**

The Boyd County eCommunity Leadership Team sees great potential for the continued use of technology in the library sector. The team has set goals to for all three categories to maintain a stage 5 on a 0 to 5 scale. The team's vision includes:

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

## **HIGHER EDUCATION**

Located in the foothills of eastern Kentucky, Ashland Community and Technical College, <http://www.ashland.kctcs.edu/>, has been the two-year college of choice for students in the Ashland area for more than 60 years. As part of the Kentucky Community and Technical College System, Ashland Community and Technical College offers university-parallel programs for transfer to four-year institutions and career programs for advancement in professional fields. In addition, ACTC responds to the needs of local business and industry for state-of-the-art workforce training. Thousands of people in the tri-state area of Kentucky,

Ohio and West Virginia visit the ACTC campus throughout the year for life-long learning experiences and cultural programs.

### **The Assessment**

The Boyd 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, Boyd County’s higher education sector is currently at stage 3 on a 0 to 5 scale with most on-campus facilities having connections to the network in every room at least 10 mbps. Additionally, some classrooms have projection equipment that allows the instructor to display videos from the Internet into the classroom.
- **Applications and Services** – In the category of technology applications and services, the higher education sector is currently at stage 3 on a 0 to 5 scale. Many of the faculty are trained to use the Internet for instruction. Many classes use digital content and/or web-based content for instruction. Students use chat rooms to discuss lessons and ask questions of instructors outside of class hours. Lastly, online registration, catalogs and payment are available.
- **Leadership** – In terms of technology leadership within the higher education community, Boyd County is currently at stage 3 on a 0 to 5 scale. Specialized courses have been developed to cater to area businesses seeking to improve the skills of workers. Furthermore, some colleges and universities have or are developing online classes to provide greater convenience for students and to increase student enrollment, and faculty training on new technology is a priority.

### **The Vision**

The Boyd 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 4 out of 5 in the network places and 5 out of 5 in the Applications and services all three categories over the next two years. The team’s vision includes:

- 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
- Many undergraduate students take **distance learning classes** for specialized subjects and graduate-level research
- All aspects of higher education are available through the **network** including instruction and administration
- Colleges and universities see themselves as a vital partner in the community’s **economic development strategy** and have formed partnerships with local businesses to provide skilled technology workers and innovative solutions
- Colleges and universities actively **promote information technology literacy** to drive positive impacts on economic performance, skills, and innovation in the classroom

## **COMMUNITY-BASED ORGANIZATIONS**

There are approximately 310 community-based organizations in Boyd County. Examples of CBOs are Ashland Mainstreet, Ashland Alliance, Ashland YMCA, Summer Motion, River Cities Harvest, Boyd and Greenup Champions.

### **Assessment**

The Boyd 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, Boyd County’s community-based organization sector is currently at stage 3 on a 0 to 5 scale. Most organizations with at least five paid staff have at least one computer for every three employees, and many organizations have e-mail.
- **Applications and Services** – In the category of technology applications and services, the community-based organization sector is currently at stage 3 on a 0 to 5 scale with many organizations having an informational website.
- **Leadership** – In terms of technology leadership within the community-based organization community, Boyd County is currently at stage 4 on a 0 to 5 scale. Some organization leaders are actively involved in community economic development issues and there are visible leaders taking a significant role in economic development.

### **The Vision**

The Boyd 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 5 on a 0 to 5 scale. The team’s vision includes:

- Many organizations use **Voice over Internet Protocol (VoIP)**
- Every organization is connected to the **Internet**
- Every computer can access the Internet via a **local area network**
- Many computers have **video cameras**
- Most organizations use affordable **videoconferencing facilities**
- Most organizations accept **online donations**
- Some organization use an **interactive service** to further engage the community and make their services more broadly available
- **Electronic data sharing** is a common practice between organizations locally and with national parent organizations
- Organizations **collaborate** with one another regularly to share resources and provide up-to-date training to their employees and volunteers
- Organizations have a defined role in supporting **local economic development** initiatives
- Most organizations plan to use **telecommunications services and technologies** within the next year

## **GOVERNMENT**

Government entities in Boyd County are:

- Boyd County
- Catlettsburg (County Seat)
- Ashland

The official Ashland city website is located at: <http://www.ashlandky.org>.

### **The Assessment**

Although the government entities in Boyd County have a limited online presence, the Boyd 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 4 on a 0 to 5 scale with some field workers using wireless networks.
- **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.
- **Leadership** – In terms of technology leadership within the government community, Boyd County and its associated governments are currently at stage 4 on a 0 to 5 scale. Elected officials understand the importance of the network for economic development and quality of life.

### **The Vision**

The Boyd County eCommunity Leadership Team has developed goals to provide a framework for robust e-government functions in the next two years, which will bring the sector to stage 5 on a 0-5 scale in each of the categories above. The team's vision includes:

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

## **TOURISM, RECREATION AND PARKS**

Recreational and tourism points of interest in Boyd County include:

- Graebear Gallery
- Old Friends Antiques & Uniques
- Reggie's Attic
- Tunnel Hill Antiques

- Ashland Historical Tours
- Ashland Area Art Gallery
- Sandy Creek Golf Course
- Sundowner Golf Course
- Bar W Rodeo Productions
- Highlands Museum & Discovery Center
- Jesse Stuart Foundation
- Paramount Arts Center
- Catlettsburg Antique Mall
- Diamond Links Golf Course
- Ashland Central Park

### **The Assessment**

The Boyd 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, Boyd 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. Some mobile workers have laptop computers and can access the office network remotely and 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. Most facilities have an informational website. In addition, some websites can accept credit card purchases, and some participate in an electronic supply chain.
- **Leadership** – In terms of technology leadership within the tourism, recreation, and parks sector, Boyd County is currently at stage 3 on a 0 to 5 scale. Some facilities permit some employees periodically to telework and some encourage employees to take work-related classes online and are making employee training for new technology a priority.

### **The Vision**

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

- Some facilities use **Voice over Internet Protocol (VoIP)** to save money
- Some office workers have converted from desktop computers to **portable devices with wireless connections**
- Some office computers have **webcams for videoconferencing**
- 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 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 274 farms in Boyd County comprising 33,512 acres with an average of 122 per farm. The total market value of production was \$1,258,000 with an average of \$4,591 per farm. Crop sales accounted for \$440,000, and livestock sales accounted for \$818,000 of the total value in 2002. Government payments totaled \$51,000, averaging \$980 per farm. Boyd County is ranked 108<sup>th</sup> in the value of agricultural products sold in the state. The leading agricultural products in sales in Boyd County are:

1. Cattle and calves with \$549,000;
2. Horses, ponies, mules, burros and donkeys with \$239,000; and
3. Nursery, greenhouse, floriculture and sod with \$191,000.

Boyd County tobacco farmers received \$297,458 in burley payments from the Tobacco Buyout Program in 2002, and there were no dark payments.

### **The Assessment**

The Boyd 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, Boyd County’s agricultural sector is currently at stage 1 on a 0 to 5 scale with some growers, suppliers and processors having limited access through a dial-up connection.
- **Applications and Services** – In the category of technology applications and services, the agriculture sector is currently at stage 2 on a 0 to 5 scale with some growers, suppliers, and processors having an informational website, and some growers, suppliers, and processors transmitting or receiving some orders electronically.
- **Leadership** – In terms of technology leadership within the agricultural community, Boyd County is currently at stage 2 on a 0 to 5 scale where the Internet is seen as essential to business operations, and employees are trained on basic applications.

### **The Vision**


The Boyd County eCommunity Leadership Team sees great potential for the use of technology in the agricultural sector but understands the industry is limited in its resources and ability to implement changes within a brief period. The team has set goals to move to stage 3 on a 0 to 5 scale in networked places and applications and services and a 2 on a 0 to 5 scale in the leadership category. The team’s vision includes:

- Most growers, supplier and processors have **always-on connections** to the Internet
- Some mobile works 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**
- The Internet is seen as **essential to business operations**
- Employees are trained on **basic applications**

<b>Business and Industry</b>	<b>Boyd County</b>
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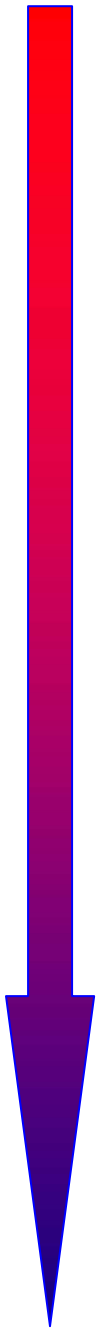
● Boyd County's Benchmark Assessment Results are presented in red.

■ Boyd 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;"><b>Least Connected</b></div>  <div style="margin-top: 10px;"><b>Most Connected</b></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.

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

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


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

# Healthcare

# Boyd County

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

■ Boyd 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
<p style="text-align: center;">Least Connected</p>  <p style="text-align: center;">Most Connected</p>	0	Not using the Internet.	Customers use phone and postal mail. No website.	No technology or telecom plan.
	1	Some physicians and/or staff have access to the Internet through a dial-up connection.	Physicians and/or staff use a dial-up connection in order to access health-related sites.	Healthcare providers are considering what advantage may come from using the Internet in the office.
	2	<p>● Some doctors regularly use computers to enter and maintain patient records. Digital instruments and imaging equipment are being acquired.</p>	<p>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.</p>	<p>Some providers have begun the conversion to electronic medical records. Some providers are investigating how to deploy wireless technologies for mobile workers.</p>
	3	Some doctors and nurses are using laptop and palmtop devices connected to wireless networks to enter patient information and access databases.	<p>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.</p>	<p>Many providers have begun the conversion to electronic medical records. Many providers are investigating how to deploy wireless technologies for mobile workers.</p>
	4	<p>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.</p>	<p>● Some providers allow patients to e-mail doctors. Most providers store patient records electronically. Some lab results and images are received electronically.</p>	<p>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.</p>
	5	<p>■ Most equipment has been converted to digital. Desktop videoconferencing is routine at all hospitals and major clinics. Telephone systems have been converted to Voice over Internet Protocol (VoIP) to save money. Remote monitoring of patients with chronic conditions is standard procedure.</p>	<p>■ 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.</p>	<p>● ■ 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.</p>

**Libraries**

**Boyd County**

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

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


<p style="text-align: center;">Least Connected</p>  <p style="text-align: center;">Most Connected</p>	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	<p>● ■ Most public libraries offer patrons a 54 mbps or faster wireless network.</p>	<p>● ■ 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.</p>	<p>● ■ 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.</p>	

# Higher Education

# Boyd County

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

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


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

# Community-Based Organizations

# Boyd County

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

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


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

**Government**

**Boyd County**

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

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


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

# Boyd County

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

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


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

# Agriculture

# Boyd County

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

■ Boyd 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	
 <p>Least Connected</p> <p>Most Connected</p>	0	Not using the Internet.	No computer use. No website. All contacts via phone and postal mail.	There is no technology or telecom plan.	
	1				
	2	Some growers, suppliers and processors have always-on connections to the Internet at their desks.	● 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.
	3	Some 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.	● 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.	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.	■ 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.
	5	Some 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 use Voice over Internet Protocol (VoIP) to save money. Some workers have converted from desktop computers to portable devices with wireless connections. Some office computers have webcams for videoconferencing.	Some suppliers and processors outsource most of their computing services. Some growers, suppliers and processors sell goods out of state or internationally.	Training on new technology is a priority. Some processors and suppliers permit employees to telework one or two days a week.
		Most growers, suppliers and processors use Voice over Internet Protocol (VoIP) to save money. Most computers have video cameras. Some use Radio Frequency Identification (RFID) to track inventory and equipment.	Some growers, suppliers and processors send and receive video mail. Some outsource most of their computing services. Some routinely use multiparty videoconferencing to coordinate operations.	Some suppliers and producers have restructured to focus on their core contribution and outsource nonessential functions. New hires are required to have experience using new technology.	



## **D. HOW DO WE GET THERE?**

## **D. HOW DO WE GET THERE?**

### **PROJECT CONCEPT: Community Web Portal to Enhance and Promote Tourism and Government Services in Boyd County**

#### **LONG-TERM GOAL**

This project will increase government access and tourism awareness through the use of technology within the entire Boyd County community.

#### **WHY IT'S IMPORTANT**

It is essential in today's world that services such as government and tourism be marketed to compete in a global economy. There are opportunities to leverage existing resources in Boyd County in order to accomplish these goals. The creation of a web portal that will enhance these services for the community will add to the overall economic development potential of the area.

#### **SPECIFIC MEASURABLE OUTCOMES**

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

1. Increase the availability of governmental technology services and applications to the public.
2. Increase the web presence of all areas of tourism
3. Increase the citizen usage rates of computers and broadband in Boyd County.

#### **STEPS TO ACHIEVE OUTCOME**

1. Meet with City Manager of Ashland and ConnectKentucky personnel to develop website.
2. Identify all applications and government organizations within Ashland.
3. Identify all tourism related organizations and activities within Ashland.
4. Create a Web Portal for same
5. Market Web Portal to the public
6. Launch Web Portal.
7. Expand Web Portal to include all of Boyd County

#### **NAMES OF IMPLEMENTATION CHAMPIONS**

Boyd County Government Entities  
Boyd County Tourism Commission  
Ashland Alliance  
Ashland City Managers

## **PROJECT CONCEPT: “Buy Local” Virtual Mainstreet Web Presence**

### **LONG-TERM GOAL**

This project will work to develop a portal for use by all Ashland “Main Street” small businesses, as a means to enhance economic development and create a web presence.

### **WHY IT’S IMPORTANT**

The majority of Ashland Businesses on Main Street have no web presence. Creating a common web portal would provide that marketing presence.

### **SPECIFIC MEASURABLE OUTCOMES**

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

1. Increase marketing presence for small to medium businesses in downtown Ashland, Boyd County.
2. Increase commerce/trade for community main street businesses

### **STEPS TO ACHIEVE OUTCOME**

1. Meet with Mainstreet Director
2. Work to develop a front page for Main Street Businesses
3. Market
4. Launch

### **NAMES OF IMPLEMENTATION CHAMPIONS**

Danny Craig – Mainstreet Director,  
Chris Pullem - Director of Economic Development, City of Ashland,  
Bob Hammond - Ashland Alliance

## **PROJECT CONCEPT: Education, Training, and Awareness for Boyd County**

### **LONG-TERM GOAL**

This project will work toward the organization, promotion and delivery of technology education, training and awareness to the entire community of Boyd County.

### **WHY IT'S IMPORTANT**

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

### **SPECIFIC MEASURABLE OUTCOMES**

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

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

### **STEPS TO ACHIEVE OUTCOME**

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

### **NAMES OF IMPLEMENTATION CHAMPIONS**

#### **Educational Team**

#### ***K-12 Education***

Boyd County Schools

#### ***Higher Ed/Community Education***

Ashland Community and Technical College

Boyd County Cooperative Extension Service

Boyd County Public Library

## **POTENTIAL ACTION ITEMS**

### **Business and Industry**

- Educate small businesses about telecommunications services and the benefits of using technology in business.
- Create a technologically capable workforce through training and skills development.
- Develop a local directory of information technology services.
- Identify ways to reduce the cost of connecting to the Internet and find potential funding sources for small businesses.
- Get businesses together to aggregate demand for high-speed services, create a more attractive market for infrastructure providers and ensure that the services meet local needs.

### **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.
- Continue to build relationships between schools and broadband providers.
- Develop strategies for bridging the digital divide, such as after-school programs, community centers, etc.
- Make it easier for low-income families to access computers and the Internet to facilitate communications with teachers and schools.

### **Healthcare**

- 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.

### **Library**

- Investigate cost-efficient ways to increase bandwidth to rural libraries.
- Increase the number of public-access computers.
- Provide additional ports or wireless access points where patrons with laptop computers can connect to high-speed lines.
- Continue to develop expanded Internet training programs for the public, targeting specific needs and groups.
- Increase the use of mobile computer stations in bookmobiles or outfitted vans, especially in rural areas.

### **Higher Education**

- Continue to increase the number of web-enhanced and fully web-based courses.
- Continue to improve countywide access to distance learning classes.
- Provide information technology resources to the community as well as educate the end-users in the use of technology.
- Encourage citizens to take advantage of the online classes already available.
- Increase awareness of national research information available across the country.

### **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 networking relationships to share information, ideas, and innovations in technology deployment.
- Recruit university and high school students to develop websites.

### **Government**

- Increase the number of public access terminals in the county.
- Encourage inter-governmental sharing of software, information and e-commerce concepts.
- Allow the donation of appropriate surplus computers to non-governmental organizations and individuals.
- Set goals to be completed in one year.
- Seek grant funding to improve infrastructure and support functions.

### **Tourism, Parks and Recreation**

- Improve and correct local links and identification.
- Establish and/or maintain 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.
- Continue to develop affordable, high-speed services for rural parts of the county.

### **Agriculture**

- Increase broadband awareness among the agricultural community.
- Develop educational materials to help the agricultural community to understand the importance of broadband.
- Create a list of providers to help the agricultural sector understand what service is available and from whom.
- Provide high-speed Internet access at the UK Cooperative Extension office.
- Use GPS and Radio Frequency Identification on farms.