Enterprise Information Technology Strategic Plan

2006 Update

For the 2001 Strategic Plan and 2003 Supplement

Nevada County
Information & General Services Department

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Overview

Executive Summary

The County of Nevada has accomplished many technology projects and objectives since the first strategic plan was published and accepted by the Board of Supervisors in 2001. This document is an update to that original plan and its 2003 supplement. This update incorporates a new document format and streamlined approach.

Improving and automating County business processes is the highest priority and most strategic initiative in this update and will have a profound affect on the County as an organization. These effects will be seen in increased productivity, efficiencies, and effectiveness. Process automation will facilitate higher levels of customer service for our citizens as well as reshape how the County interacts with our citizens, providing them an increased level of accessibility and accountability.

Other key strategies and trends identified from the Community of Interests and by performing technology surveys with all County departments include:

- A need for more document imaging and management solutions across multiple departments.
- A need to develop more robust and comprehensive disaster recovery and business continuity plans and capabilities.

There are several significant issues on the horizon that could have a major impact on the County. Information privacy and security issues continue to present an on-going concern and require ever-growing resources to address. Unfunded Federal regulations such as HIPAA continue to escalate this issue and the Sarbanes-Oxley Act of 2002 may be coming to the public sector in the near future. The County needs to be very selective when purchasing new technology, as our information systems staffing levels cannot support a wider breadth of technology or a more complex environment. County departments have invested in technology and rely heavily on it to meet their business objectives. This investment must be protected and sustained so that it is not compromised and diminished over continued periods of challenging budgets.

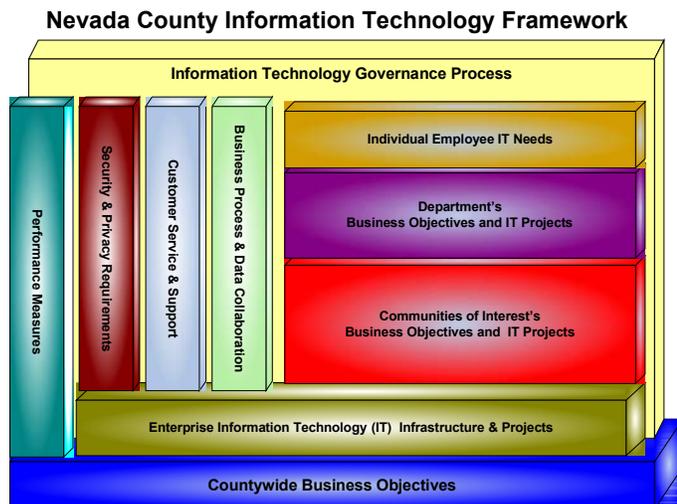Top county business issues identified during departmental interviews:

1. Control escalating personnel costs.
2. Respond to Citizen/Customer/Partner demands for more sophisticated service offerings.
3. Meet rising service workloads and citizen service immediacy expectations with current staff levels.

The cost for employees is the County's largest single budget component, as it is in most organizations. This cost comprises up to 90% of the budget in some County departments. The effective use of technology applied in conjunction with proper business process improvement initiatives can help the County manage this ever-escalating cost. Helping County employees to be more efficient and effective, thus, enabling departments to avoid increasing staffing levels as service level demands rise. This is the strategic plans number one objective.

As we move further into the 21st century, our citizens, customers, and business partners all are becoming more technology sophisticated in their own realms. From on-line banking and home shopping, to electronic payments and information sharing partnerships, all aspects of our society are utilizing more complex technology solutions. County departments are feeling this pressure at all levels and in all areas. There is a growing demand for county services and operations to be more automated and sophisticated in their technical abilities.

While our citizens expect their county government to be effective and cost efficient, they also have rising expectations on the services we provide. These rising expectations are driven by the commercial sector that fiercely competes with one another for market share, raising the bar on customer service, service experience, and service responsiveness. The expectation for immediate service and responsiveness places a large burden on staffs that have to produce more output with the same resources and for organizational structures that were not originally designed to provide this level of service. Rarely any longer do citizens place a question or request in a paper letter, then US post mail it taking three days to arrive to staff, staff taking a few days to respond, and then finally the response taking a few days to be delivered back to the citizen. Today, citizens send their questions via email and expect a response back in a few hours or sooner. Not only is this more work for county staff, but preemptive work that is compressed into a shorter, more rigid time frame. Departments must innovatively utilize the County's current technology resources to meet this growing demand and citizen expectation.

A significant new component of this plan is an Enterprise Architecture (EA) document. An EA describes the people, processes, and technologies that an organization utilizes to develop their technology solutions. It is a guide to assist customer department business managers and Information Systems staff in working together to implement and mature Information Technology (IT) projects and services at the County of Nevada. It is a strategic document addressing the management and development of our technologies. This is in contrast to this core plan that speaks to how the County can use technology to make services better, faster, and cost efficient.

Nevada County Information Technology Framework

- Information Technology Governance Process
- Performance Measures
- Security & Privacy Requirements
- Customer Service & Support
- Business Process & Data Collaboration
- Individual Employee IT Needs
- Department's Business Objectives and IT Projects
- Communities of Interest's Business Objectives and IT Projects
- Enterprise Information Technology (IT) Infrastructure & Projects
- Countywide Business Objectives

Accomplishments

In the past two years the County has completed these and many other accomplishments.

1) Upgraded our Financial and Land Management Applications.

2) Implemented Citizen Request Management software for multiple departments.

3) Automated cross enterprise business processes including the IS HelpDesk, Facilities Maintenance Request, HR Personnel Action forms, and Board Order Tracking.

4) Expanded and implemented document imaging and management infrastructure and solutions in multiple departments.

5) Web enabled multiple services for the public, including online Building Department permits and GIS interactive maps.

6) Implemented a wide range of video conferencing equipment and abilities for departments and for the Board of Supervisors' meetings.

7) Greatly enhanced our GIS infrastructure and data layers. Created custom on-line map applications for several departments, including the Sheriff, CDA, and DOTS.

8) Replaced and implemented new major applications for the DOTS, Library, Sheriff, Probation, Elections, Recorder, and HSA departments.

9) Developed an ongoing private-public partnership with the Economic Resource Council which created, and the County is hosting, a GIS based "Business Relocator" application.

10) Interconnected Countywide law enforcement agencies with the County network so all agencies can share and search one another's relevant databases and documents.

11) Implemented HIPAA security policies and developed an information technology security education handbook for County employees.

12) Implemented a highly praised and attended Countywide employee technology awareness and class room training program.

> A proud achievement for the County that shines a light on the above accomplishments is the acknowledgment and recognition from the Center for Digital Government and the National Association of Counties with their second place award for the past two years in a row to Nevada County from their "Most Digital County" survey program.

Vision and Goals of the Strategic Plan

To achieve a level of automation and technical ability that enables effective "seamless governmental services" (cohesive services delivered to the citizen regardless of the number of agencies involved or levels of bureaucracy required to fulfill the citizen's service need), that add value to the citizens of Nevada County, enhancing the quality of their lives while delivering the services in the most efficient, cost effective and convenient manner possible.

Goal 1: Provide automation systems and services that will enable Nevada County to achieve its stated Strategic Goals as adopted by the Board of Supervisors.

Goal 2: Set forth E-government enterprise automation initiatives and objectives "Portals" that will provide seamless governmental services at the counter, by fax, phone, e-mail and over the Internet.

Goal 3: Provide a trusted environment and forum in which all departments and agencies, through collaboration, can share ideas and resources, build partnerships, and re-engineer their mutual business workflows and customer service offerings with innovative automation solutions.

Goal 4: Form partnerships between County leaders and managers at all levels of the enterprise to keep them apprised of the capabilities and possibilities that automation can deliver for them in their efforts to improve their business and service delivery activities.

Goal 5: Reach beyond the County organizational boundaries and build partnerships with community stakeholders on technology issues and services.

The underlying objectives of the above:
- Make Nevada County a more effective and productive organization.
- Empower business managers with the ability to automate their own processes at will, and place technology decisions in their hands.
- Increase citizen satisfaction and service levels while utilizing staffing levels to the greatest possible efficiency across the organization.
- To be a catalyst for positive change and organizational development by:
  - Leveraging technology to support, promote, and increase natural workgroup behaviors.
  - Promote communications and knowledge development/management.
  - Promote communities of practice.
- To be a leader for digital government that will flow to other local agencies and automate cross-agency processes.
- Leverage County resources to help community partners be successful.

Business Case

A Fresh Look at Technology Investment

In the past, organizations have used technology to solve core business needs, meet growing service demand, and improve overall efficiencies. Automated payroll processing, check writing, and tax bill preparation are just a few examples how technology has improved business processes. These investments were driven by a business need to automate highly labor-intensive processes that could no longer be practicably accomplished by manual labor. The IT investment and thus return on investment (ROI) for these projects was very clear and tangible. As an example, you calculated the number of payroll clerk positions you could eliminate with automation. This found that the investment in some cases would pay for itself in as short a time as two years and then save money every year afterwards.

The last 10 years has seen technology investments focus on enterprise initiatives, providing technology solutions that allow employees to work together more effectively, exchange data, and store, retrieve, and share documents, as well as for organizations to service, communicate, and interact with their customers better. These investments included network infrastructures, email systems, central data depositories, document management systems, geographic information systems, and enhanced on-line websites (portals) to list a few. During this period, technology was used not only to increase productivity, but also to help transform how the organization did business and even the very products and services they provided. Amazon.com is a good example of transformation of a business model by the innovative application of technology.

Today, the delivery of many, if not, most County services and operations would come to a halt if our information systems were to become unavailable. Our citizens now rely on our website for daily information and services from Board agendas and minutes, County codes, job postings, permit status, calendar events, recorded documents, to parcel and map based information. This deep dependency that the County has on our technology has several ramifications with how we evaluate our future investments compared with traditional ROI calculations. We need to make our information systems very reliable and available 24/7/365. It is critical that we now put in place the plans and infrastructure to have continuous technical operations if a fire, disaster, or other catastrophic event occurs. However, this type of investment does not return a traditional IT based ROI as described above. The investment justification is based on risk assessment and the demand to provide continued services.

One of the largest and fastest growing costs to the County is our employees. Controlling these costs is a great challenge to both the public and private sectors. Our County will continue to grow in population and our population is aging. Both events are placing greater demands on County services and thus on our workforce. Traditionally, organizations have met this type of higher service demand by simply increasing their workforce. This is not an option in today's economic environment. Nevada County has reduced its number of full time employees by almost 100 positions over the past three years, while maintaining service levels to our citizens. Technology helped make this possible. Now, technology's goal is to help maintain current staffing levels and enable our employees to provide more services as demands and needs rise over time. IT investments need to be evaluated by cost avoidance, (not hiring new employees), rather than traditional cost savings ROI (reduce current staff levels by automating a process). This shift may see IT investments rise overall in our County. For example, a $25,000/year IT project may enable a department to avoid increasing staff levels and the resulting $100,000/year associated cost, thus returning a solid $75,000/year ROI with a 3 month payback.

Chapter 3   Goals & Objectives

Recommended Strategic Initiatives

The goals of the plan can be focused into three key areas:

1 – Process Automation

The active pursuit of improving and automating County business processes is the single most strategic initiative in this update and will have a profound affect on the County as an organization. These effects will be seen in increased productivity, efficiencies, and effectiveness. Process automation will facilitate higher levels of customer service for our citizens as well as reshape how the County interacts with our citizens, providing an increased level of accessibility and accountability. Process automation is about automating departmental business processes that live outside of their major applications. These target business processes are estimated to encompass over 50% of any given department's total internal business processes. Most are manual and paper-intensive processes.

Automating a business processes is only half of the equation. The first phase and most significant element is Process Improvement. This is the actual re-evaluation and re-design (reengineering) of the business process. County managers at all levels need to be trained to properly evaluate, improve, design, and review the business processes that they manage. Not every business process should be automated, and those that are should be fully examined and re-evaluated before technology is introduced.

2 – Document Imaging and Management

A key strategy and trend identified from the Community of Interests (COI) and by performing technology surveys with all County departments is the need for more and deeper use of the County's current Enterprise Document Management System (EDMS). Our County departments have many paper intensive business processes. These processes can be greatly enhanced and made more efficient through EDMS solutions. In addition, the electronic storage and retrieval of these documents will further our efforts to provide more transparent, accountable, and accessible services to our citizens.

3 – Business Continuity and Disaster Recovery

County departments have invested in technology and rely heavily on it to meet their business objectives. Many County services could not be performed if these systems and applications were unavailable. More robust and comprehensive disaster recovery and business continuity plans and capabilities need to be put in place. While the Information and General Services Department has high level recovery plans for the main data center and data infrastructures, capabilities for uninterrupted services now need to be put in place. Departmental business continuity and continuation plans from Y2K efforts need to be updated.

The following tables layout two year goals and IT objectives for each of these three strategic initiatives.

1-Process Automation

2 Year Goals		IT Objectives
1. Complete current "example" enterprise projects that demonstrate solid process automation in the County.		A. Fully deploy web based time sheets B. Fully deploy the ePersonnel Action Form C. Continue to deploy the County's CRM system to new departments
2. Identify enterprise and departmental business processes to improve and automate.		A. Further analyze results from IT surveys B. Bring target projects to COI's and ISSB C. Prioritize and scope projects
3. Educate county business managers on process improvement techniques. Introduce them to the graphical tools available to design an automated business process.		A. Conduct process improvement training B. Conduct eWork business manager training
4. Implement a single enterprise web based report writer. May also include dashboard, executive management portal features.		A. Evaluate current needs B. Conduct research on available products C. Implement single solution
5. Automate various business processes		A. Cross train IS staff in eWorks B. Implement a service oriented architecture (SOA) –web based application to application messaging and data sharing ability C. Mature the eWorks infrastructure

2-Document Imaging and Management

| 2 Year Goals	IT Objectives
1. Implement disaster recovery for document stores.	A. Create hot DocuShare server B. Implement off-line storage
2. Enterprise records management	A. Implement automated document retention abilities based on current County retention policy B. Promote and train records management best practices to all departments
3. Expand the use of document imaging, integrating it with other key Countywide and departmental applications.	A. Add document imaging abilities to the Pentamation financial applications. B. Workflow automate the current manual accounts payable approval processes C. Continue property-based scanning projects D. Interface DocuShare with eWork
4. Implement a centralized scanning services center.	A. Complete and publish indexing standards. B. Publish scanning best practices C. Expand scanning services from Central Services operations.

3-Business Continuity and Disaster Recovery

2 Year Goals		IT Objectives	
	1. Complete comprehensive disaster recovery plan.		A. Continue the refinement of the data center disaster recovery plan
	2. Implement hot standby servers for core critical County applications and services.		A. Identify core services/applications for project B. Implement standby servers C. Conduct regular testing and verification operations
	3. Assist departments with developing business continuity and continuation plans for critical technology services.		A. Research best practices from other organizations B. Develop Nevada County recommended methodology C. Work with departments to develop plans
	4. Implement an off site hot backup data center at a County facility.		A. Perform needs assessment B. Complete I-Net infrastructure project C. Transfer standby servers to new location

4   Governance Structure

Structure

The governance strategy of the organization is to have a partnership model that encompasses all those who are involved in different points of the information pathways. All policy, strategy, technical, operational, implementation and support aspects of Nevada County's information systems are included in this methodology.

The Nevada County Technology Partnership Model
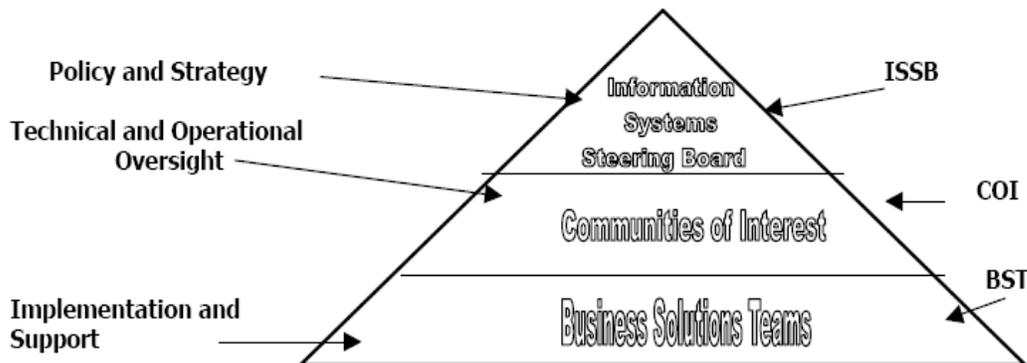
Information Systems Steering Board

The Information Systems Steering Board (ISSB) sets the policy, strategy and direction of Nevada County's information systems. This group represents all facets of the County and is chaired by the Chief Fiscal Officer. Departments are represented by the chairs of the Communities of Interest. The ISSB prioritizes projects from a countywide perspective.

Communities of Interest

Communities of Interest (COI) create a forum for identifying and overseeing information technology activities which are related to business processes and cross-departmental boundaries. In addition they have the technical and operational responsibilities for their particular area. Each COI has a chairperson, who is the representative on the ISSB. The COI's prioritize projects and funding according to their interests, and represent those at the ISSB meetings.

They are represented as follows:

Community Of Interest	Departments Represented	Chairperson
Internal Services COI	Auditor - Controller, Treasurer – Tax Collector, Board of Supervisors, Personnel, Information & General Services, DOTS	Rich Reader & Michael Hill-Weld
Justice COI	Courts, District Attorney, CSS, Public Defender, Sheriff, Probation, Code Enforcement, Welfare Fraud, County Counsel	Michael Ferguson
Development & Environmental Management COI	Assessor, CDA (Building Inspection), Code Enforcement, Planning, Environmental Health, DOTS	Dale Flippin & Steve DeCamp
Enterprise Information Management COI	Information & General Services, DOTS	Diana Carolan
Public Safety COI	Sheriff, Public Health, Emergency Management, Juvenile Hall, Probation, Victim Witness	Bob Wood
Community & Social Programs COI	Clerk Recorder, Elections, Library, Human Services Agency, Child Support Services	Jeff Brown & Kathy Barale

Business Solution Teams

The Business Solution Teams are the experts in their area. They will handle the implementation and support of each particular project.

A further in-depth explanation on the County's IT Governance process and funding approval process can be found in the accompanied Enterprise Architecture document.

Monthly Review

The ISSB will be reviewing the project status on a monthly basis. Additionally, on a monthly basis, the Information and General Services staff monitors and reviews all strategic projects. More information on this process can be found in the accompanied Enterprise Architecture document.

Continuous Process Improvement

Continuous Process Improvement (CPI) needs to become part of our County culture. This will happen as County managers at all levels are trained on process improvement and are introduced to the technical systems available to them for process automation. Process automation enables managers to proactively monitor work. It shines light on potential bottlenecks, delays, and inefficiencies that may live in complex business processes. This "light" enables managers to redesign and improve their processes to be as efficient, effective, and customer-focused as possible. CPI must become part of the County's core competencies, values, and goals. CPI needs to take place at all times and the ISSB should monitor how departments are utilizing technology in these efforts. Best practice sharing across departments will assist in this effort.

Departmental Technology Planning

As part of the process to update this enterprise strategic plan, technology needs assessments and surveys were performed with each County department. This information is being used to develop concise two-year technology roadmaps for each department. These roadmaps will identify opportunities where department's can utilize the County's current technology to make their employees and operations more efficient. The roadmaps will also be a useful budgeting tool for departments as they evaluate which IT projects they would like to pursue.

Appendix

The following are the projects rated by each Community of Interest (COI). The higher the rank, the more important the project is to the COI.

Rank	Internal Services	Est. Time	Est Cost.
1	Employee Self Service Center – Pentamation	0-2 years	$10K
2	Pentamation Implementation & Enhancements/fixes	0-2 years	$20K
3	Pentamation Business Continuity	0-2 years	$15K
4	Centralized Scanning	0-2 years	$20K
5	On-line job applications/applicant tracking - Pentamation	0-2 years	$10K
6	Image Enhancement of Pentamation	0-2 years	$15K
7	BOS eAgenda Workflow	0-2 years	$50K
8	Workflow of Accounts Payable Application	0-2 years	$8K
	Justice		
1	District Attorney and Public Defender Case Management Systems	1-3 years	$100-200K
2	Time/billing SW for lawyers	0-2 years	$2-5K
3	Legal research and opinions – DocuShare	0-2 years	$0-4K
4	Juvenile Hall Shift scheduling, menu planning, and inventory control application	1-3 years	$10-75K
5	PDA/Mobile Enable Probation Case Management system	0-2 years	$5 -20K
	Development and Environmental Management		
1	Property Tax System replacement	5-6 years	$1-2M
2	High-speed imaging for Treasurer/Tax Collector Office	1-3 years	$70 -150K
3	IVR integration w/One-Stop-Shop	0-2 years	$20-40K
4	Property/land document scanning - DocuShare	0-3 years	$40-90K
	Enterprise Information Management		
1	I-Net construction	0-2 years	$100-350K
2	Work flow projects - eWorks and DocuShare	0-5 years	0-$80K
3	Enterprise WEB Report Writer Solution	0-2 years	$60K
4	Enterprise Records Management	0-5 years	0- $100K
5	DocuShare hot mirror server/off-line storage	0-2 years	$50K
6	eGovernment Strategy	0-2 years	$5K
7	Catastrophic Event plan - (Offsite mirror site plan & site)	0-1 years	$200K-450K
8	Hot mirror evaluation for all systems	0-1 years	$5K
9	Master Events Calendar	0-1 years	$2K
10	Paperless agenda	0-2 years	$40K
11	Master tickler and tracking system	0-1 years	$2K
12	HAVA	0-1 years	$200K-450K
	Public Safety		
1	Sheriff Mobile Data Terminals and Data Radio Network	0-2 years	$500- 1M
2	Command Vehicle	0-1 years	$350-500K
3	Dispatch Centers upgrades and replacement	1-3 years	$50K

4	Fingerprinting stations upgrades (Identix)		1-2 years	$40K
	Community and Social Programs			
1	AFS DocuShare scanning		0-1 years	$10K

ISSB Ranked Project list

The ISSB determined the project priority for all COI projects by applying a broader countywide perspective based on such factors as business impact and customer services needs.

COI	Description	Legal/mandated	Strategic	Enterprise	Risk	Total score
PS	Dispatch Centers 911 upgrades and replacement	5	5	1	5	16
PS	Sheriff Mobil Data Terminals and Radio Network	2	5	3	5	15
EIM	Catastrophic Event Plan - (Offsite mirror site plan and site)	1	3	5	5	14
EIM	Enterprise Records Management	2	4	5	3	14
Jus	District Attorney and Public Defender Case Management Systems	2	4	3	4	13
EIM	I-Net construction	0	5	5	3	13
Int	Employee Self Service Center/all Human Resources features - Pentamation	2	4	5	1	12
EIM	HAVA	5	3	2	2	12
EIM	Workflow projects - EWorks and DocuShare	0	5	5	2	12
PS	Fingerprinting Stations upgrades (Identix)	3	2	2	4	11
Int	Pentamation Business Continuity	2	3	3	3	11
Int	Pentamation Implementation & Enhancements/fixes (Purchasing, etc) per yr	1	4	5	1	11
EIM	DocuShare hot mirror server/ offline storage	0	3	4	4	11
CS	AFS DocuShare scanning	2	1	2	5	10
PS	Command Vehicle	0	2	3	4	9
EIM	Enterprise WEB Report Writer Solution	0	4	5	0	9
DEM	IVR integration with applications/data bases /One-Stop-Shop	0	5	4	0	9
Int	Centralized Scanning	0	4	4	0	8
EIM	Master events calendar/Master tickler and tracking system	0	3	3	2	8
EIM	e-Government strategy planning	0	4	4	0	8
DEM	Property/land document scanning - DocuShare	0	4	4	0	8
DEM	Property Tax System replacement	1	2	3	2	8
Jus	Legal research and opinions - DocuShare	0	3	3	1	7
EIM	BOS eAgenda workflow	0	3	3	1	7
Jus	PDA/mobile enable Probation Case management system	0	4	1	1	6
Int	Image enhancement of Pentamation	0	3	3	0	6
Int	Workflow of Accounts Payable Application	0	3	3	0	6
EIM	PDA/mobile enable Community Plus System	0	4	2	0	6
Jus	Time/billing SW for lawyers	0	2	2	0	4
Jus	Juvenile Hall Shift scheduling, menu planning, and inventory control application	0	2	2	0	4