

CONNECTING MADERA COUNTY

Assessing Our Readiness for the Networked World

A Report from the Community

May 2002

San Joaquin Valley ACCESS

A Partnership Program of the Great Valley Center and the California Technology, Trade and
Commerce Agency, Division of Science, Technology and Innovation

EXECUTIVE SUMMARY

San Joaquin Valley ACCESS (Advanced Communications Connectivity for E-commerce Strategic Success) is a partnership program of the Great Valley Center and the California Technology, Trade, and Commerce Agency, Division of Science, Technology, and Innovation. Its goals are to:

- 1) Create and retain jobs using e-commerce and new technology tools.
- 2) Increase the number of rural small businesses participating in e-commerce.
- 3) Improve their ability to compete.

Nine counties have joined the program.¹

The ACCESS program has three phases. In the first phase, each county conducts an assessment of its connectivity. In the second phase, sector teams identify a set of action initiatives to increase the community's access to and productive use of advanced communications services. In the third and final phase, the counties and cities within the counties implement the best action initiative proposals.

Connecting Madera County began with the formation of a steering committee of leaders from throughout the county to plan the assessment and provide oversight for the program. The committee met on July 18, 2001 at the County Library in Madera. With the help of a consultant, the committee developed the strategy for a community readiness assessment workshop and a list of people to invite. The workshop took place on October 18, 2001 at the Social Services Administration office in Madera. About 35 people, from all over the county participated in the assessment. (A list of workshop participants and steering committee members is provided in the Appendix.)

¹ Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, and Tulare Counties.

Workshop participants were divided into teams by economic sector:

- ✓ Business
- ✓ Agriculture
- ✓ Communications Services
- ✓ Education
- ✓ Libraries
- ✓ Government
- ✓ Community-Based Organizations

The teams used a community self-assessment tool developed by the Computer Systems Policy Project (CSPP), a public policy advocacy group comprised of the Chairmen and Chief Executive Officers from America's leading information technology companies². The CSPP published a visionary report, *Living in the Networked World*, that describes the importance of global connectivity. The companion *Networked World Readiness Guide* is a self-assessment tool designed to help communities determine how far along they are in developing their communications infrastructure and in putting it to productive use. The Connecting Madera County steering committee identified representatives from each major economic sector who have expertise in and knowledge about the quality of connectedness in their sector. The committee also ensured that both urban and rural communities were represented. Working in sector teams, workshop participants developed visions, one-year goals, and ideas for how to achieve those goals. This report summarizes their work.

The following are some of the key insights that emerged from the process:

1. About 80% of the City of Madera can get high speed services from either SBC Pacific Bell or AT&T Broadband.

² For more information on the *CSPP Readiness Guide* and the *Living in the Networked World* report, see www.cspp.org.

- Chowchilla does not yet have access to the new high-speed services.
2. Businesses and residents in the eastern parts of the County are showing strong demand for high-speed services.
 3. Ponderosa Telephone and Sierra Telephone have been aggressive about offering high-speed services for businesses and wireless broadband to reach rural residences in their service territories.
 4. The County and cities have websites but none offer on-line transactions. The County is developing e-permitting services for businesses to reduce trips to County offices.
 5. Our food processing sector is a strong user of technology. Most other businesses have yet to embrace the Internet or Web as a part of every-day operations.
 6. Our K-12 schools are well connected but we need to connect more classrooms and get more teachers trained in using computers and the Internet as instructional tools.
 7. Workshop participants want our community leaders to play a stronger role in championing the rapid deployment of advanced services and putting them to use for competitive advantage and quality of life.

SUMMARY ASSESSMENT

	Current Stage	Comments
The Network Rural Urban	2 3-	The City of Madera has DSL service. Several communities in the eastern foothills have DSL and wireless broadband. Other areas can get ISDN and T1 services.
Networked Places	1+	Our K-12 schools are the best connected sector. County government is building a Wide Area Network to connect its facilities. Businesses and homes are generally not well connected.
Networked Applications & Services	1+	The agriculture processing companies are the most sophisticated users of technology. Other businesses and local governments are getting started.
Networked Economy	1+	We have some leading edge enterprises, but most organizations are in the early stages of learning how to capitalize on technology.
Networked World Enablers	1	Most of us do not understand how to protect our privacy and computers from hackers. We have not yet begun to address policy issues.

Stage 1: High-speed services are hard to get or expensive; few take advantage of the resources and services on the Internet.

Stage 2: High-speed services are more widely available; local web sites are limited.

Stage 3: General access to high-speed services; web sites support transactions; organizations beginning to restructure for the New Economy.

Stage 4: Universal access to affordable, high-speed services; the Internet has changed the way all organizations operate; the Internet is fully integrated into everyday life.

MADERA COUNTY AND THE NETWORKED WORLD

Madera is the fastest growing county in California and one of the fastest growing in the United States. If we can believe the forecasts, the County will almost double in population over the next twenty years. Growth pressures come from the relatively strong economy in Fresno and Clovis to the south, and the construction of UC Merced to the north. People are coming from all over the world to enjoy and buy homes in our foothills. The County has 36,000 households today; *30,000 new homes are planned for one development alone, on Coombs Ranch.*

How will we support this growth? How will our schools, highways, and utilities keep up with this new demand? One answer is at Coombs Ranch. There the developer is using smart growth principles. He is planning simultaneously for housing, community centers, retail, and, most important, communications infrastructure. His vision is to encourage tele-work using high-speed networks, reduce the load on the roadways, and encourage people to work, study, and enjoy a high quality of life *locally.*

Madera County needs to employ smart growth methods that take full advantage of the new generation of communications technologies. Compared to other counties in California we have above average unemployment and below average educational attainment.³ But we can use the network to allow our youth to take classes from anywhere in the country, and even overseas. We have a highly productive agricultural industry that we need to support by providing the best in communications services. With that network we can continue to attract clean, high-wage, knowledge-

worker jobs from the San Francisco bay area and Los Angeles.

SBC Pacific Bell is providing high-speed services in the City of Madera. Ponderosa Telephone and Sierra Telephone are providing DSL and wireless broadband services to many communities in the foothills. We need to extend these services to Chowchilla and the other communities on the Valley floor. Constructing these services is expensive.

Through this assessment, we learned that most of the businesses and residents on the Valley floor are not aware of the advantages of the new technologies and are not ready to put them to productive use. To attract the new services, we have to show that providers can earn a fair return on investment, so we have to encourage demand.

Our challenge is to raise the level of understanding of the benefits of the new technologies for economic growth and quality of life in our businesses, schools, and government agencies. Increased demand will attract better services.

Ready access to affordable⁴, reliable high-speed communications services can create many opportunities:

Business. E-mail and the Internet are becoming mission-critical for companies of all sizes and industries. Electronic commerce is saving time, cutting costs, and increasing sales. Job candidate interviews are being conducted by videoconference to save travel time and money. Electronic networks are giving suppliers access to their customer's production schedules. Organiza-

³ Umbach, Kenneth, *A Statistical Tour of California's Great Central Valley – 1998*, California Research Bureau

⁴ Most people define "affordable" as costing \$50/month or less for residential or small business per person use in 2001.

tional structures are flattening as information moves directly to the people who need it, no matter where they are located. And some employees are becoming more productive by working at home one or two days a week.

Education. Children must be information literate when they graduate from Middle School, if not sooner. They must know how to communicate by e-mail, how to conduct research on the Web, to execute secure transactions, and how to protect their privacy. The Internet also supports lifelong learning for workers who want to pursue an advanced degree or learn new skills.

Community. E-mail helps churches, charities, Little Leagues, and soccer teams announce events, call for volunteers, and raise funds without having to spend scarce resources on printing and postage. Web sites help people find out about services they need and help staff keep informed about grant opportunities and legislative actions.

Government. Putting public services on-line can help residents get the information they need, when they need it. Businesses and homeowners can avoid time-consuming trips to government centers to get forms and submit permit applications. Electronic procurement can make the purchasing process more efficient. And e-mail from voters to elected officials can help councils make better decisions.

Healthcare. As healthcare providers convert from paper to electronic records they can make our records more accessible to us. We will be able to review our medications and test results and get reliable information on treatments. We can send questions by e-mail and get automatic reminders for appointments and to update vaccinations. Patients in some remote areas can already use telemedicine to consult with distant specialists from local clinics.

The workshop participants generated 22 ideas for how we can prepare for the Networked World. The following ideas stand out:

1. Form a partnership of public agencies, businesses and the communications companies to organize a series of awareness-building events.
2. Construct a demonstration network in Madera's downtown and allow local businesses to learn first-hand how the technologies work and the benefits they can provide.
3. Create a regional information portal for the community.
4. Put building permits on-line.
5. Encourage more K-12 teachers to learn how to incorporate the Internet and web-based content in instruction.
6. Develop maps of service availability showing where high-speed services are available today and where they will be available a year from now.

MADERA COUNTY DEMOGRAPHICS

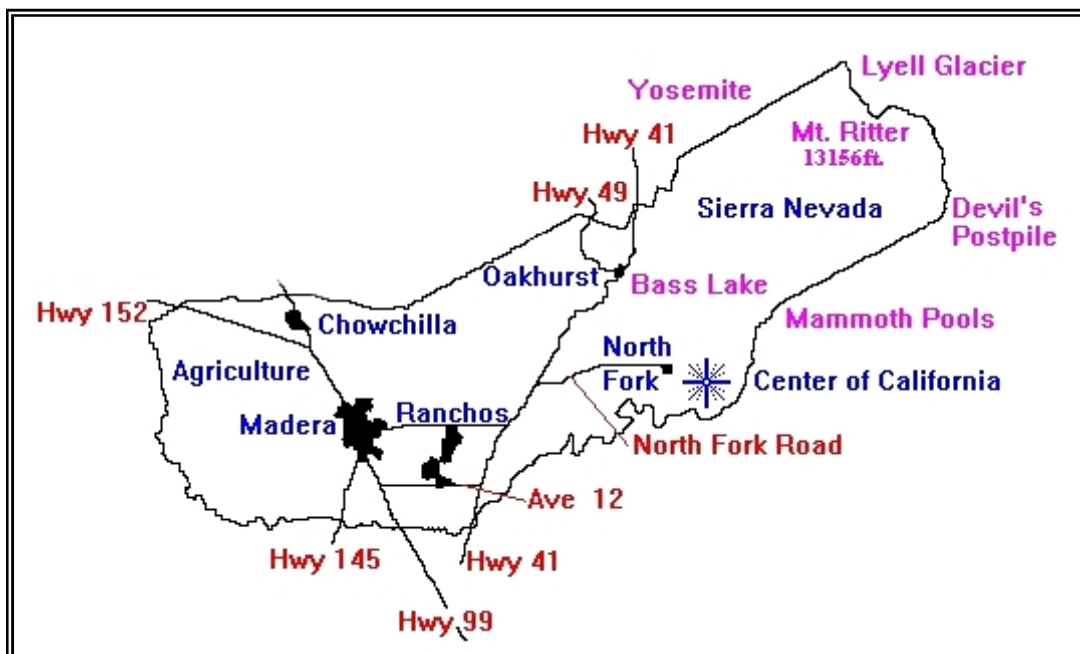
Madera County has 123,109 people and 36,155 households according to the April 2000 census. Forty-four percent of the population is of Hispanic or Latino origin. The County expects to add over 90,000 people by 2020, an increase of 74% over 20 years. Forty-four percent of the population lives in the incorporated cities of Madera and Chowchilla. About 24% lives in the foothills. The rest live in the unincorporated and rural communities on the Valley floor. The county covers 2,147 square miles, yielding a population density of 57 people per square mile, well below the State of California definition of less than 300 people per square mile for rural counties.

Agriculture and related processing industries comprise the dominant industry cluster, employing 30% of the workforce. Government employs 20% of the workforce, services employ 17%. Education and income levels in Madera County are below California averages. The 12.6% unemployment rate in December 1999 was substantially higher than the state-wide average of 4.6%.

Most of the County's population lives on the Valley floor where the flat terrain is ideal for both wireline and wireless communications infrastructure. The hilly terrain in the eastern part of the County is more difficult to serve—houses are more widely dispersed and the hills block transmission of some high-speed wireless signals.

Sources: U.S. Census Bureau website; *A Statistical Tour of California's Great Central Valley - 1998*, California Research Bureau; Great Valley Center website; Madera County website; Eastern Madera County Chamber of Commerce website.

MADERA COUNTY



THE NETWORK

WHY IS THIS IMPORTANT?

To compete in the networked world, all segments of each community need access to reliable, affordable, and convenient high-speed communications services. Each community needs to look into what services are available in which parts of the community. They also need to look into the number of companies competing for their business. Competition helps keep prices low and service high.

In the 1990's communications companies began deploying three new technologies that offer two major advantages over regular dial-up lines: much higher speeds, and always-on convenience. One technology, Digital Subscriber Line (DSL) uses regular telephone lines. Another technology, the cable modem, uses the co-axial cable installed by cable television companies. The third technology, wireless broadband, uses towers that send high-speed signals for over 30 miles, but it requires a clear line-of-sight. Satellite-based services are also entering the market. Each technology is capable of delivering over one million bits of data per second, a vast improvement over traditional telephone-based modems that communicate at only 56,000 bits per second.

Cable modem and DSL technologies require extensive upgrades to communications networks. Backbone lines have to be upgraded with fiber optic cable. Central telephone offices and cable head ends need new equipment to handle the high-speed signals. Wireless towers also need to upgrade their equipment. Each technology also has distance and loading limitations.

The performance benchmark is continually rising. Today, the goal is speeds of 500K to 1 megabit—at least 10 times faster than ordinary modems and phone lines. But

already there are a few communities with 100 megabit connections.

HOW ARE WE DOING?

Most of the eastern portions of the County and the City of Madera have access to affordable high-speed services. For residential service, representatives from the wireline communications companies report that 50%-60% of downtown Madera residents have access to DSL service. Cable modem service is now available in most of Madera and Ranchos. In the foothills, Sierra Telephone is offering wireless broadband service in Oakhurst, Coarsegold, and Indian Lakes. ISDN⁵ service is available in all parts of the County.

About 80% of businesses in downtown Madera can get DSL and cable modem service. Chowchilla businesses can get T1⁶ service; the more affordable DSL service is not yet available. Central Valley Cable is preparing to offer cable modem service in Chowchilla. Most rural businesses served by Ponderosa Telephone and Sierra Telephone are able to get wireless broadband or T1 service and 95% of businesses in the southeastern part of the county has access to. Installation times are over two weeks.

Wireless voice and data services are available throughout the County, but the services are not highly dependable in the foothills.

Workshop participants recognized that it is expensive to lay lines in rural areas where

⁵ Integrated Switched Digital Network is a dial-up service that operates at 64K to 128K bits per second. A new tariff provides unlimited use for about \$80/month.

⁶ Telephone companies provide T1 service on special lines. Rates are usually less than \$800 per month for 1.5 megabit speeds.

the small number of potential users makes it difficult to earn a reasonable return on investment.

WHAT NEEDS TO BE DONE?

The representatives of the utilities and communications companies commit to pro-actively representing the needs and goals of Madera County to their respective company management.

The companies propose a key action initiative to be developed in partnership with community leadership:

- ✓ Organize multi-vendor workshops on the new communications technologies to help businesses and consumers understand their potential to support growth and quality of life.

NETWORKED PLACES, APPLICATIONS AND SERVICES

It isn't enough to wire the streets; we also have to wire our offices, factories, schools, libraries, and homes. Enterprises need Intranets – networks for internal communications – which allow employees to get e-mail, share printers, and connect to administrative services. We also need wireless access for mobile workers, for convenience, and as a backup network if there are problems with a wireline system.

Applications and services provide value to users. Applications allow us to, for example, administer our benefits plans from home, take advanced classes at home or work, check on the school lunch menu, get building permits without having to drive to the Planning Department, and buy goods ranging from electronic components to groceries.

While the Internet allows us to connect with the entire world, most people prefer to deal with local merchants and service providers. Most of our friends, teachers, and associates live within a few miles, and dealing with city hall and the county is, by definition, a local matter. Because there are so few local services on the Internet, many people see no reason to get connected. To attract these people onto the Net and help them participate in the New Economy, every community needs to increase the number and range of *local* services available on-line.

At the workshop, participants assessed how well each of our sectors is wired and using network-based services and applications:

BUSINESS

WHY IS THIS IMPORTANT?

A number of factors are forcing businesses to change time-honored models of operation, such as global competition, partnering for all

but core functions, demand for more personalized services, and the falling costs of technology. Larger businesses must get connected as their customers and suppliers cut costs and refuse to accept paper orders or invoices. The County's retail businesses can not be sheltered from competitors on the Web; bookstores are losing sales to Amazon.com, travel agents to Travelocity.com, and car dealers to Autobytel.com. Our businesses have to adapt; they have to learn the tools of the networked world, and innovate to survive.

HOW ARE WE DOING?

Our workshop participants came primarily from the small business community. They reported that small businesses are using dial-up connections, and few people are aware that both DSL and fixed wireless services are available in the City of Madera. Despite the slow speeds of dial-up lines, some 15%-20% of businesses are buying or selling goods on-line. Job openings are posted on-line to recruit professional employees from out of the area, but not for hourly employees. Our Hispanic businesses are not using the net very much, perhaps because of language barriers. Some of our younger business people who are more technologically savvy are leaving the County.

Our businesses would like to see more local government services on-line such as permitting and simple government information. Realtors would like to get zoning information and research titles on-line. The Madera Chamber of Commerce now has a technology team and has added a regular technology column to its newsletter.

Most of our telecommuters live in the foothills, in towns like Oakhurst. They are eager for high-speed services. But many business owners have never seen a high-

speed connection and do not understand what a difference it can make.

WHAT NEEDS TO BE DONE

Advanced communications services will broaden markets for our businesses and make them more competitive. As business increases the community's economic strength will increase.

To achieve this vision, the workshop participants propose the following ideas for action initiatives:

- ✓ Get businesses together to aggregate demand for high-speed services, create a more attractive market for infrastructure providers, and ensure that the services meet local needs.
- ✓ Organize demonstrations of the new technologies and present local role model users.
- ✓ Develop workshops and seminars on the use of the Internet and technology and their benefits to the rural population. Create special programs to reach out to the Hispanic and elderly populations.
- ✓ Develop a small, high-speed, metro network within the downtown area to demonstrate the advantages of technology to downtown businesses.

AGRICULTURE

WHY IS THIS IMPORTANT?

The agriculture industry, including ranchers, seed companies, growers, food processors, irrigation equipment manufacturers, fertilizer companies, distributors and retailers, is becoming more dependent on technology. The industry has always depended heavily on access to information, especially weather forecasts and commodity prices. Companies like DTN of Omaha, Nebraska, have used satellites to distribute time-critical agricultural information for over 15 years.

Advanced communications services are helping the industry become ever more efficient. Electronic trading exchanges are making it easier to check prices and match buyers and sellers. Electronic commerce is connecting the supply chain, reducing time and errors and eliminating a lot of manual paper processing. On-line bidding is emerging. Some growers are using the Internet to reach global niche markets directly. Others are putting weather sensors in their fields. When certain conditions are met, a radio signal goes to a computer and sets off a pager to alert the farmer to get his equipment into the field.

HOW ARE WE DOING?

Workshop participants found it useful to separate agriculture production companies – ranchers and growers – from agriculture processors. In general, our processors are using more technology in their operations than producers. E-mail, for example, is used by less than 25% of employees at production companies and more than 25% at processors. Five to 10% of growers and ranchers are using e-commerce to order goods and transact business with customers. Fifteen to 20% of processors are taking advantage of e-commerce services.

Agriculture executives and professionals are continually upgrading their skills in technology and business, but the rank and file workforce is not. The County Agriculture Commission posts its job openings on-line, but agriculture producers do not see much need as few of their workers can access the Internet.

Few agriculture businesses are being transformed by the Internet, but the barrier is access to high-speed networks more than lack of interest. Already livestock auctions include televised pictures of the stock. The Internet would be a better medium, but for this application to be useful, “you’ve got to

have clear pictures of livestock walking around, or almonds in a box.” said Clay Daulton of Daulton Ranch. Demand is there, but transmission speeds on dial-up telephone lines are not adequate.

WHAT NEEDS TO BE DONE?

Access to affordable high-speed connections will foster increased use and acceptance by agriculture.

Workshop participants want to increase industry use of advanced communications services by at least 10% over the next 12-18 months. They provided the following ideas for projects:

- ✓ Put agriculture permits on-line. Launch a County Agriculture Department website and allow on-line payment for permits using credit cards. Promote the new services when ready.
- ✓ Educate producers, processors, and employees on the benefits of Internet access.
- ✓ Create easier access to *affordable* rural high-speed services.

EDUCATION

WHY IS THIS IMPORTANT?

For our children to succeed in the Networked World, the tools of the information age should be as comfortable to use as pencil and paper. Our schools can provide every student, regardless of family income, with the opportunity to understand these tools. Even more important is the use of these tools in the education process itself. The interactive nature of the Web is providing a richer and more timely learning experience that engages and motivates students to explore and learn. Putting computers into classrooms is helping reduce dropout rates in many schools.

Institutions of higher education are helping our workforce learn the tools of the information age and develop the skills that will allow them to be more productive and earn higher wages.

HOW ARE WE DOING?

Workshop participants believe that 95% of K-12 classrooms have always-on, high-speed connections to the Internet and 100% of teachers will have access to e-mail by the end of the year. Student access to e-mail is proceeding slowly because of restrictions in the Children’s Internet Protection Act. Most K-12 schools have informational websites. The school districts have implemented an aggressive professional development program to help teachers learn the new technologies. At least 65% of K-12 teachers have taken classes in using the Internet as a tool for instruction.

Madera Community College Center (State Center) is raising funds to build a wireless network for its campuses in Oakhurst and Madera. Nearby CSU Fresno is also building a wireless network and installing high-speed connections in dorm rooms. The College allows students to register for classes on-line. Over 50% of the faculty at CSU Fresno has had training in the use of the Internet and web in instruction. A goal is to put more classes on-line to make it easier for students living in Madera County to take CSU classes.

WHAT NEEDS TO BE DONE?

K-12:

High-speed services will help us provide instruction that engages students in an exciting learning experience and motivates them to learn and pursue post-secondary education. We will give our students experiences that prepare them for success in the knowledge economy.

Higher-Ed:

Make higher education available to the Madera County community anywhere, anytime through the utilization of high-speed services.

The teachers and administrators at the workshop propose the following action initiatives:

K-12:

- ✓ Identify better resources for integrating digital content and technology with curriculum.
- ✓ Expand student, parent and teacher access to student information such as homework assignments and attendance records.⁷
- ✓ Increase the use of technology in student projects to help them learn how to express themselves with the new tools.

Higher-Ed:

- ✓ Implement the wireless networks at State Center and CSU Fresno campuses.
- ✓ Substantially increase the number of web-enhanced and fully web-based courses. Increase the number of classes using these technologies and/or digital content to 75%.

LIBRARIES

WHY IS THIS IMPORTANT?

Public libraries play a vital role in most communities by providing every resident with the opportunity to receive instruction and use the Internet for free. People have been able to start businesses in libraries, and many K-12 students depend on library computers to do their homework assignments. But libraries are not open 24 hours a day, every day, and sometimes there are lines of people waiting to use the machines.

HOW ARE WE DOING?

All five branches of the County Library system offer free Internet access on high-speed lines. Each branch has at least four machines. One computer at the Madera branch is set up for Spanish speakers. The machines are all heavily used, especially by students. They were donated by the Bill & Melinda Gates Foundation.

Patrons are able to access the library's catalog from home over the Internet. They can request books from other libraries in the Heartland Library System that includes many California University and medical libraries. We also provide Internet access to Infotrack, a full text database of over 200 periodicals that is very popular with high school and college students.

Research librarians help patrons learn how to navigate the Internet, but there are no formal classes at the libraries. There are no plans to allow patrons to pay fines with credit cards on the Internet, or to install network access ports for patrons bringing in laptop computers.

The primary constraint to increasing the number of computers is space. The Madera Ranchos branch will soon double in size, and Chowchilla is building a new library.

WHAT NEEDS TO BE DONE?

Provide all residents of Madera County with a no cost, safe and secure place to access the Internet.

- ✓ Increase the number of public access computers with Internet access.
- ✓ Improve technical support for the public computers and library web site.
- ✓ Offer more instruction on how to take advantage of the Web's resources.

⁷ See, for example, PowerSchool at www.powerschool.com.

GOVERNMENT

WHY IS THIS IMPORTANT?

Local governments provide communities with many services and capture a great deal of information about the community that can be valuable to public agencies and non-profits. Businesses and residents want to access public services and information with the same convenience and ease of use as ordering a book on-line. The Internet is also a convenient tool for expressing an opinion to a council member, for distributing council agendas, reporting a problem, and getting information on the County's General Plan. Local governments can be role models for the community, by encouraging public access, using e-commerce technologies, and showing how valuable services can be delivered efficiently and conveniently on the web.

HOW ARE WE DOING?

County government representatives at the workshop reported over 80% of their buildings are still using dial-up connections to the Internet, but a Wide Area Network (WAN) is under construction. The new network will provide all facilities with high-speed, always-on connections. The City of Madera has about 75% of its buildings connected. The City of Chowchilla has all of its buildings connected to a Wide Area Network and it has an 11 megabit wireless network that covers the City for mobile employees.

About 10% of County agencies have informational websites today. The County is developing on-line construction permitting. Once they develop the ability to accept credit card payments on-line, County agencies will put more transactions on the web. The County will also use the WAN to build an internal administrative network to facilitate data sharing between departments

and to administer Human Resources functions.

The cities of Chowchilla and Madera have websites that provide a wide variety of information for residents. Forms are available on-line for permits, but it is not yet possible to complete an application and pay on-line. More Human Resources services are going on-line, such as job listings. Residents are starting to send e-mails to council members and staff about topics of current interest. The Chowchilla Police Department is participating in a regional high tech crime task force to help it acquire the skills and tools it needs to combat computer crime.

WHAT NEEDS TO BE DONE?

County:

Use our new Wide Area Network to expand, improve, and extend appropriate services to the public on a 24x7x365 basis.

Cities:

Expand our network-based services to make government more accessible for the community and for employees.

The government representatives propose the following action initiatives:

County:

- ✓ Grow the Information Technology Department and increase employees' skill levels to support day-to-day business functions and e-government initiatives.
- ✓ Initiate and complete a new Information Technology strategic plan to improve all automated systems and re-engineer manual procedures and how departments collaborate.

Cities:

- ✓ Add transaction processing to the website, including credit card payments.
- ✓ Expand the city networks to reach more employees.
- ✓ Collaborate with the County on permitting solutions.

COMMUNITY-BASED ORGANIZATIONS

Our not-for-profit agencies provide a wide variety of services to the community, ranging from health services, to religious services, children's sports, and the arts. Like any enterprise, community-based organizations need information technology to manage operations, apply for grants, reduce costs, and improve client service. Their budgets are always tight; they typically depend on out-dated, cast-off computers and donated services. CBO's generally don't have the time or money to train staff, create websites, and take advantage of high-speed services.

HOW ARE WE DOING?

Workshop participants said there is very little information on the size and nature of the CBO community in the County. They believe there are a lot of CBO's but very few have more than five paid employees. At least 75% of the CBO's are based locally. Only a few have a statewide or national affiliation. The Madera County Arts Council (www.maderaarts.org), for example, is part of the state-wide California Arts Council.

When it comes to the use of technology, workshop participants believe many CBO's have at least one or two computers, and well over 25% are using e-mail. Volunteers often have computers and e-mail at home. Less than 10% of CBO's have informational websites today, but there is strong interest in building them, and many organizations have websites under development. Barriers to capitalizing on these tools include a lack of understanding of costs and benefits and the belief that computers are not consistent with their organization's social mission. Competition for resources is difficult and getting worse.

A county-wide portal would be a good resource for the community to help residents find and access social service organizations.

WHAT NEEDS TO BE DONE?

Advanced communications can facilitate effectiveness and efficiency in service delivery, communications, and collaborations among the growing Madera County CBO community.

To help us move closer to this vision, workshop participants suggested three action initiatives:

- ✓ Identify the community-based organizations in the County.
- ✓ Assess the current use of technology in the County's CBOs and their needs.
- ✓ Introduce a community portal that expands access and utilization of a variety of applications, including smart cards.

NETWORKED ECONOMY

WHY IS THIS IMPORTANT?

The New Economy is driven by **innovation**. New ideas move quickly from university research to entrepreneur and corporation. New business models are forcing old-line businesses to change time-honored ways of doing business, cut prices and improve services. Jobs are being transformed, and those with the skills to create new products and solutions are earning among the highest salaries. Information technology has accelerated productivity in the United States, but only in those organizations that are able to use it wisely.

Consumers have been major beneficiaries of the innovations in business. Those with network connections, and the courage to try the new tools, are getting news and music on-line, shopping globally for the best prices, taking classes on-line, getting a permit to build a new deck at home, researching medical conditions, posting résumés and searching for jobs, planning vacations, and communicating more frequently and easily with elected representatives. Those without the necessary tools and skills, those who can not afford the equipment or classes are in danger of falling behind in the competition for information and better jobs.

HOW ARE WE DOING?

We heard from several innovators at the workshop. One-woman Lane Realty in North Fork has increased its volume four-fold thanks to its website. People are coming in from Europe and Asia to buy homes in our foothills. Maderans Making a Difference is developing a community portal and an idea for smart cards to help migrant workers save transaction fees when sending money to Mexico. Young entrepreneurs are taking classes through an innovative program, Accelerator OnLine, a virtual

incubator based at CSU Fresno. Dennes Coombs has attracted national attention with his plan to build the Riverbend Ranch “e-Village” south of Madera, a new community designed specifically for tele-workers.

But we have a long way to go to prepare our community for the information age. Workshop participants believe that while some businesses, public agencies, and non-profits have developed websites, few have transformed business processes to take advantage of the new technologies. The County’s plan to put construction permits on-line will help attract more businesses onto the Internet.

Our food processing companies make aggressive use of technology, posting jobs on the Internet and encouraging all workers to constantly upgrade their skills. Other organizations are not taking advantage of our educational resources to develop the workforce and the job listing services at the Workforce Development Office.

When it comes to consumer use of technology, a March 2001 study by the Public Policy Institute of California⁸ found that 66% of North San Joaquin Valley residents use computers at work, home, or school, and 58% use the Internet. Workshop participants were not aware of any studies of computer access in Madera County. They believe consumers in the eastern foothills are heavy users of the Internet for buying goods and services, but the great majority of those living on the Valley floor do not have computers, and they are not taking advantage of the Web.

⁸ PPIC Statewide Survey: Special Survey of the Central Valley in Collaboration with the Great Valley Center, Mark Baldassare, Director, March 2001

WHAT NEEDS TO BE DONE?

Raise the awareness of businesses, community-based organizations, and consumers, especially in the Hispanic community, of the opportunities technology can provide to become more competitive and increase the quality of life.

To achieve this vision we should consider the following ideas for action initiatives:

- ✓ Organize technology fairs where people can learn about information technologies and experience the advantages of high-speed networks first hand.
- ✓ Encourage more businesses to take classes on using e-commerce technologies.

NETWORKED WORLD ENABLERS

WHY IS THIS IMPORTANT?

Everyone should have the opportunity to participate in the information age economy, but many people can not or will not. Many of the barriers to connectivity are invisible. Some people avoid the Internet because they are worried about protecting their privacy, about break-ins, and about legal protections if something goes wrong. Policy makers overlook key issues that prevent progress, such as allowing digital signatures, and facilitating accelerated construction permits. Or the barrier might be as simple as not realizing that there is a free, high-speed computer in the library across the street, and librarians who are only too happy to help a novice get started.

Of the 44% of adult Americans who are not connected,⁹ at least half say the Net does not have any value for them. Many of the holdouts are already out of the workforce. But there is a substantial number of Americans of working age who still can be reached. We need to identify and remove the invisible barriers to connectivity – lack of knowledge, privacy and security fears, access and public policies.

HOW ARE WE DOING?

A key enabler is ubiquitous access. All five County libraries provide free Internet access during their open hours, but we need safe access points that are open in the evenings.

We learned from one workshop participant who specializes in computer security that few organizations are taking basic precautions to protect their

computers from hackers and viruses. With the notable exception of the food processing companies, workshop participants believe that only about 10% of always-on connections have firewalls. E-mail is rarely encrypted, and virus software is not updated very often.

Few, if any, public agencies or businesses post privacy policies on their websites, and less than 10% of consumers believe they understand how to protect their privacy when on-line. This will grow in importance as we expand the number of websites and offer more services.

Our public policy leaders need to become more familiar with key policy issues such as privacy, competition in the telecommunications market, and security. The County and cities can play a strong role in leading the way for our business community and residents.

WHAT NEEDS TO BE DONE?

Madera County enterprises and residents will embrace the new technologies as they grow more aware of ways to protect themselves and as our community leaders show the way.

To address these issues, workshop participants suggest the following initiatives:

- ✓ Create a forum where public agencies can share best practices in privacy, security and policy.
- ✓ Meet with policy makers to encourage them to develop strategies for improving access to high-speed services in rural and low-income communities.

⁹ Pew Internet American Life survey, January 2001

APPENDIX

Connecting Madera County Steering Committee

April 26, 2002

Al Lucchese	City of Chowchilla
Allan Shearer	Ponderosa Telephone
Bob Brown	City of Madera
Bob Carlson	P.G. & E.
Bob Kelley	Madera Community Hospital
Bonnie Holiday	Madera County Board of Supervisors
Carol Rau	Fresno-Madera Medical Society
Cheryl Rudd	SBC Pacific Bell
Christine Boozer	Sierra Telephone
Debi Bray	Madera Chamber of Commerce
Dennes Coombs	Coombs Inc., Riverbend Ranch
Dennis Patrick	Madera County Information Technology
Don Horal	Greater Madera County Industrial Association
Don Yeager	Madera Community College Center
Donald Holley	Madera Chapter of the NAACP
Jack Climer	MCI/Worldcom
Jaime Franklin	Children's Hospital – Central Valley
Janine Williams	Madera County Information Technology
Jason Baldwin	Madera County Farm Bureau
Jim Michael	CSU Fresno
John Sears	Madera County Administration
Julie Tone	SBC Pacific Bell
Kathy Carey	Real Estate
Kevin Weaver	City of Chowchilla
Mark Lozada	Madera Hispanic Chamber of Commerce
Nancy Red	City of Chowchilla
Phil Atkisson	Oakhurst
Robert Winslow	Friends of the Library
Sabine Balabin	Yosemite-Sierra Visitor's Bureau
Sally Frazier	Madera County Office of Education
Stell Manfredi	Madera County Administration
Warren Lloyd	Fresno-Madera Red Cross

Workshop Participants

Business

Janine Marklund Fruit Basket Restaurant
 Jennifer Shehorn Economic Development
 Commission
 David Sullivan Relief Technologies of
 Madera
 Rebecca Lane Rebecca Lane Realty
 Steve Varner Coombs Inc.
 Frédéric Martin Working Arts

Agriculture

Clay Daulton Farm Bureau/Cattlemen
 David Robinson Madera County Dept. of
 Agriculture

Communications

Alan Shearer Ponderosa Telephone
 Bill Craft SBC Pacific Bell
 Craig Yamato Nortel Networks
 Emerson Tripoli Elecom
 Eric Vargas Ponderosa Telephone
 John Black MCI Worldcom
 Mark Hendrickson PG&E
 Mike Wilcox MCI Worldcom

Community-Based Organizations

Mike Fuller Maderans Making a
 Difference
 Nancy Clute Madera County Arts
 Council

Education

Don Yeager Madera Community
 College Center
 Jeff Bottorff K-12
 Jim Michael CSU Fresno ITS
 Ron Manfredo Madera Adult School

Government

Barry Thorn Madera County Sheriff
 Bob Brown City of Madera
 Dan Garcia Madera County
 Treasurer/Tax
 Hub Walsh Madera County Dept. of
 Social Services
 Janice Melton Madera County Mental
 Health
 John Sears Madera County
 Administration
 Jose Luis De La Rosa City of Madera
 Kevin Weaver City of Chowchilla
 Leonard Garoupa Madera County Planning
 Melissa Crawford Madera County Fire Dept.
 RuthAnne Harbison Madera County Env.
 Health
 Stacey Gamble Madera County IS
 Stell Manfredi Madera County
 Administration

Libraries

John Taylor Madera County Library

Detail Assessment Results

	Stage 1	Stage 2	Stage 3	Stage 4	1 Yr. Goal
A. THE NETWORK (INFRASTRUCTURE)					
1. Residential Rural Urban	1+	2+			2+ 2+
2. Commercial Rural Urban		2+	3		2+ 3
3. Fixed Wireless Rural Urban		2 2			2+ 2+
4. Mobile Wireless Rural Urban			3 3		3 3
B. NETWORKED PLACES (ACCESS)					
5. Business Ag Production Ag Processing	1+ 1- 1+				1 2-
6. Government County Cities	1-	2+			2 3-
7. K-12 Schools		2-			3-
8. Higher Education	1+				3
9. Libraries		2+			2+
10. Healthcare					
11. Community- Based Organizations		2			3
12. Home	1-				1

	Stage 1	Stage 2	Stage 3	Stage 4	1 Yr. Goal
C. NETWORKED APPLICATIONS AND SERVICES					
14. Business Ag Production Ag Processing	1+ 1	2			3 2- 3-
15. Government County Cities	1 1+				2 2+
16. K-12 Schools	1+				2+
17. Higher Education		2-			3
18. Libraries		2+			2+
19. Healthcare					
20. Community- Based Organizations	1				2
D. NETWORKED ECONOMY					
22. Innovation	1				1
23. Workforce	1+				2+
24. Consumer	1-				1
E. NETWORKED WORLD ENABLERS					
25. Ubiquity Rural Urban	1- 1-				1- 1
26. Security	1				2
27. Privacy	1				1
28. Policy	1-				1

Multiple groups evaluated rows 23 through 28. The above scores are averages of their ratings.

Local Perspectives

Lane Realty – Rebecca Lane

Lane Realty is a one-woman independent brokerage that serves the eastern part of Madera County. Rebecca opened her office in North Fork in 1996 and launched her web site in 1998. Thanks in large part to the web, Lane Realty's business has grown four-fold. Buyers are contacting Rebecca from all over the U.S., Israel, Japan, and other parts of the world. A significant number of buyers want to telecommute. We need better services in the foothills to support them.

Madera County Environmental Health Department – Ruthanne Harbison

The Department has invested in a GIS system to identify and monitor water sources. They have mapped 217 small water systems throughout the County at less than one meter resolution. Ruthanne chairs the County GIS Committee and leads a San Joaquin Valley-wide GIS coordination team.

Riverbend Ranch e-Village – Steven Varner

Dennes Coombs is planning a 30,000 home development near Avenue 12 in Rio Mesa. The target buyer is a telecommuter who will work for UC Merced, and other local businesses, as well as people working in Madera, Fresno, Clovis, the San Francisco Bay Area and Southern California. The developer, Property Development Group, has conducted extensive focus group studies to determine what telecommuters need in their homes. They are partnering with Nortel for the technology and working with California State University Fresno, the Chawanakee School District, two utility companies and Caltrans. A goal is to build an environmentally sensitive community that minimizes auto traffic and encourages teleworkers to use local community centers for meetings.

Daulton Ranch – Clay Daulton

The Daulton Ranch has relied on DTN, a satellite-based service, for commodity prices and agricultural news for many years. The company would like to use the Internet to sell cattle, to obtain agricultural permits, and to speed access to the Farm Credit System for monthly loan reporting. The ranch granted an easement to run a fiber optic cable across its land, but the company is unable to get the high-speed services it needs.

Madera Arts – Nancy Clute

The Madera County Arts Council is heavily dependent on e-mail for its operations. Its website – www.maderaarts.org – provides information on its programs and a calendar of events. The Council has been a member of the California Arts Council since 1982.

Maderans Making a Difference – Mike Fuller

Maderans Making a Difference is working on plans for a community portal on the Internet. The organization is also working on a smart card application to help migrant workers transfer funds to Mexico without having to pay high fees. Any excess revenues from the project will go to local non-profits.

AcceleratorOnline – Amy Chubb

AcceleratorOnline is a virtual business incubator based at CSU Fresno. It provides entrepreneurial training for students and established small businesses, and internship opportunities for MBA students. Twenty-five high school students, including several from Madera County, have enrolled in a program to learn how to prepare a business plan. They are now recruiting potential Virtual Incubator Tenants as well as people interested in the online entrepreneurial training.

High Tech Crimes Task Force – Sgt. Kevin Weaver

The Chowchilla Police Department is participating in a State-sponsored regional high tech crimes task force that is based in Fresno. The region stretches from Tulare to Modesto. Participants are receiving training and equipment for investigating high tech crimes. A computer forensics lab is being set up in Fresno. Computer companies like Hewlett-Packard are providing equipment and cash for the program. The program has helped Chowchilla with four computer crimes in the last 12 months, including one \$400,000 embezzlement case.