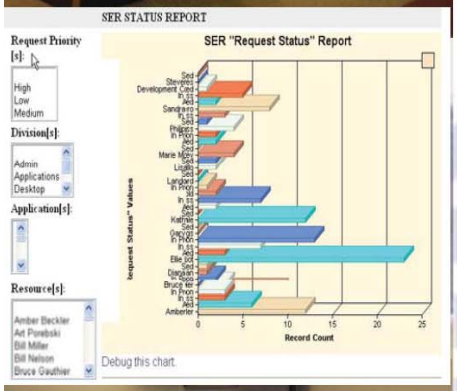


Enterprise Information Technology Strategic Plan

2009-2011 Update

For the 2001 Strategic Plan and Supplements

Nevada County
Information & General Services Department
950 Maidu Avenue, Nevada City, California 95959
530-265-1238 Fax 530-265-7112 igs@co.nevada.ca.us

TABLE OF CONTENTS

Chapter 1

Overview

Executive Summary

Like many local governments, the County of Nevada currently faces several challenges including fiscal issues with declining revenues, increasing costs, and expanding demands for citizen services. The County is fortunate that it has performed fiscally very well compared to most local governments. "Doing more with less" is an often overused statement, but clearly applies to the County's departments at this time. Some departments already have reduced staffing levels and others are expected to do so, with no departments adding any mentionable capacity. Compounding this situation is the continued practice from the State of California and Federal Government to balance their budgets by shifting workload and responsibility down to the local level, or reducing reimbursements for County program expenses. These "unfunded mandates" place even greater pressure on the County to do more with less.

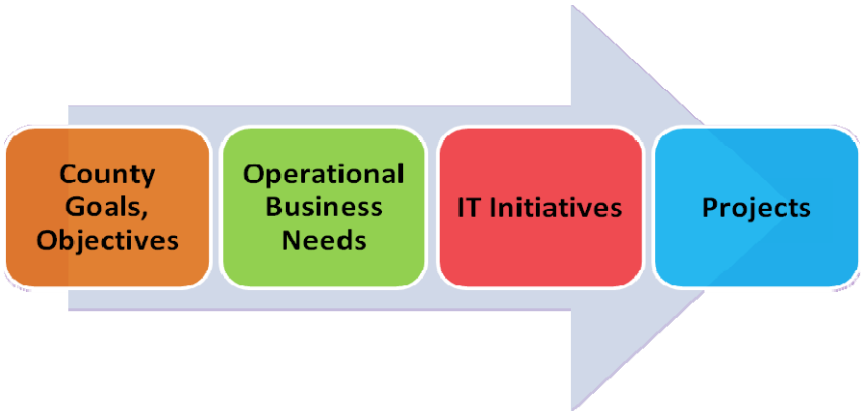
The County has successfully leveraged information technology (IT) to help us through past fiscally demanding times. IT has enabled the County to reduce and maintain lower overall staffing levels, increase employee workload capacity and efficiency, and provide new and improved services to our citizens. The County has diligently invested in IT and built a fund balance to maintain this critical infrastructure. Reviewing the past eight plus years of annual County accomplishments, budget performance measures, and organizational awards provides a vast array of innovative technology projects that departments across the organization have implemented to be more efficient and improve citizen services.

Today, Nevada County IT systems are connected to every aspect of the county's work, across all services and operations. Technology is vitally important in helping provide county managers and employees with the critical information needed to make effective decisions on behalf of our citizens. Technology is and will continue to be fundamental to creating a county where residents are healthy and successful and communities are safe and vibrant.

As budget realities continue to make resources tight, placing more strain on employee workloads, technology opportunities have much to offer the County. County employees are the main resource that delivers County services to citizens. They are the front line service delivery channel that determines the organization's service capacity, range, and overall quality.

Employee costs are very significant, reaching to over $85 million annually, which is 45% of the overall county budget. The County needs to insure it is getting the best return possible on this major investment. IT can help maximize this labor investment by providing employees effective tools, improving business processes, and making information more readily available which assists them to be more efficient, provide quality services, and serve more citizens; effectively "doing more with less".

Strategic implementation of information technology can also help the County to reduce its non-labor costs. This includes implementing "Green IT" strategies for hardware including increasing use of server virtualization strategy. The overall need to reduce energy costs by shutting down workstations, recycling computers and enforcing purchase of energy efficient computers and monitors has and will continue to be important.



This enterprise information technology plan addresses eleven major initiatives as identified by the County Departments as their most pressing needs.

1) Align the central IT environment with departmental applications; ensuring that all IT systems can seamlessly work together across the County and with the State, Federal Government, and other strategic partners.
2) Ensure continuity of government (COG) services and operations during an emergency or major technology failure, e.g., natural disaster, pandemic, building fire.
3) Improve managers' ability to make sound decisions with enhanced management decision systems, providing real-time insight and information into our live business activities.
4) Improve and automate the more labor-intensive business processes, increasing employee efficiency and workload capacity, providing better citizen services.
5) Expand the use of document imaging and management across departments, increasing employee productivity, citizen access to information, and organizational transparency.
6) Update or replace legacy and key vendor-supplied software applications to implement operational best practices that improve employee productivity.
7) Enhance the County's security and privacy policies and capabilities to protect sensitive information and ensure un-interrupted IT operations.
8) Provide more video and multimedia services to help distant employees work together efficiently, and enhance public outreach communications.
9) Bridge county business people and technology people together in strong partnerships to

maximize opportunities and realize the best return on the County's technology investments

10) Improve data creation and maintenance process for roads, address and GIS Data Layers
11) Expand the use of Geographic Information Systems.

One of the critical components of the Information Technology Strategic Plan is the continuation of the partnership between Information and General Services Department (IGS) and county departments. The IGS Vision and Mission are centered on the concepts of IGS responding to the needs of County departments for technology solutions by listening to departments' needs and proactively seeking out technology opportunities to meet those needs.

This Strategic Plan builds the roadmap for the County to take advantage of new technology that will help us better service our citizens. More than ever before, the technology decisions the County makes directly affect the work being done across the county and by other government entities as well. These cross-agency and organizational interconnections require us to continually improve our technology and needs to be guided by a well-thought-out, comprehensive technology plan.

Strategic Plan Objectives

- Ensure that all IT goals align with the strategic objectives of the County.
- Continue to build a foundation that fosters a common vision between IS and partner departments.
- Provide the County with a consistent framework to help guide IT investment decisions, accelerate its decision-making process, and improve overall communication across IT.
- Promote a collaborative work environment that allows the County to maximize employee talents and financial resources.
- Define the County's major initiatives.
- Identify new technologies and trends, and define how to direct these technologies to help the departments.
- Create a document that can be used as an education tool for department heads and managers.
- Encourage a public oriented view to technology
- Make this plan part of our ongoing project prioritization process.

Information and General Services Mission Statement

To provide an outstanding level of service, quality products and innovative solutions to those we serve. Through teamwork, professionalism and responsibility, we strive to meet and exceed the expectations of our customers, building an environment that promotes long-term relationships and creates value for our clients, our employees and the citizens of Nevada County.

IGS Guiding Principles

In addition to the mission statement and objectives there are several guiding principles that we use in IGS to provide daily direction and focus. These guiding principles are intended to provide an environment in which IGS can achieve its objectives related to providing high-level customer service and creating an environment where we are partnering with our customers.

Commitment to Customer Care
IGS exists to service the needs of its internal customers and the citizens of Nevada County. In order to fulfill this role, all IGS staff must be focused on providing value in every interaction. Continuous improvement in all areas is everyone's responsibility.

Building Customer Relationships
As a corollary to customer service, we must build strong, effective relationships with County departments and related agencies so that we understand their needs and can plan how best to meet them.

Communication is Critical
Another corollary to customer service is the need to continually update customers on what we are doing to solve their problems and on project progress.

Focus on Delivering Value
We will focus on introducing technology because we should do it to meet a customer's requirement, not because we can do it to keep up with the latest technology fad.

Keep Things Simple for the Customer
Managing technology and technology-based solutions is complex and growing in difficulty all the time. However, that should properly be the province of the IGS department. Keeping it simple for the customer allows other departments to concentrate on their own missions rather than having to be concerned about technology.

Offer Technology Leadership
There are a multitude of challenges that confront Nevada County. Some of these may be answered by deploying technology-based solutions to either extend our services or maintain current service levels in the face of mounting demand with existing staff. However, it will take leadership by IGS employees to help those involved in performing analysis and making informed decisions.

Chapter 2

Business Case

Strategic 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 practically 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, and recorded documents, to parcel- and map-based information. This deep dependency that the County has on our technology has several implications for 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 save the resulting $100,000/year associated cost, thus returning a solid $75,000/year ROI with a 3 month payback.

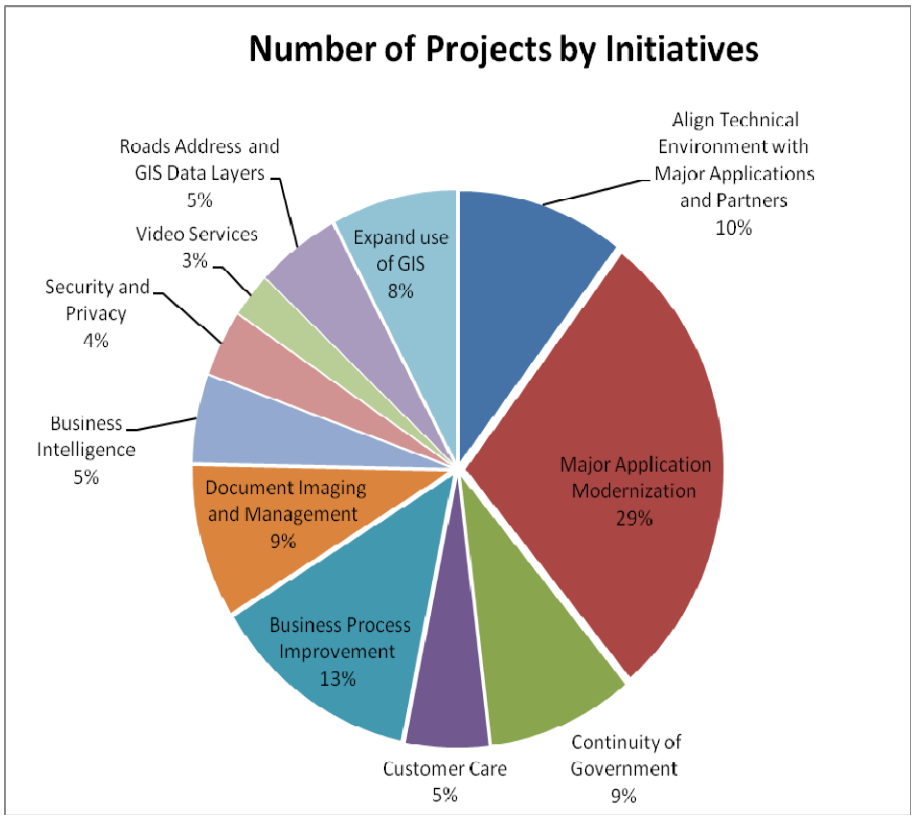
Chapter 3

Strategic Initiatives

Through the use of our established information technology governance structure, the Communities of Interests (COI) participated in the process of establishing and prioritizing countywide technology goals and the Information Systems Steering Board (ISSB) has approved the list of prioritized goals as shown in this update. This plan update includes recommended strategic initiatives that were established from the results of the information technology surveys that were conducted with all County Departments and recently updated in 2008. The final recommended strategic initiatives were developed by identifying common themes. These initiatives serve as an overall picture of where the majority of IT resources will be focused in the next three years.

The initiatives of this plan can be focused into 11 key areas:

A. Align Technical Environment with Major Applications and Partners
B. Continuity of Government
C. Business Intelligence
D. Business Process Improvement and Automation
E. Document Imaging and Management
F. Major Application Modernization
G. Security and Privacy
H. Video Services
I. Customer Care
J. Roads, Address Database and GIS Data Layers
K. Expand Enterprise use of GIS



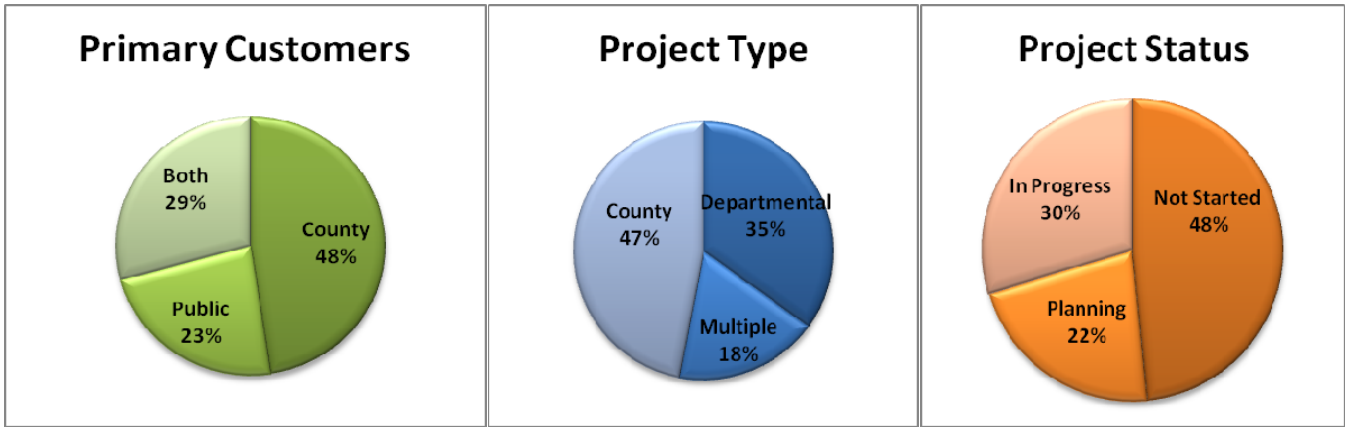
During the 2009-2010 year the major focus will be on initiative number one, Align our Technical Environment with Major Applications and Partners (Microsoft Migration). This effort will require extensive IT resources in hardware, software and labor. This effort will provide the cornerstone for the other initiatives in this plan and will have a profound affect on the future IT environment at Nevada County.

The County evaluated each IT specific project listed in the appendix in the following areas:

Primary Customers – About 48% of the projects have an internal County Department customer focus; the remaining 52% have an external focus on serving the public or other agencies.

Project Type – 35% of the projects are sponsored by and benefit a single department; 18% involve at least two departments, but are not enterprise wide in nature; and 47% are initiated by an enterprise technology direction that affect all departments.

Project Status – Most of the projects, 52%, are ongoing from efforts either in progress or in the planning stages. 48% of projects on the list have not been started. The focus in the coming year will be to complete the projects that are currently in progress. Completion of the large initiative to migrate to Microsoft will be the main priority in the first year. Efforts to increase our overall project management and oversight of the ongoing projects and prioritization of newly submitted projects will be implemented. New project implementation will be kept at a minimum during this time for all but ones that are directly related to achieving the goals stated in this plan.



A. Align Technical Environment with Major Applications and Partners

Migrating off Novell and to a Microsoft Centric Environment

Moving the County to an environment that is based largely on more standard Microsoft products is the highest priority and most strategic initiative in this update and will have a profound effect on the County as an organization. These effects will be seen in increased productivity, efficiencies, and effectiveness. Standardizing on a single infrastructure platform will facilitate higher levels of customer service for our citizens as well as reshape how the County conducts business. The County will benefit from a negotiated enterprise software licensing and services from Microsoft. This will allow the County to leverage volume purchases and support interoperability between applications. There are various drivers for Nevada County to move to a Microsoft centric environment.

1. Customer driven application ID/authentication services. - A majority of our county applications are now Microsoft-based. In a few years the County could be on almost all Microsoft based applications for the server and user front end and database back end.

2. Licensing costs – It is proving costly to maintain a dual licensing environment. As our applications are Microsoft based, the correlating licensing requirements to provide these applications to county workers has grown. As such, the Novell licensing for basic services is redundant to what we have and buy from Microsoft.

3. Key applications for providing core strategic services, such as eWork, DocuShare, LogiXML, GIS, etc., are all Microsoft-based technologies - Keeping a core based on Novell is limiting our ability to effectively leverage these investments and build integrated customer solutions. The County IT environment is too interdependent to have such a critical service from a third party. It "costs" too much in staff time to perform the workarounds and integrate the products.

4. Novell is ending Netware 6.5 support in 2010, moving to their Novell Linux platform - To stay with Novell would mean migrating 50+ Netware servers to Linux over the next two years. There is no clear strategic value to stay with Novell any longer.

5. Simplify our network architecture - Most of our applications require Microsoft Server and SQL - this will never go away. By eliminating Novell, we can greatly reduce the number of technologies that we currently have to support.

7. Gain more options. - Netware restricts the number of software and product options we can purchase, from security, web, and monitoring products, to backup and disaster recovery.

8. Leverage our current products and investment - By not utilizing Microsoft directory and messaging services, we are underutilizing our dashboard and web reporting, enterprise content management and business process management products.

9. Staff training and professional services have proven difficult to find with current Novell software - We continue to have difficultly finding Novell-based training for staff. It is becoming very difficult to find Novell professional services.

10. We are at a key point in strategic planning and major infrastructure projects - We are looking at SAN (large storage technology), remote access solutions, security, new backup and disaster recovery systems, and remote desktop support. We should engineer these solutions from the ground up, based on the best available technology without the limitations imposed by our current Novell-based system.

11. The State has begun a very large Identity Management/Authentication project – Many of our applications come from the State, which will have a growing impact on us. The State has started pilot project in the Employment Development Department, which is Microsoft Active Directory based. The State has also begun an overall IT standardization and centralization project. Combined, the two projects will impact counties greatly in the future. We need to have a standard interface with the State.

3 Year Projects	Objectives
1. Migrating to Microsoft Active Directory for network directory services.	A. Provide user accounts, security, and identity management for all county employees and computer equipment. B. Supporting customer initiatives for increased integration between applications and services C. Increased security, and integrated identity management for all county employees and computer equipment. D. Single sign-on to applications and services
2. Moving file and print services to Microsoft Servers.	A. Reduce technical problems between the Microsoft applications and Netware services B. Efficient desktop support by utilizing client management software and diagnostic tools C. Comprehensive user account management/ reporting, files data, internet, email
3. Migrating from GroupWise to Exchange Server and Outlook	A. Provide better web access to email B. Centralize storage of email C. Quick reliable back-up and recovery of user mail boxes D. Better integration with other core services E. Migrating to Outlook Mobile Client for mobile personal devices

B. Continuity of Government

The purpose of a Business Continuity/Disaster Recovery Plan is to enable an organization to survive a disaster and to reestablish normal business operations. 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. The organization must resume normal processing of critical operations within a reasonable time frame. The goal is to develop an approach so that systems and data can be replicated, redirected or quickly recovered.

3 Year Projects	Objectives
1. Complete Comprehensive Disaster Recovery Plan	A. Continue the refinement of the data center disaster recovery plan. Understanding of the total effort required to develop and maintain an effective recovery plan B. Focus on disaster prevention and impact minimization, not just recovery C. Inventory all applications and services , identify total costs
2. Implement an Off-Site Hot Backup Data Center at an Outlying County facility	A. Lessen the impact of an extended loss of operation and key business functions B. Implement hot standby servers for core critical County applications and services C. Implement standby servers with virtual server technology D. Conduct regular testing and verification operations
3. Centralized Backup Solution Replacement	A. Purchase of software package to accommodate increased size of data stores
4. Infrastructure Modernization and Standardization	A. Replace aging phone servers, switches and hand sets B. Implement Enterprise Network Storage Area Network (SAN) to better manage and consolidate storage in a central location C. Upgrade all network closet switches D. Implement "Green IT" strategies whenever feasible, including server virtualization on all development servers and on production servers where feasible.
5. Pentamation Business Continuity	A. Prepare an emergency back up process for payroll
6. Enable Remote Access for County workers	A. Implement software and hardware to support remote access for County workers to access technology resources. B. Support Continuity of Operations Plans and future social distancing needs in the event of a pandemic

C. Business Intelligence

Expanding the use of Business Intelligence is a major IS initiative. This initiative to support the growing demand for dashboards, ad-hoc reporting and other business intelligence toolsets will enhance the operational performance of county projects in on-going business operations. The ability to analyze business data in new and different ways provides a powerful tool for Department Heads to make decisions, alter processes and improve customer service. The use of Dashboards for decision making has proven to be an effective means of presenting information in a visual and useful manner. The visual nature of a Dashboard makes it easier and less time consuming to identify information as opposed to a traditional tabular report. Along with dashboards, ad hoc reporting is another useful tool that can be used by County staff to create and produce their own reports on an as needed basis. To facilitate the creation of Dashboards and Ad-Hoc reporting, IGS will make use of a data warehouse to consolidate data from various data sources into a Central Data Store.

3 Year Projects	Objectives
1. Central Data Storage for Web Based Reporting Services (Enterprise Data Mart)	A. Create a Health and Human Services Agency consolidated reporting B. Develop Finance data mart for Departmental use C. Create Land Related Records (Community Development Agency) data D. Create data for Public Access Dashboards E. Sheriff data F. Assessor G. Review Data Security and Access Control Policies
2. Expand use of Dashboards throughout the Enterprise	A. Implement Department Finance Dashboards B. Refine the Human Resources Dashboards for Departments C. Create Health and Human Services Agency Dashboards D. Create Project Portfolio Dashboard E. Implement Personalized employee dashboard portals
3. Improve Financial Reporting	A. Financial Statement preparation software for Auditor's office to automate creation of annual reporting and improve timeliness of reports. B. Ad Hoc Reports

D. Business Process Improvement

The active pursuit of improving and automating County business processes is an important initiative in this update and will have a profound impact 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, transparency and accountability. Process improvement is about automating departmental business processes that live outside of their major applications. Automating a business processes is only half of the equation. The first phase and most significant element is process improvement. This is the actual evaluation and re-design (re-engineering) of the business process. After review of the current business process in place, improvement or creation of an automated process to facilitate improvement in efficiency and accuracy begins.

`

3 Year Projects	Objectives
1. Enterprise Wide Process Improvement Projects	A. Refine Master Roads and Address database processes B. Board of Supervisors paperless agenda C. E-Personnel File- moving all paper HR documents to electronic files. D. Contract Management – tickler, insurance requirements, tie to Pentamation, personnel services E. Integrated data exchanges between systems (Nemo, Pentamation, eWork, GIS)
2. Departmental Specific Process improvement	A. ePA Phase II – (eWork) Auditor edit functions B. DSS Electronic Check Signature (after completion of DSS C-IV implementation project) C. Expand use of Customer Relationship Management System (CRM)
4. Electronic Timesheet Improvement	A. Improved efficiency of data entry, reporting and auditing within ETS and the quality of payroll data

E. Document Imaging and Management

A key strategy and trend identified from the Community of Interests (COI) and in technology surveys conducted with all County departments was the need for more and deeper use of the County's current Enterprise Document Management System. Our County departments have many paper intensive business processes. These processes can be greatly enhanced and made more efficient through automated document imaging and electronic storage and retrieval solutions. This initiative provides a foundation for a Countywide Enterprise Content Management solution that can grow to further our efforts to provide more transparent, accountable and accessible services to our citizens. The major initiative to move to a more standardized platform will be the primary focus in the coming year.

3 Year Projects	Objectives
1. Migrate DocuShare to SharePoint	A. Create single platform for email archival, eDiscovery, records management, document management file stores B. Provide web-based access to files via SharePoint services
2. Enterprise Records Management – enterprise wide organizational approach to document management and scanning projects	A. Complete and publish indexing standards. B. Implement automated records retention best practices C. Promote and train records management best practices to all departments.
3. Continue property-based scanning projects	A. Provide all County departments and the public with parcel maps tied to parcel related information
4. Improve Departmental Document Imaging Applications	A. Replace Green bar tax reports B. All reports directly to pdf from Finance and other legacy systems C. Scan Library Card Applications - Imaging of 60,000+ library card applications D. Utilize the Document management system to streamline processes in the Auditors office and finance operations in departments
5. Flowport and DocSlide replacement	A. Procure third party scanning application to replace existing scanning and imaging solutions with SharePoint

F. Major Application Modernization

The Departments identified many applications in their portfolios which are currently in the process of being replaced or upgraded in the next three years. This will present challenges in project management, resource allocation, ongoing support and funding. The large initiative to move to a Microsoft centric environment will make integration between applications easier and ease the burden on resources. A major effort will involve mainstreaming desktop applications across the enterprise. This effort entails identifying and moving legacy applications off existing hardware and software and into mainstream application environments. As the County seeks to improve both its internal and external processes, we will seek opportunities to improve applications that directly serve the County's citizens as well as to facilitate cross-department or public-to-department information or transaction flows.

3 Year Projects	Objectives
1. Implementation of an Enterprise Content Management System (Microsoft SharePoint)	A. Consolidated approach to information stores B. Implement Enterprise Records Management - Create single platform for archival, eDiscovery, policies, and retention schedules. C. Replacement of existing scanning and imaging applications (Docslide and Flowport) D. Provide web-based access to files via SharePoint services (replacement of DocuShare) E. Website redesign and re-architecture (move from Affino to SharePoint). F. Implement enterprise wide collaborative work space
2. Upgrade the County Recorder System	A. Upgrade to newer records management technology B. Adhere to state redaction mandate
3. Replace the District Attorney and Public Defender Case Management Systems	A. Implement an integrated Case Management system B. Replace legacy application, increase functionality and integration with other applications

4. Replace and upgrade Human Service Agency Application upgrades (to meet evolving State requirements)	A. Behavioral Health Billing and Electronic Records System B. DCSS C-IV- Replacement of ISAWS C. Public Health Electronic Medical Records/ Billing/ Scheduling D. DSS Eligibility screening tool E. DSS Upgrade CompuTrust F. DSS – Implement 211 Call Center G. Public Health CD tracking system (CMR), file sharing
5. Human Resources Application Enhancements	A. Job Applicant Center –web based application for personnel applications, hiring transactions, etc. B. EAC – Employee Activity Center- so individuals can view, print and submit a change request for their specific information. C. Benefits HR module – Phase II of the Employee Activity Center
6. Upgrade Tax and Financial Systems	A. Tax System Needs Assessment B. Property Tax System replacement C. Elimination of hard copy reports (move green bar reports to pdf in shared store)
7. Implement Web-Based Emergency Operations Center (EOC)	A. Implement a web-base information management system that provides a single access point for the collection and dissemination of emergency event information
8. Enhance Library Services technology	A. Library Envision Ware time management software for public PCs., Reduce Library staff time to monitor pc usage B. Library Receipt Printers for Circulation desk in all libraries - 12 computers.
9. Replace Legacy Systems	A. Inventory and plan for replacement of smaller legacy systems primarily on Nemo (Recorder, County Counsel, Board of Supervisors, Auditor) B. Replace legacy Environmental Health system C. Child Support Services - Replacement of legacy collections system ,software and hardware to more supportable platform

G. Security and Privacy

In today's networked environment, security vulnerabilities in one department can easily place the entire County at risk. The structure of the County IT Security Program is based on centralized coordination and management. It is critical to keep current in this area of technology due to regulations as well as the intensity of and constant increases in the number of threats. As we rely more on technology, the infrastructure becomes more complex and consequently more vulnerable. With the increasing demand to use technology anywhere and anytime, using a variety of mobile devices, the challenge increases to ensure that IT security is in place and is at the appropriate level for the sensitivity of the information.

The County will be undertaking a number of actions to reduce our exposure to threats, put in place new equipment, new software, new policies and procedures to prevent, detect, respond to and mitigate these risks. The goal of this initiative is to assess our current network security policies, methods and infrastructure and put in place hardware and software to meet the security needs of our customers. This will lead to development of a comprehensive security standard and policies as it relates to all aspects of technology to include application development/support, hardware, O/S, network administration, etc. This will provide the day-to-day working tool to ensure basic security policies are followed in the use of technology. Implementation of this plan will guide the work effort to develop standards against which each new project will be reviewed to ensure adherence to security policies.

3 Year Projects	Objectives
1. Replace and reengineer aging security infrastructure	A. Support secure, anywhere, anytime access to county IT resources with remote access. B. Implement single sign on to many core county applications. C. Improved employee network security, activity, and auditing D. Implement wide area network optimization for faster access to services
2. User Change Request	A. Streamline process for new user account creation, deletion and changes B. Increase security for account deletion
3. Data Security System Review	A. Integrate existing security initiatives into inventory of systems and services to ensure security complements service offerings B. Establish a periodic review of policies and procedures to ensure methods are up-to-date with current business requirements.
4. End-User Roles & Responsibilities	A. Use Active Directory (user identity management) implementation to provide efficient unified security across all services / applications with granular security at the data level B. Support remote access for County staff

H. Video Services

Video Services

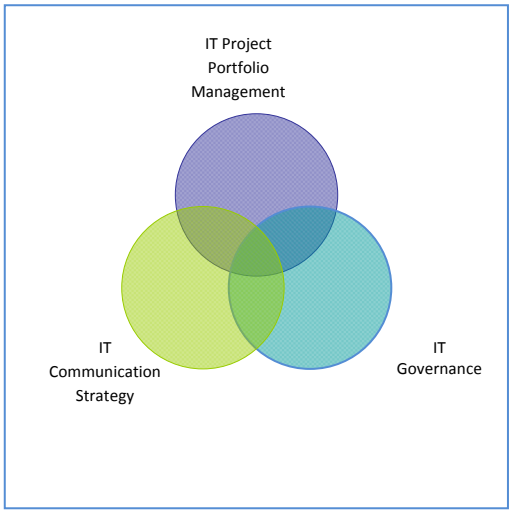
Video and Web services will continue to grow and mature as bandwidth becomes readily available and our customers demand the implementation of these new technologies.

The goal of this initiative is to provide the infrastructure needed to support the specific projects listed below. New video and audio formats will provide web site information for use by employees and residents using computers and various mobile devices.

3 Year Projects	Objectives
1. Voice and Video, enriched context on website, including audio streaming	A. Reduce costs and provide operational efficiencies B. Enhanced service delivery C. Support information sharing and collaboration
2. Streaming of Public Meetings (BOS, Planning commission etc)	A. Provide citizens and county workers with the option of listening to Board meetings as they occur on the Internet.
3. Video surveillance and recording and control systems	A. Add recording capability to Juvenile Hall video cameras for surveillance. B. Add recording capability to Jail video system
4. Public Service Announcements (PSA's)	C. Increase usage of media kits by County departments D. Facilitate partnering with non-profits to create departmental PSA's E. Make PSA's available to citizens on local government channels and websites

I. Customer Care

IGS has undergone a restructuring process that will enable increased communication and project portfolio management operations and will provide guidance and coordination using best practices that ensure County departments have the necessary information to bring departmental IT projects to successful completion.



One of the challenges we confront as an IT department is to continually improve the value we provide. As part of this process, IT staff members will be encouraged to build relevant and meaningful relationships with our customer base and to understand the processes and needs of each area of the County. We will strive to stay current with plans in all departments so we can ensure that investments in technology are in line with department needs and County priorities.

Given the diversity of services that are offered by County departments, the number of potential technology solutions is quite large. IGS will develop and publish an outline of selection criteria that departments should use in evaluating technology purchases. Following these guidelines will mean that IT will be able to provide the best possible infrastructure and technical support.

3 Year Projects	Objectives
1. Develop IT Project Management and Portfolio Management Processes	A. Develop an initial project submission process B. Develop a project tracking application for project monitoring and reporting C. Refine the prioritization process for all project submissions D. Provide a dashboard for departments to track projects E. Monitor progress and workload of all projects
2. Enhance IGS Communication and Collaboration Strategy	A. Begin to implement ITIL best practices in the areas of services delivery and service management B. Begin implementation of change management best practices
3. Support IT Governance and Strategic Alignment with Customers	A. Ensure all new projects are reviewed by the ISSB and evaluated against County goals and available resources B. Evaluate new projects for alignment with Customer initiatives

J. Roads, Address Database and GIS Data Layers

An important aspect of the County IT Strategic Plan includes the Geographic Information System Operations. Nevada County has been using GIS technology and data since the mid-1990's. GIS is now used daily in the business processes of numerous County departments and for access to information for the general public. As expectations increase and the possibility of linking to more disparate databases climbs, there are ever-more opportunities for advancing the utility and users of GIS in the everyday business of Nevada County.

GIS provides address and road data used daily by emergency services and law enforcement, which makes this data very important for Nevada County. County systems such as Dimms (voter registration), planning, building and others that contain parcel and address data could benefit from more comprehensive, accurate and timely data. This will provide consistent information for internal and public use while making county processes more efficient. Even though a project to build an accurate address and road database has been in process for several years there is still much to be done. Processes and procedures will be put in place to ensure that the data is maintained in a timely manner. Approximately 110 data layers exist and many need updating. Moving to a hybrid maintenance model and identifying the most important layers will help improve the timeliness and accuracy of these layers.

3 Year Projects	Objectives
1. Provide timely and accurate data for County road and address databases	A. Defined guidelines and processes for street naming and addressing to be used by agencies involved in name and address activities will be published and monitored for compliance B. Master road database including address ranges that can be used via a web interface or web service to validate address information in databases used in Nevada County C. Resolve data and integrity issues in problem databases D. Routine and periodic quality assurance checks of the databases E. Establish cooperative agreements with cities and agencies that are the originating source of road and address data
2. Enhance base map to provide reliable GIS data	A. Existing base layers will be expanded and improved based on available resources and funding B. A program to create and maintain layers with the largest benefit to the county will be defined and implemented C. Spatially represent data from non-GIS county databases using simple interfaces

K. Expand Enterprise use of Geographic Information Systems

This initiative is to expand the use of GIS by upgrading the ArcGIS software, implementing new tools, and changing the organizational model and processes to provide better direction and efficiencies. Also included in this initiative are a needs assessment and a Strategic Plan update.

ArcGIS is the main application that utilizes spatial data and enables analysis. Currently Nevada County uses ArcGIS 9.1 and has purchased ArcGIS 9.3 and is planning on upgrading in 2009. Many departmental GIS users are using an outdated and unsupported version of ArcView 3. The plan for 2009 is to upgrade these users to ArcMap 9.3 and ArcReader to provide more functionality at the desktop. Nevada County currently has a centralized GIS organization and while this has worked it has put the responsibility for data maintenance on the GIS staff. The plan is to move to a model where departments are responsible for the maintenance of their data to free the GIS resources so they can provide better tools and analysis using the more advanced features of the software.

Once the software has been upgraded, tools put in place and the processes made more efficient, the GIS resources will be able to refresh the websites and deliver web services that can be used by other applications to present data on a map. This will foster better analysis and decision making.

The current organizational structure will be reviewed and changed to provide better alignment with the Enterprise goals and to push ownership of data to areas where it makes the most sense.

Successful GIS implementations use a GIS Master Plan that addresses the business needs and processes for each department and as such a needs assessment should be conducted and a comprehensive strategic master plan created using existing staff and outside resources. Elements that are important for realizing a successful GIS program can be found in the Appendix.

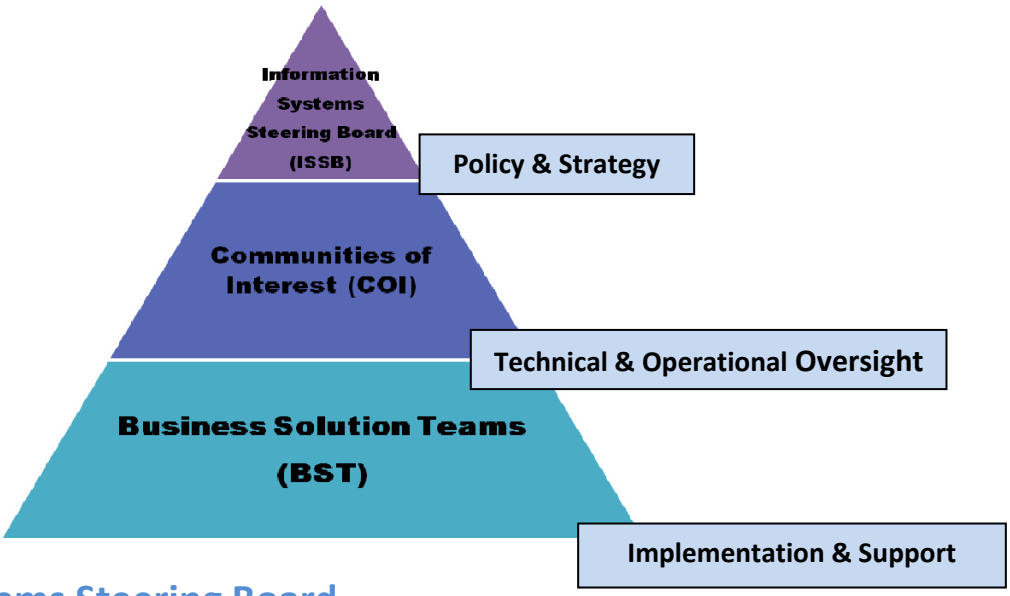
3 Year Projects	Objectives
1. Create a collaborative environment where departments share in the responsibility for maintaining accurate GIS data	A. Empower departmental GIS users to maintain accurate GIS data B. Guidelines and standards for data replication and quality control of database are documented and effectively followed C. Effective training for GIS tools will be coordinated and training conducted
2. Align GIS with County initiatives	A. A GIS steering committee to ensure that GIS is implemented effectively throughout the organization and that enterprise-wide goals and objectives are being met will be established
3. Provide easy access to County data through a GIS interface	A. GIS web interfaces for specific internal county business needs will be made available based on county business priorities B. A citizen self service web site that provides access to county data using a map interface will made available C. Web services that integrate county systems with information related to location will be available and used
4. Review and improve business processes and establish data standards and transfer mechanisms	A. Automate time spent by GIS performing routine tasks B. Move functions that do not require GIS expertise to more appropriate personnel C. GIS fee schedule and data dissemination processes will be updated and recommendations made to the Board D. GIS processes and standards that interface with other departments and partners will be reviewed, optimized and formalized
5. Develop comprehensive strategic plan for GIS	A. GIS needs assessment will be completed and documented B. GIS master plan will be created and published by 2010

Chapter

4 Governance Structure

To be successful, a responsive IT organizational structure requires clearly defined roles, organized collaboration, and consistent and measurable processes. 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 Technical 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.

- The ISSB is responsible for:
  - Reviewing critical IT projects and breakthrough technologies
  - Establishing consistency in IT governance across the county
  - Making recommendations to the CEO and Board of Supervisors
- Benefits:
  - Improved understanding and decision making about IT's direction and priorities
  - Better ability to evaluate and make decisions on the urgency of IT investments
  - More comprehensive view of IT efforts across the county

Communities of Interest

Communities of Interest (COI) provide 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:

ISSB Chair: Joe Christoffel – Chief Fiscal Officer

ISSB Co-Chair: Steven Monaghan –Chief Information Officer

Community Of Interest	Departments Represented	Co-Chairs
Internal Services COI	Auditor- Controller, Treasurer-Tax Collector, Board of Supervisors, Personnel, Information & General Services, County Counsel	Marcia Salter Gayle Satchwell
Justice COI	Courts, District Attorney, CSS, Public Defender, Sheriff, Probation, Code Enforcement, Welfare Fraud, County Counsel	Cliff Newell Doug Carver
Development & Environmental Management COI	Assessor, CDA - (Building Inspection, Code Enforcement, Planning, Environmental Health, Transportation and Sanitation), Treasurer-Tax Collector	Dale Flippin Steve DeCamp
Enterprise Information Management COI	Information & General Services (including GIS), DOTS, CEO, CDA	Diana Carolan Wesley Nicks
Public Safety COI	Sheriff, Public Health, Emergency Management, Juvenile Hall, Probation, Victim Witness , Environmental Health	Bob Wood Victor Ferrera
Community & Social Programs COI	Clerk Recorder, Elections, Library, Human Services Agency, Child Support Services	Jeff Brown MaryAnn Trygg

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 Appendix.

Appendix

IT Project List

The project list was based on information from the ISSB, County Departments and the County CIO, and represent future technical needs for Nevada County. Recognizing the dynamic environment in which we operate, we expect that information presented will change from year to year as our business needs, drivers, and funding sources change and evolve. While the IT Plan covers a five-year planning horizon, the projects list will be reviewed annually to reflect ongoing changes as new projects are added, existing projects are modified and completed projects are deleted from the plan.

The IT Plan includes the projects planned or currently in progress by the Departments, independent of their funding sources. For the projects needing General Fund dollars or enterprise resources, a prioritization process has been developed for use by the ISSB in ranking projects. Prioritizing projects has become more difficult with decreased funding available. This process will be refined as part of the implementation of this plan. Projects that impact public safety, are legally mandated or may benefit multiple services have been ranked highest. Not all projects were rated this year by the ISSB. The ranking process will be an annual effort.

IT Project List by Implementation Year

				Primary Customers			Status			Project Type			
	Source	Initiative	Project Name	Internal County	Public	Both	Not started	In Progress	Planning	Enterprise	Multiple	Department	Year
1.	Department Project	Align Technical Environment w/ Applications and Partners	Move existing eDirectory to Active Directory (Microsoft Migration)			X			x	x			1
2.	2008 ISSB	Major Application Modernization	County Recorder system replacement		x			x				x	1
3.	2008 ISSB	Major Application Modernization	District Attorney and Public Defender Case Management Systems	x				x			x		1
4.	2008 ISSB	Continuity of Government	Centralized Backup System Replacement	x					x	x			1
5.	2008 ISSB	Continuity of Government	Pentamation Business Continuity (Payroll)	x					x		x		1
6.	2006 SP	Continuity of Government	Implement an off site hot backup data center at a County facility		x			x		x			1
7.	2008 ISSB	Major Application Modernization	Public Health Electronic Medical Records/Billing/Scheduling			x			x			x	1
8.	2008 ISSB	Continuity of Government	Network storage capacity Updates	x					x	x			1
9.	Department Project t	Major Application Modernization	DocuShare Migration to SharePoint			x	x			x			1

				Primary Customers			Status			Project Type			Year
	Source	Initiative	Project Name	Internal County	Public	Both	Not started	In Progress	Planning	Enterprise	Multiple	Department	
10.	2006 SP	Continuity of Government	Implement hot standby servers for core critical applications	x				x		x			1
11.	2008 ISSB	Major Application Modernization	DSS VetPro (VIMs)		x			x				x	1
12.	2008 ISSB	Major Application Modernization	DSS 211 Call Center		x				x			x	1
13.	2008 ISSB	Major Application Modernization	DSS Upgrade CompuTrust	x			x					x	1
14.	2008 ISSB	Security and Privacy	User Change Request (eWork process for account creation and deletion)	x				x		x			1
15.	2008 ISSB	Video Services	Streaming of Public Meetings - BOS		x				x		x		1
16.	2008 ISSB	Business Intelligence	HR Departmental Dashboards	x				x		x			1-2
17.	2008 ISSB	Document Imaging and Mgmt	Flowport and Docslide replacement	x					x	x			1-2
18.	2008 ISSB	Continuity of Government	Phone system upgrades	x			x			x			1-2
19.	2008 ISSB	Major Application Modernization	Website Re-Design and Migration		x		x			x			2
20.	2006 SP	Business Process Improvement	Identify business processes to improve	x			x			x			2
21.	2008 ISSB	Major Application Modernization	Financial Statement preparation software for Auditor's office	x			x					x	2
22.	2008 ISSB	Major Application Modernization	BH Billing and Electronic Records System	x					x			x	2
23.	2008 ISSB	Business Process Improvement	DSS Electronic Check Signature	x			x					x	2
24.	2008 ISSB	Business Process Automation	ePA phase II - (eWork) Auditor edits functions, Auditor form	x			x			x			2
25.	Department Project	Business Process Improvement	Parcel and address data standardization and processes	x					x	x			2
26.	2006 SP	Continuity of Government	Complete comprehensive disaster recovery plan.		x			x		x			2
27.	2008 ISSB	Continuity of Government	Hot mirror evaluation for all systems			x	X			x			2
28.	2006 SP	Document Imaging and Mgmt	Complete and publish indexing standards.			x		x		x			2
29.	2006 SP	Document Imaging and Mgmt	Continue property-based scanning		x			x			x		2
30.	2006 SP	Document Imaging and Mgmt	Implement automated records retention best practices			x		x		x			2
31.	2006 SP	Document Imaging and Mgmt	Promote and train records management best practices to all	x				x		x			2
32.	Department Project	Major Application Modernization	Benefits - Phase II of the EAC	x			X					x	2
33.	2008 ISSB	Major Application Modernization	DSS Eligibility Screening Tool		x		x					x	2

				Primary Customers			Status			Project Type			
	Source	Initiative	Project Name	Internal County	Public	Both	Not started	In Progress	Planning	Enterprise	Multiple	Department	Year
34.	Department Project	Major Application Modernization	Elimination of hard copy Tax Reports	x			x					x	2
35.	Department Project	Major Application Modernization	EAC - Employee Activity Center	x			x			x			2
36.	2008 ISSB	Major Application Modernization	Finance Plus & Comm. Plus upgrade	x					x		x		2
37.	Department Project	Major Application Modernization	JAC – Job Applicant Center -HR module		x				x			x	2
38.	2008 ISSB	Major Application Modernization	Library Envision Ware time		x				x			x	2
39.	2008 ISSB	Major Application Modernization	Library Receipt Printers for Circulation desk			x	x					x	2
40.	2008 ISSB	Major Application Modernization	Public Health Communicable Disease tracking system			x	x					x	2
41.	2008 ISSB	Major Application Modernization	Tax System Needs Assessment	x			x				x		2
42.	2008 ISSB	Security and Privacy	Data Security System Review –Auditor reporting, network security	x			x			x			2
43.	2008 ISSB	Security and Privacy	End-User Roles & Responsibilities - to enhance application security	x			x			x			2
44.	Department Project	Video Services	Video surveillance and recording systems (Juvenile Hall and Jail)	x			x					x	2
45.	Department Project	Video Services	Voice and Video, enriched website		x				x	x			2
46.	2008 ISSB	Business Process Improvement	BOS Paperless agenda	x			x					x	3
47.	2008 ISSB	Business Process Improvement	Contract Management	x			x			x			3
48.	2008 ISSB	Business Process Improvement	E-Personnel File (DocuShare)	x			x			x			3
49.	2008 ISSB	Business Process Improvement	Parcel map creation process enhancements	x			x				x		3
50.	2006 SP	Document Imaging and Mgmt	Document Imaging and Mgmt - Image enhance Financial Suite			x		x		x			3
51.	2006 SP	Document Imaging and Mgmt	Expand the use of document imaging			x		x		x			3
52.	2008 ISSB	Document Imaging and Mgmt	Library Card Application Scanning			x	x					x	3
53.	Department Project	Major Application Modernization	DSS - C-IV Replacement of ISAWS			x			x			x	3
54.	2008 ISSB	Major Application Modernization	Property Tax System enhancements			x	x				x		3
55.	2008 ISSB	Major Application Modernization	WEB EOC		x		x				x		3
56.	2008 ISSB	Major Application Modernization	Property Tax System replacement			x	x				x		4

IGS Visionary Expectations & Cultural Objectives

IGS Visionary Expectations were developed through the "World Class RoadMap" process to identify expectations that IGS staff will hold each other to during the daily course of business. We are sharing these expectations with our customers to educate them as to what they should expect of a World Class IGS organization when doing business with us.

1. Partner with our Customers.

- Build a relationship with our customers by treating them with respect.
- Maintain open communication channels, keeping customers informed throughout the project.
- Provide direction and choices to help our customers' define their technology needs.
- Advise our customer of the benefits, risks and alternates solutions to their requests.
- Set realistic deadlines and commitments.
- Hold ourselves and our customers accountable for clearly defined and agreed-upon deliverables.

2. Seeking First to Understand our Customers.

- Gain understanding of the customers' needs and goals.
- Adjust to departments' various abilities and budget constraints.
- Address our customers concerns by generating options and recommending appropriate remedies to maintain their highest level of satisfaction possible.

3. Utilize our Resources and Manage our Projects Wisely.

- Maintain visibility of customer business objectives.
- Communicate to customer's estimates of rates before they begin their budget planning.
- Provide quality and creative services at a reasonable cost and look for ways to reduce costs.
- Deliver products and services in a manner that our customers feel they are receiving value for their expenditures.
- Intercede on behalf of our customers with vendors.

4. Provide "World Class" Customer Care by being Accountable and Communicating.

- Act in an ethical and professional manner, treating others with respect and dignity.
- Be open to different perspectives.
- Treat internal (IGS employees) customers the same as external (non-IGS) customers.
- Be accountable to internal and external customers by following through on clearly defined and agreed-upon deliverables.
- Respond to customer communications in a timely manner matching the customers' sense of urgency.

Comprehensive Approach to a Successful GIS

1. **GIS Master Plan**

In preparing the 2009-2011 plan GIS realized that an updated long term master plan is needed. One of the goals in the 2009-2011 plan is to conduct a needs assessment to create an updated GIS strategic plan. The plan for 2009-2011 was developed after considering input from Nevada County's GIS users, County GIS staff and plans from other counties and cities.

2. **Coordination**

Coordination is the most critical characteristic of successful GIS programs. We will work with our customers to implement a governance model that provides direction and determines GIS priorities and objectives. Coordination will be achieved by listening to our customers to provide solutions to the problems and challenges they face not just technical solutions that we find interesting.

3. **Quick Successes**

The creation of data is one of the most expensive components of a GIS and one of the most time consuming activities. This slows the momentum of the GIS project as months turn into years as the data is gathered and entered into the system. This can give the perception that no progress is being made while in fact the base data is needed before results can be seen. The 2009-2011 plan identifies quick successes from a list provided by the GIS users at Nevada County to provide useful data and solutions in a timely fashion. Quick successes will enable GIS to demonstrate new uses of the technology and should be shared throughout the entire organization so that all staff will be made aware of what the GIS can do for them.

4. **Education**

There are two components of education required for a successful GIS. One component is that GIS staff needs formal hardware and software training. The second component is that all county staff need to be educated on what GIS can do for them in there day to day jobs and in their field.

5. **Ease of Use**

To be successful the GIS tools used throughout the organization need to be available, easy to use, intuitive and appropriate for the level of analysis that needs to be done. There will be a program to ensure that the GIS users have licensed and supported software as well as training. In addition, there will be a review of web-based solutions and a plan in place that to provide appropriate tools and downloads for GIS analysis including metadata so users can easily identify datasets that they need.

6. **Enterprise-Wide implementation**

To be successful an adequate number of staff needs access to GIS tools and training. The GIS tools need to be viewed as indispensable much the same way a word processing and spreadsheet tool is viewed. To accomplish this we will identify different tiers of users and work with them to provide the GIS tools they need and the training that they need to effectively use

the tools. The training may be provided by either in-house GIS staff or by formal training available from a vendor. It is important that each department recognize the value of GIS tools for their staff and that they develop expertise among their staff. As part of this strategic plan GIS will work to develop tools and training programs to promote the use of GIS enterprise-wide.

7. **Quantify Benefits vs. Cost**

Quantifying the use of a technology such as GIS is important to ensure that the appropriate projects are being worked on. The benefits may be measured in time, money, or anything else that can be measured. In some cases it may be difficult to measure the benefit such as the potential for saving lives through the use of GIS by first responders or the Office of Emergency Services. In selecting projects it is important that GIS staff consider the return on investment to ensure that the expense is worth the cost. This will be made easier with a governance model that assists with the prioritization of GIS work.

GIS Projects List by Initiative and Implementation Year

Road and Address Database and GIS Data Layers	Implementation Year
Metadata management system	1
Evacuation centers and shelters layers	1
Water storage tanks layer	1
Probationers layer with registered sex offenders	1
Homeowners association boundaries layer	1
Resolve multiple designation issues in land use data (zoning and general plan)	1
Update parks and schools layers	1
Daycare centers layer	1
Underground propane tanks layer	1
Consolidate hydrologic data and distinguish NID canals	1
Incorporate Nevada City AutoCAD parcels into GIS	1
Implement Tax Rate Area layer and reconcile district boundaries	1
Wastewater infrastructure layers	1-2
Correct addresses for all parcels in the County	2
Mileposts, culverts, signs and accident location layers	2
Assign attributes to roads layer (speed limits, traffic volumes, classifications)	2-3
Improve accuracy in parcels layer	3
Road easements layer	3
Rights-of-way layer	3
Building footprints layer	3
Update highest resolution aerial photos as funding allows	?

Expand the use of GIS throughout the Enterprise	
Assessor maps link from GIS interface	1
Data and application server setup, upgrade and configuration to ArcGIS 9.3	1
Aerial photo loading and tiling	1
Enterprise Geodatabase storage migration and master data schemas	1
Enterprise Geodatabase replication plan and implementation	1
Planning projects and certificates of compliance GIS Web application	1
Develop "County Information" GIS Web application	1
Upgrade ArcView 3 with latest software; Define data replication and QC process; Coordinate training program for GIS tools	1
GIS team leads for each department	1
GIS Steering Committee	1
GIS data agreement for districts and cities	1-2
Addressing process GIS Web application	1-2
Consistent parcel information between GIS, NEMO and Comm Plus	2
Dynamic segmentation for Pavement Management System	2
LAFCo/District Annexation GIS Website	2
Comprehensive GIS strategic plan	2-3
Recorder maps link from GIS interface	2-3
Building permits link from GIS interface	2-3
Sanitation data GIS Web application	2-3
Public Works data GIS Web application	2-3
GIS-based data catalog for AutoCAD drawings for surveys	3