COUNTY OF SAN JOAQUIN
STRATEGIC DIRECTION FOR INFORMATION TECHNOLOGY

Expanding Possibilities…Creating Solutions

By the year 2010, San Joaquin County government will transform the manner in which it provides services to the public and its employees so as to promote efficiency, economic development, and improved quality of life.

San Joaquin County is committed to improving the effectiveness and efficiency of government services through the use of technology. It is the intent of San Joaquin County to judiciously invest in automation in order to improve service delivery to the public, businesses and County employees.

The rapid advancement of information and telecommunications technology is creating opportunities for the County to not only improve efficiency and lower costs, but to also redesign products and services, re-engineer business processes and transform the way people work and live.

San Joaquin County is committed to improving customer service by implementing technologies and industry proven processes that make government services more transparent and more convenient. The County will use technology to extend the hours of service to the public and provide electronic County services in a manner that will ensure their availability to all County citizens, regardless of economic status.

VISION

By the year 2010, technology will play a vital role in the way government services are delivered in San Joaquin County. Citizens and businesses in San Joaquin County will complete a majority of their routine interactions with local government via automation. The level, quality and cost of public service will improve as technology is utilized to expand possibilities and create cost effective solutions that make government more available and accessible. Government services will be available 24 hours a day, 7 days a week. Technology will facilitate coordinated services from the County that focus on the individual and are not constrained by departmental or geographic boundaries.

BACKGROUND

As the 15th most populous county in California, San Joaquin County has responsibility for providing a wide and diverse range of programs and services to approximately 613,000 County residents. In order to accomplish this mission, the County is organized into 28 departments with more than 6,500 full and part-time employees. Although many of the County operations are concentrated in downtown Stockton, the County delivers services and has sites throughout a 1,448 square mile area.

San Joaquin County provides over 400 different programs and services for its constituents ranging from prenatal care by Public Health to senior services from the Department of Aging. The County provides protection under the law to its residents through the Sheriff's Patrol and Custody systems. The County also provides its constituents with health care services through San Joaquin General Hospital, as well as providing for their recreation through Community Centers and Park and Recreation programs. In addition to providing County services, the County is the provider of many state and federal mandated programs such as WorkNet and CalWorks. These are just a few examples of the scope of work of San Joaquin County. The service spectrum is immense.

Business Challenges

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The County is continually assessing its current business and computing environment, searching for opportunities to increase operational efficiency and improve the service it delivers. During this assessment, a number of issues ("Business Challenges") were identified. A summary of the Business Challenges are listed below:

Decreasing Budgets

Government budgets in California are being stretched and will continue to be stretched into the foreseeable future. San Joaquin County will have limited dollars available to invest in technology; those dollars must be invested for the greatest overall good to the County.

Growing County Population

San Joaquin County is one of the fastest growing counties in the nation. As the County's population grows, the

demand for County services and the cost of delivering County services is likely to grow correspondingly.

Changing Demographics

As the population in San Joaquin County changes, so do the County's demographics. The number of households in San Joaquin County that have and use a computer is growing. County government faces the challenge of delivering cost effective solutions to constituents that will likely expect government services to be commensurate with the services they receive from private businesses – namely services that are available when it is convenient for the customer and available via their home computer.

Service Constrained by Organizational Structure / Process

In many cases today, it is very difficult for citizens and businesses to know who within County government provides the services they seek. In certain instances, multiple departments are involved in delivery of the service, requiring a citizen to travel around San Joaquin County, going from department to department, in order to complete the entire transaction.

Aging Criminal Justice Information System

The County's current Criminal Justice Information System (CJIS) was developed in 1986. The system is used on a daily basis by nearly every law enforcement entity within the County. The system now faces two challenges. First, the Administrative Office of the Courts has announced that all County Courts will migrate away from their existing County Justice Systems and move to a new State-developed system by fiscal year 2007-08. This departure of the Courts from the County system will impact the ability of the system to function and meet the needs of law and justice entities in the County. Second, the County's existing Criminal Justice Information System has reached a point where the technologies it utilizes have become obsolete and difficult to maintain. A system outage caused by a failure of one of these older technologies would have a tremendous impact on the daily law enforcement operation in the County.

Selection and Use of Technology

San Joaquin County spends millions of dollars annually on technology. The County's technology investments are often made with a departmental focus rather than with a broader countywide perspective. The inconsistent selection and use of technology can result in duplication and excess cost to the County as a whole. The inconsistent use of technology can also create barriers to data sharing and technology use that lead to higher cost of ownership and lower benefits from the technology investment.

Technology Skills and Training of Workforce

The County's reliance on technology increases each year. The County has made significant investments in enterprise wide systems that are now used daily for a variety of essential administrative and program functions. For the County to be effective and efficient, its workforce must be adequately trained in the use of technology. At this point in time, there is not a comprehensive technology training program in the County, and the technology skills of the County workforce vary greatly from department to department.

In many cases the business challenges listed above are impediments to the County's goal of efficient and effective delivery of services to the public, its employees, and other stakeholders. To overcome these business obstacles, San Joaquin County has formulated an overall technology strategy.

STRATEGY

San Joaquin County seeks to maximize the investment of each dollar spent on technology in order to improve overall business operation and service to the public. To accomplish this, the County will make appropriate investments in technology in order to:

- *Improve County Service Delivery*
- *Expand County Services*
- *Realize Efficiencies*

To accomplish these goals the County will, with guidance from the County's Chief Information Officer (Director, Information Systems Division), focus on four strategies:

STRATEGY #1 **The County will sponsor projects that provide secure public access to government services.**

- Wherever possible, the County will provide on-line public access to appropriate government information
- The County will seek public input on what County services or information they would like available on-line
- The County will promote electronic commerce as an alternative form of delivery of government services and transactions
- The County will ensure security and confidentiality of information and electronic transactions, giving special attention to compliance with the Health Insurance Portability and Accountability Act.

STRATEGY #2 **The County will provide standards, guidelines and training to facilitate innovation and a cohesive business operation.**

The County will:

- Develop and actively maintain a comprehensive IT Disaster Recovery Plan
- Develop, maintain and actively enforce comprehensive Information Security policy and procedure
- Establish a coordinated approach to automating shared business processes
- Continue to support an Information Technology Management Committee responsible for the review of all major IT efforts in the County
- Adopt and implement the Federal Enterprise Architecture (FEA) model for technology
- Apply project management techniques to all IT projects
- Establish, promote and enforce countywide IT standards
- Establish tools, methods and policy that facilitate the concept of collecting information once and sharing the information with those individuals who have the right to use it

STRATEGY #3 **The County will develop and implement a robust, interoperable information technology (IT) environment.**

The technologies and practices implemented by the County will:

- Manage data to satisfy the needs of a diverse customer base
- Support the collection, storage, and utilization of multi-media, including text, audio, images, maps, and video
- Consolidate (where appropriate) like technologies to reduce costs, eliminate unnecessary redundancies and free up limited technology staff
- Reduce the need to store paper documents
- Provide flexibility and ease of access to County services and information
- Foster greater collaboration and data sharing
- Focus on selecting proven, "off-the-shelf" solutions wherever possible
- Improve the reliability and responsiveness of the technology being used

STRATEGY #4 **The County will utilize technology to control operational costs.**

The County's operational costs are likely to grow as the County strives to serve the needs of a rapidly growing population. The County will consider the following as a means of controlling costs:

- The County will investigate Open Source software solutions as a means of reducing ongoing software maintenance costs
- Where feasible and prudent, the County will seek to establish public / private partnerships for the implementation and support of technology
- The County will review the replacement of computer hardware to determine if its useful life can be extended

TECHNOLOGY

A number of existing, new and / or developing technologies will be vital tools to San Joaquin County as it strives to achieve its stated technology vision. Technologies that will be critical to the County include:

Security Technology

Security technologies are essential to the County's effort to ensure that its automated systems and the data they store are secure and that privacy / confidentiality of those served is protected. Anti-virus, Anti-SPAM, Intrusion Detection, data encryption, biometric security devices and other security technologies are, and will continue to be, essential tools for the County as it combats the rise in computer-based attacks.

Web Technology

Web technologies, both the Internet and Intranet, will be the foundation for the delivery of electronic services. The County will utilize web technologies to deliver services to constituents, businesses and employees. This technology will allow users to access information and services via computers, telephones and other devices that connect to the web. Business partners will interact with the County via special Internet connections that provide confidential and secure business transactions. When used in combination with many of the other technologies listed below, the County will be able to provide improved access to government solutions that better service the public and employees, freeing up limited staff for more direct service to the public.

Integrated Voice Recognition (IVR)

Integrated Voice Recognition technology will be used by San Joaquin County to provide electronic services to citizens and employees who do not have computers. Using a common touch-tone telephone, customers and employees will have access to many of the same services the County delivers to computer users via the web.

Document Management / Imaging

The use of Document Management / Imaging technologies will be expanded to facilitate greater levels of document storage and retrieval. The County currently utilizes a large amount of space to store paper documents. A coordinated implementation of Document Management / Imaging technology will decrease the amount of needed storage space, improve access to information, and facilitate data sharing.

Wireless

The County will expand its implementation of wireless technologies that support the work of County employees while they are in the field, facilitating the delivery of County services to those who need them. This technology will also be used to connect additional primary and remote County sites at a fraction of the cost of existing land-based connections. Security of the information transported via wireless connections is of paramount importance to the County, and security technologies will be integral to all wireless solutions implemented.

Portal

Portal technology will manage the delivery of electronic information and services to the public and employees. The Portal will be customizable to each user, focusing on delivering those services the user has defined as being of interest or importance. The Portal will deliver electronic services in such a way as to transcend the physical organization of County government, focusing instead on delivering a comprehensive service that appears to come from one entity – the County.

Enterprise Database

Databases shall be the common connecting point for all County business applications. Databases will be established and expanded to facilitate data sharing and provide tremendous levels of security and reliability.

Decision Support

The management and leadership of the County are routinely confronted with decisions that have broad and lasting effects. The problems to be resolved are often very complex. Decision support systems will, when combined with Enterprise Databases, allow County leaders to easily and intuitively access accurate and consistent data that will assist them in their decision-making.

Geographic Information Systems (GIS)

"Where" is becoming a prevalent adverb used by executives when analyzing business information. GIS provides a powerful tool that allows users to view a wide variety of information (physical description, land use, financial, demographics, etc) -- all tied to a location. When integrated with information in an Enterprise Database, GIS tools will provide users with the ability to integrate information in existing systems (Criminal Justice, social support, health) with location, providing new and insightful data not currently available to the County.

Workflow Automation / Collaboration Tools

Workflow automation will move information through a work process electronically. As processes are re-engineered in order to facilitate greater efficiencies and / or service levels, the ability to quickly move information through the process will be critical. Workflow automation will move vital information through each step in a process, allowing for electronic signature and performance metrics to be captured and tracked. The County will implement automated workflow between processes in order to transmit data when, and to where, it is needed.

Multi-function Server Technologies

New technologies in the server environment will allow the County to consolidate computing power to reduce licensing, hardware and support costs. This consolidation of computing power will streamline the server support function, allowing the County to more effectively utilize its existing technology personnel. Technologies such as Blade Servers, Server-based Computing, Network Storage and

Virtual Machine functionality will be powerful tools for the County as it focuses on controlling technology costs and improving computing reliability, security and performance.

Video Technologies

Video Technologies will allow the County to deliver information and services in a new and easily accessed medium. For example, Video Conferencing technology will allow the County to deliver collaborative services, without the need to co-locate employees from different departments at one site. Web Seminar technologies will provide tools that will allow employees to participate in training and information sharing with other employees from their computer in their office. Streaming Video technologies will provide the citizens of San Joaquin County the ability to view Board of Supervisor meetings from their home computers. These technologies can be used to improve service to customers and facilitate greater levels of communication amongst County employees.

A DAY IN THE LIFE

Given the County's IT Vision for the future and taking into account the key technologies listed above, a possible day in the life of San Joaquin County employees who interact with the public in 2010 might be as follows:

Jay Smith's job is to provide customer contact support for a major San Joaquin County department. The department is responsible for providing a wide and varied number of services to the citizens of San Joaquin County. Jay starts the day by replying to a number of emails and voice mails that were received the previous night from citizens needing help. Jay uses his personal computer to first log the incoming citizen requests, and then begins to answer the inquiries. To help Jay answer the questions received, he accesses a central repository of information that is intended to act as a countywide knowledge base. By using the knowledge base, Jay is able to tap into a vast store of information designed to answer the most common questions and inquiries about County services. In the past, Jay would have been required to seek the advice of others on how best to address many of the questions posed by citizen inquiries – in some cases apologizing to the citizen

because he simply did not know who in the County provided the service the citizen was seeking. With the technology available to Jay, he is now able to address a wide variety of customer questions quickly and accurately.

As the day progresses, Jay helps a number of citizens who call in for help. As the calls come in, Jay's computer shows who is calling and any non-confidential history about the citizen regarding previous or ongoing contacts the citizen has had with the County. This information helps Jay to ensure continuity and consistency of the services provided, and helps avoid any "Round Robin" incidents that sometimes occur as customers are passed from department to department and then back again in search of answers.

Jay fields a variety of questions from callers, including some requests for information that are not part of the service supplied by his department. Because Jay is able to access a countywide knowledge base, he is able to answer basic questions for customers. For the more difficult questions, Jay is able to electronically route the call or email, as well as the information gathered about the customer and their request instantly to another support person in the appropriate department – allowing the customer to receive service in a timely and efficient manner. For those requests for service that Jay is unsure who to route the information to – he can identify the key aspects of the request and the system routes the service request to the appropriate service provider – which may be a different person in his department or another department in the County.

Jay's supervisor uses her computer to monitor the service levels her unit is providing. The supervisor is able to see the number of customer contacts that have occurred that day, the average response times, the number of still pending inquiries for service or information, and the types of calls being received. The system highlights all service requests that are taking longer than normal to resolve, and escalates any service requests that are overdue or of a critical nature to her for review and action. The supervisor is also able to utilize enhanced analytical tools that look for trends in customer contact, noting routine peak periods in calls, trends in customer calls, and other factors that provide key information that will allow the supervisor to more effectively manage and operate her unit.

Jay's Department Head uses his desktop computer to monitor the service performance of each core function of his department. He is able to quickly scan his computer screen to monitor key performance indicators for each functional unit; track the budgetary spending of each of the key functions; and review the current status of vacancies in his department.

Later that same day, the Department Head prepares for an upcoming Board of Supervisors presentation. The Board is very interested in the status of a new service program and will ask questions about how the service is being provided, how is the program performing, how has the money for the program been spent, who is utilizing the service and where in the County is the majority of the service being provided. In preparation for the meeting, the Department Head and / or his support staff access a variety of technologies that tap into the County's information systems. The Department Head is able to utilize enhanced analytical tools similar to those used by the supervisors in his department to access information and statistics available in both departmental and countywide systems. The Department Head can access the County financial, purchasing and project costing systems to show how much money was spent and on what. The Department Head can also utilize the customer contact information entered by Jay and other customer service employees in combination with the County's Geographic Information System to see pictorially where the majority of service calls are coming from for this new program. Via his desktop computer, the Department Head has at his fingertips critical information about the operation of his department that was not easily available in the past.

The scenarios described above are possible. The County has already implemented some of the key technologies needed to make these events a reality. By utilizing existing and new technologies to coordinate service and information, the County has the opportunity to improve the timeliness, consistency, quality and cost effectiveness of service provided to the citizens of San Joaquin County. To accomplish this vision, continued investment in technology and the re-engineering of business processes are the critical steps necessary to bring this scenario, and other creative solutions, to fruition.

ACTION STEPS

The County will focus its attention on both short and long-term actions to make the IT Vision described in this document a reality:

Short Term Actions

Standards

The County will continue its effort to institutionalize countywide technology standards. Information technology funds are limited and must be utilized in a manner that maximizes information sharing and organizational productivity, while at the same time minimizing long-term cost of ownership. Standards recognized and adopted by all County departments will optimize expenditures and facilitate data sharing. To ensure that the standards are representative of the overall needs of the County departments, a formalized mechanism will be established to collect feedback on the standards and create a review process for existing standards. The County also intends to adopt and implement the Federal Enterprise Architecture (FEA) model. This comprehensive technology framework has been adopted by both the Federal government and the State of California. Compliance with the FEA will be a requirement for many future Federal and State technology grants.

Staff Development

The use of technology is becoming an integral part of County employment. The County plans to establish an ongoing computer skills training curriculum as part of its employee training program. This curriculum would ensure that all County employees who regularly use computers in their daily job are adequately trained. It is also critical that the County invest in training for IT professionals to ensure that their technology skills are kept current.

Website Redesign

The County intends to redevelop its website to facilitate service and information delivery to the public. The website will be developed using methods and tools that will support future efforts to deliver more services electronically. The redeveloped site will focus on coordinating the County's various disparate websites into one cohesive framework that provides citizens with a single point for accessing all San Joaquin County online services and information. The County will also redevelop its Intranet site. The intent will be to maximize the use of the Intranet by improving the site so that it delivers new functionality employees will find helpful. The Intranet will provide employees access to a number of electronic services, such as e-procurement, e-time and a countywide employee e-mail and phone directory.

Modernize CJIS

The County will redevelop its Criminal Justice Information System (CJIS) in preparation for the San Joaquin County Courts migration to the State-managed Court system. The County will develop interfaces and functions that continue to support the law and justice duties of the Sheriff's Office, Public Defender, District Attorney and Probation Department, as well as the needs of other local law enforcement entities. During the redevelopment effort, the County will focus on reducing unnecessary redundancy and consolidate like functions to decrease costs and improve overall system performance.

Consolidation

As part of an ongoing strategy, the County Administrator's Office looks for organizational restructuring opportunities. In the 2005-06 Budget Message to the Board of Supervisors, the County Administrator identified information technology support as a potential area for consolidation or rearrangement. Prior to the end of fiscal year 2005-06, the County Administrator will report to the Board of Supervisors on the feasibility of consolidation / rearrangement of IT support and services in the County.

Telecommunications Planning

The County will continue its efforts to develop plans that benefit both County Government and the region. The newly developed Master Radio Communications Plan developed by the County and the Cities within the County is an example of the regional telecommunication planning that will be fostered in the future.

The Telecommunications industry is changing dramatically. Newly developing technologies for Wireless communication, radio and telephone systems have the potential to improve the speed and cost of the services provided. The County will evaluate the changing technologies with the intent of consolidating functions wherever possible to reduce the number of devices in the field, and thereby reduce the operation cost to the County. Lastly, when the County constructs a new building or makes major modifications to an existing structure, technologies such as Voice over Internet Protocol, video conferencing, and advanced presentation services for public forums will be seriously reviewed for implementation.

Long Term Actions

Focused Funding
The County will fund only those projects that improve service to the public, as well as those projects that foster greater collaboration and information sharing amongst departments.

Regional Partnership
The County will make every effort to develop regional partnerships that will enhance and expand electronic services to the public. Utilizing many of the key technologies listed above, the County, in partnership with other local municipalities, has the opportunity to deliver electronic services in a collaborative fashion.

Expansion Of Electronic Services
The County will evaluate each upcoming technology and process improvement project to determine if the services would be effectively delivered electronically (Internet, touch tone phone, etc). Not all County services lend themselves to electronic delivery. However, those services that will deliver value to our citizens via an automated approach should be delivered in that manner.

Voice over IP
The County will investigate the viability of Voice over Internet Protocol (IP) technologies for future use in the County. The County Communication Officer will ensure that all future telephone contracts have a provision that allows the County the option of procuring both standard telephone services and Voice over IP technologies and services.

Conclusion

This Strategic Plan outlines the vision San Joaquin County has for utilizing technology. The County's intent is to make technology investments that result in expanded hours of service to the public, efficiency improvements in County business practices, and improved service to the public. The County recognizes that the effective combination of technology and government will enable the expansion of government services while at the same time reducing costs and streamlining processes.