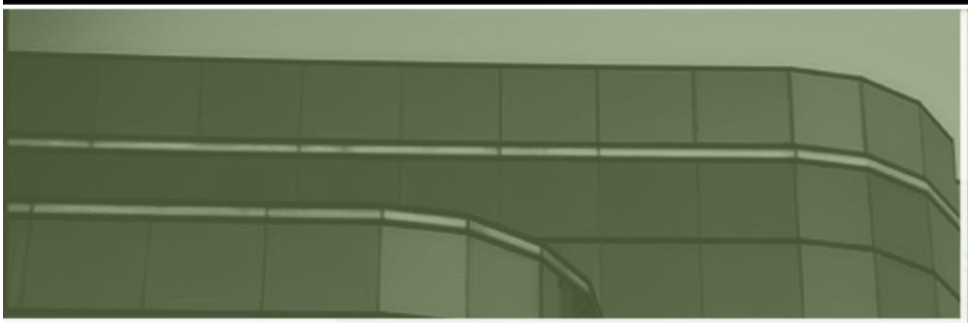
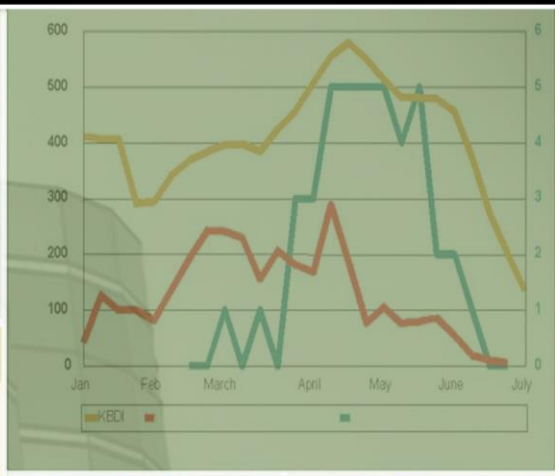
Statewide Strategic IT Plan

May 2006





Government Information Technology Agency

Message from Director Cummiskey:

Fiscal year 2006 was an active year for GITA. A major milestone is the 10-year extension of the agency, signed by Governor Napolitano, which allows GITA to continue its strategic role in advancing innovation, technology, telecommunications, and digital government.

In addition, the State saw the implementation of Governor Napolitano's vision for using information technology (IT) to increase government efficiency and access to online resources within State agencies. Important initiatives such as Arizona 2-1-1 Online and the Health-e Connection Roadmap are just a couple of the major initiatives of FY 2006.

In FY 2007, GITA will continue its efforts to coordinate and guide the development of IT in Arizona government. Priorities for 2007 include an emphasis on advancing e-government services, increasing IT security and privacy, and promoting target technologies and an enterprise framework for State IT.

This Statewide Strategic IT Plan encourages a proactive approach to technology.

Chris Cummiskey
Director, State CIO
Government Information Technology Agency

Table of Contents

EXECUTIVE SUMMARY

In 2006, many agencies are utilizing Information Technology (IT) to maximize public value by making their services more efficient, useful, responsive and accessible. E-government is driving changes within Arizona state operations forward by providing online access to government information and services. The Internet allows citizens to interact directly with government; bypassing the time and effort of traveling to government offices.

In her 2006 State of the State address, Governor Janet Napolitano declared, "In Arizona we are showing what matters is smart government, efficient government, and effective government. We're shifting resources from government waste and inefficiency to **government productivity**". This message sets forth a vision for improving both the quality of life and the business climate within Arizona.

In the past, agency personnel and business organizations were customers; however, now the state's definition of customer has expanded to include its citizens…

The 21st century has initiated a new era in secure information technology. State agencies not only directly serve citizens through their websites but are starting to **consolidate and share resources among themselves** by aggregating networks and consolidating information sources through web portals. Many agencies are caught in a conundrum of competing needs: shrinking budgets, heightened concerns regarding IT security, customer demands for increased access to government services online, and a lack of technical staff to administer IT.

A key component of e-government today is the **important element of secure communications**. Viruses and worms can bring the Internet, computer resources, and business with it to a standstill; while identity theft and privacy concerns are now important issues as well. Technology has become a strategic resource but it can also be a tactical vulnerability. Efforts are being focused on IT security, through continuity of government and business continuity planning, and the development of secure interoperable first responder systems throughout the state in coming years.

Two important health initiatives reflect the growing emphasis on public service by government agencies; namely, Arizona Health-e Connection and Arizona 2-1-1 Online. The Arizona Health-e Connection initiative generated a roadmap in preparation for a federal program to automate health records and services

nationwide over the next decade. This roadmap provides a path for the advancement of e-health and data exchange in Arizona in order to realize cost efficiencies and improvement in quality of care. The second initiative, Arizona 2-1-1 online, developed and implemented a website at www.az211.gov to aid in identification of resources for childcare, jobs, healthcare and insurance. In addition, in times of emergency or disaster, state and local emergency bulletins and alerts are posted online on the website. Formation and activation of 2-1-1 call centers for response to emergency situations is ongoing.

Communications across the state are being enhanced through the use of broadband. Furthermore, the increasing sophistication and sheer numbers of Internet users necessitates improved functionality and capacity at all state websites along with richer e-government services. The **growing computer knowledge on the part of the public influences government** by propelling movement towards more e-government services. Much more than information is being transmitted as these factors necessitate additional sensitive data; e.g., financial transactions are now conducted on the Internet. Arizona has been at the forefront of e-government services development, especially online licensing.

T**imely and accurate communication of critical information plays an integral part in keeping Arizona safe** from both natural and man-made disasters. When such disasters do occur, communication plays an even greater role in mitigating the impact of the disasters. The State is leading efforts to prevent and respond to threats against Arizona citizens, employees, and its assets. The development of the Arizona 2-1-1 Online website is a key example of Arizona's response to these efforts.

This statewide plan identifies and elaborates on the strategic IT goals for FY 2007 based largely on an extraction of executive agency IT goals from last year combined with the Governor's statewide goals. Discussions with stakeholders and the Information Technology Authorization Committee (ITAC) have also revealed concerns, issues and suggested directions for the future. These goals are long-term and may not be accomplished in a single year; hence the focus on last year's goal accomplishment and subtle deviations from those objectives. Furthermore, state

Accomplishing the goals of Arizona's IT vision will require effective planning based upon defined standards and processes and utilizing meaningful metrics.

core values and guiding principles have laid the foundation for the overall focus and emphasis of five adopted goals.

State executive agencies' FY 2004 – 2006 IT plans have been summarized in terms of trends, issues, goals and objectives in the formation of this document. The statewide strategic IT plan consolidates agency trends and identifies strategic IT goals for the next three years. Reordering of last year's statewide IT goals was the result of new statewide emphasis on security and agency focus on the Internet and e-government. Recommendations are also made based on review of the agencies' IT plans at the end of this document. Through successful IT planning, the State will reap the benefits of agency IT programs that play a more cohesive role in agencies' fulfilling their missions and future visions.

STATE OF ARIZONA'S IT VISION

"A thriving economy means an economy that takes advantage of the jobs and technology of the future. If we want Arizona to be the high-tech powerhouse it can be, we need to invest in the research and innovation that will produce it." Governor Janet Napolitano, State of the State speech January 2006

Arizona's IT vision is based on the technology of the future and the use of technology as a tool to improve processes, share information, and deliver timely services. Economic growth expands opportunities. The sharing of IT resources enables agencies with finite time, money, and personnel to deliver services more efficiently and more effectively. Technology services and initiatives must be driven by demonstrating a maximization of benefits through economies of scale.

Accomplishing the goals of Arizona's IT vision will require effective planning based upon defined standards and processes and utilizing meaningful metrics. This Statewide Strategic Information Technology Plan communicates key goals for guiding Arizona State government's IT future.

GITA's mission within the state of Arizona is to promote "partnering with state agencies and private sector organizations to improve technical and human information technology capabilities, to efficiently add value and improve delivery of public services for the people of Arizona." As an enabling tool, GITA's vision is "the advancement of

GITA's Core Values

Integrity

Right to privacy

Freedom of access

Cooperation

Respect

Quality

Efficiency

quality, productivity, and governance through creative process improvement driving Arizona as a model of accountability in managing and measuring value-added results."

This vision includes the following guiding principles:

- Strong partnerships and alliances with agencies and vendors;
- Leveraging resources and information;
- Customer-oriented and continuing service process improvements;
- An emphasis on cost-effectiveness, return on investment, and business process improvements;
- Consistent policies and standards, using industry-accepted professional tools and practices to improve quality and efficiency;
- Focus on the future promise of technology combined with an understanding of the present capabilities and limitations.

ARIZONA'S CORE VALUES

Values influence how decisions are made, reflecting which qualities are held important, how the world is viewed and what beliefs are significant. The core values for GITA and the state of Arizona are as follows:

Integrity – honesty, fairness, and accountability.

Right to privacy – State government holds information, which is private; unauthorized release of that data is a violation of the public trust.

Freedom of access – citizens have a right to ease of access to public information within the constraints of privacy and confidentiality.

Cooperation – cooperation between political entities and the private sector is fundamental to effective use of technology.

Respect – all individuals and organizations deserve our respect.

Quality - high caliber of state IT systems and services is one of our fundamental objectives.

Efficiency - State government should constantly strive to improve its efficiency.

ARIZONA STATEWIDE IT GOALS

The information technology goals promulgated in the past two years, and continuing this year, reflect the desired end result of using IT in targeted areas over the next decade. They set the strategic direction for the State of Arizona in 2006 and years to come. Agency IT plans have reflected these goals to one extent or another, as summarized in the final section of this plan. Each year the statewide IT goals are derived from the Governor's State of the State address and the trends, issues and agency goals & objectives as reported in their annual IT plans.

In addition, meetings with stakeholders and other initiatives influence the overall direction from one year to the next. Performance measures are assessed annually to quantify overall progress on these far-reaching goals, some of which are operational in nature. Governor Napolitano has emphasized five long-term issues for 2006; namely, building the new Arizona economy, supporting children and education, assisting seniors, ensuring homeland security and enhancing efficiency of government.

For FY 2007, GITA is envisioning continuation of the previous year's five statewide strategic IT goals with a renewed focus on homeland security, state economic growth, and revived interest in efficient government.

"Any e-government initiative should be based upon principles of convenience, efficiency, security, accessibility…"

1. Secure Information & Data: *increasing both IT privacy and security for Arizona citizens by protecting state government information, strategic IT assets, and personnel.*

2. Accessible Government: *making services more accessible to citizens and state agencies by providing convenient access to information and services using e-government solutions.*

3. Growth of State Economy: *enhancing economic development for the State of Arizona through application of information technology.*

4. Efficient Government: *sharpening efficiencies and augmenting quality of life for Arizona citizens through leveraged common IT resources and an IT infrastructure employing an enterprise perspective.*

5. Effective Government: *strengthening quality products and faster services by improving internal government effectiveness and productivity.*

Working in concert with the executive branch agencies and other stakeholders in the State, GITA is committed to achieving these goals by adhering to the objectives and initiatives outlined in this strategic plan. Information technology support for the executive branch of Arizona should operate as a seamless enterprise delivering consistent, cost-effective, reliable, accessible and secure services that satisfy the needs of its diverse public and private customers, including its citizenry, its business communities and its public sector agencies.

GOAL 1: SECURE INFORMATION & DATA: *Increasing both privacy and security for Arizona citizens by protecting state government information, strategic IT assets, and personnel.*

In her 2006 State of the State Address, Governor Napolitano identified Arizona's border security and homeland security as priorities for the state. Information security and privacy are closely related factors in quality of life for Arizona citizenry. Communication with the public in times of crisis is equally important. Seamless communication is central to any crisis response, whether that crisis is a terrorist attack or a wildfire. Arizona is improving homeland security efforts by using technology for sharing critical information on physical and cyber threats, upgrading communications interoperability, and by improving business continuity, disaster recovery, emergency response planning, and border security.

Information security and privacy are key factors in quality of life for Arizona citizenry.

Statewide Objectives

- Improved IT security at state agencies based upon security awareness training and adherence to statewide security policies and standards.
- Identification of alternate service delivery means, for every *critical* agency business function throughout the state, if a natural or man-made disaster disables regular service delivery.
- Update of statewide security policies and standards with **best practices** relating to IT operations and architecture in alignment with Homeland Security initiatives.

- Initiation of a statewide IT disaster recovery plan encompassing all state mission-critical systems.

Statewide Performance measures

- Increased IT security standards compliance across state executive agencies from an overall average of 75 to 80 percent, measured through the application of the annual self-assessment survey. These surveys placed the large mission-critical agencies at 82% overall compliance level with statewide standards and at an 82% compliance specifically with IT security standards. Last year's goal was to be at 70% security compliance, so it was exceeded by 12%.

- Improved business recovery from disaster through business impact analysis, business continuity planning, training, and identification of key, essential and critical business functions. The goal was to have 100% of critical business functions and associated IT processes identified and covered by an IT Disaster Recovery Plan by close of FY 2006. This stretch goal was not met; however, nearly 70% of state agencies now have Business Continuity Plans in place which includes 97% of the major agencies.

"Arizona is improving homeland security efforts by using technology for sharing critical information…"

- Improved state agency participation in the Statewide Infrastructure Protection Center (SIPC) to a level of at least 60 percent was the goal for FY 2006, with increasing percentages over the next five years. SIPC produces alerts on security threats and vulnerabilities, incident response reports and emergency responses and vulnerabilities to all subscribers based on a nationwide network. This goal would have been met had not funding and adequate authority for SIPC been removed in August 2005. Work is underway to re-activate this important program.

- Secure statewide IT infrastructure to protect both privacy and data integrity through assessment and audit of key agency IT systems to ensure security standards and procedures are in place. The goal is for self-assessment of the 33 major agencies' IT processes in 25 different categories ranging from security plans to enterprise architecture. This goal was met through activation of the

online TISA application at the GITA website. Only one major agency failed to complete all 110 questions of the self-assessment survey.

- Successful disaster recovery testing of state agencies in simulated emergency situation. This goal has been met at a handful of agencies but needs to be more seriously addressed in 2006, especially in the area of backup testing. Although most major agencies are backing up their information on a daily or weekly basis, few are actually testing the backup media to ensure that they are recoverable.

Current Initiatives Underway

Business Continuity Planning (BCP): All executive branch agencies are required to submit Business Continuity Plans as well as test and maintain them. Arizona Department of Administration (ADOA), Department of Emergency and Military Affairs (DEMA), and GITA are working together to determine validity and completeness of the BCPs, identify state IT and disaster recovery vulnerability gaps, delineate data collection requirements and characterize training needs in support of agencies' IT disaster recovery plans. This tri-agency team analyzes the IT security information collected online through the agency self-assessment survey and generates overall readiness scores to validate agency BCPs.

Newer technologies enable people who are less technical to spend less time gathering data and more time analyzing information.

In conjunction with these efforts, State CIO Chris Cummiskey participates as a member of the Governor's Emergency Preparedness Coordination Council and has been instrumental in the creation of the IT Security Advisory Committee to identify and recommend IT security best practices to state agencies. A statewide IT Disaster Recovery Plan is also in the works as a result of the preparations for Business Continuity Planning and IT security standards compliance.

Statewide Infrastructure Protection Center (SIPC): Arizona has implemented a Statewide Infrastructure Protection Center to send alerts, collect vulnerability information for prevention efforts, and provide early warnings to state agency personnel and other government entities of cyber threats, including computer viruses and network intrusions. As part of the State's IT security policies and standards, agency Chief Executive Officers and Chief Information Officers are responsible for

reporting all cyber threats and intrusions to SIPC. Despite earlier funding cuts, this important center will hopefully be re-activated before the end of the fiscal year.

Furthermore, the CIO Council and ADOA are developing a statewide incremental cyber security improvement plan, which includes clarification of roles and responsibilities for a computer emergency response team and the statewide IT security management function.

Communications Security: The need to communicate efficiently and securely, when preparing and responding to emergency situations, is extremely critical for first responders, state government, and its citizens. Due to the importance of communications interoperability to support statewide emergency response, the state is addressing both long-term microwave (radio and data) infrastructure enhancement requirements and tactical border radio communications gap closure needs. The intent is to define a common communications protocol allowing intercommunication between all of the state, local, federal, and other entities to support planning, preparedness exercises and respond to and recover from emergencies.

Data and intellectual property are the state's primary assets.

In collaboration with Homeland Security, DPS, DEMA, GITA, and local safety organizations are providing consulting support services for three-digit N-1-1 "one call" resource centers; e.g., 2-1-1, 5-1-1, and 9-1-1. Arizona State government recognizes that an efficient and interoperable information technology infrastructure is essential for sustaining continuity of government capabilities and improving collaborative Homeland Security efforts for first responders, emergency management, citizen safety, welfare, and transportation functions.

2-1-1 Project: The first phase of a statewide 2-1-1 system has been implemented by Arizona Health Care Cost Containment System (AHCCCS), in conjunction with the Governor's Office, as well as the Departments of Economic Security and Health Services and GITA. The second phase of the system, namely the establishment of 2-1-1 call centers is underway in preparation for the 2006 fire season.

Arizona's 2-1-1 system currently enables easy web searching by the public of a health care and social services provider database. The website also supports

searches by information & referral and social service professionals using standard Alliance of Information & Referral Systems taxonomy categories and codes. The emergency response components of the system allow posting and searching of homeland security and bio-terrorism bulletins by county and by city throughout Arizona.

By the completion of Phase II, anyone in the state will be able to dial 2-1-1 to access a network of community-based call centers along with the web-enabled database; thus providing timely information on health care as well as pertinent information in times of disaster. The second phase of this important three phase system is planned for interim operation during times when the State Emergency Operations Center is activated starting in June 2006.

"Ultimately, the State will provide citizens and businesses with 'one face' to Arizona government."

Top Officials (TOPOFF 4) Preparations: A congressionally mandated federal biennial counter-terrorism exercise administered by the Federal Department of Homeland Security of Office of Domestic Preparedness' Training & Exercise Program will be held in three locations in 2007: the states of Oregon, Arizona and the island nation of Guam. TOPOFF 4 is the fourth such exercise involving collaboration between state and federal agencies, local jurisdictions, tribal nations, non-profit organizations, and private sector companies. Due to its size, import, and international aspects, preparations are underway already. The primary objectives of the exercise include interoperability, functionality testing of existing emergency teams, patient distribution and mass casualty plans, protocols, hospital surge capacities, interagency intelligence and media information sharing processes as well as business and information systems continuity.

Integrated Criminal Justice: Coordinated efforts with the Arizona Criminal Justice Commission between the State, local courts and law enforcement agencies are underway to leverage State assets and information in protection of the citizens of Arizona.

GOAL 2: ACCESSIBLE GOVERNMENT: making services more accessible to citizens as well as the public and private sectors by providing convenient access to information and services using e-government solutions.

E-government increases the public's access to government and enables it to run more efficiently. Government services must be made widely available through multiple delivery channels. The State's goal is to provide accessible, reliable, and cost-effective government services to Arizona's citizens electronically. As mentioned in a majority of the agency IT plans, improved access to government services over the Internet is the primary vehicle envisioned for improving customer service. Sharing data and services using the Internet indicates a positive trend towards collaboration among state and local government agencies. The following three ongoing activities promote Internet accessibility:

- Collaboration and communication among agencies and municipalities;
- Architecting a framework to support both enterprise and distributed e-services delivery; with emphasis on online licensing;
- Development of statewide standards for web-related initiatives;

Arizona @ Your Service (AAYS), a leading-edge web portal offering Arizona citizenry improved access to government agency information and services over the Internet, has been in place in Arizona since 2001. The AAYS Portal at http://az.gov/webapp/portal/ is now the center of the state's e-government initiative providing citizens access to Arizona's government organizations from a single web site. Currently, more than 150 Arizona state, county, and municipal agencies leverage the capabilities of the AAYS.

One of the state agencies leading trends was the use of the Internet to provide information and services…

Agencies' business functions are being reviewed to determine the feasibility of migrating selected functions to the Internet. Many agencies save money and provide better service by utilizing the proven web application development expertise and infrastructure of the Portal. GITA provides the services of its webmaster to state executive agencies both for training and website enhancement services.

The intent is to promote government efficiency and accessibility through the practical application of technology in support of the Governor's directive to reduce costs and

improve service delivery to the public. One of the state agencies' key trends was the use of the Internet to provide information and services along with infrastructure improvement. Sharing data with other agencies was another frequently identified trend as well as the growing recognition of e-government.

Statewide Objectives

- Encourage agency use of the State Web Portal;
- Provide a sound business model for online service delivery;
- Improve the look-and-feel of the navigation and search capabilities of State websites;
- Enable agencies to use online E-Licensing services;

Statewide Performance Measures

- Number of transactions available on the Internet via the web portal. The goal for FY 2006 was to have at least 65 transactions available on the Internet with an increase of ten transactions for each succeeding fiscal year. As of March 2006, there were 78 transactions available on the state web portal, thus exceeding expectations by 20%.

"The Web Portal assists citizens by improving their access to web-enabled services."

- Support agencies in development of online licensing initiatives. The goal for FY 2006 was to have at least 12 agencies providing online license renewal services. In succeeding years, an increase of ten agencies each year is desired. Thus far in 2006, there are 15 agencies using various components of the portal for online licensing.
- Promote the use of a standard 'look-and-feel' to yield a positive experience for citizens. The goal for FY 2006 was to have 65 agencies using the standard web design style guide with an increase of ten agencies in each succeeding fiscal year. At present, there are 70 agencies using the standard web design style guide.

- Number of agencies using the standard Internet designation to the .gov format. The goal for FY 2006 was to have 100% participation in use of the .gov naming convention. Although 120 agencies have requested a standard .gov naming convention, only 90 of them have been implemented so far. The Governor's request for a more standard addressing scheme for state agencies is driving this initiative.

Activities Underway

Notice of Intent (NOI): Governor Janet Napolitano has directed all agencies to coordinate web development initiatives through GITA. The process of informing GITA of the web development or maintenance effort is done through the NOI. This directive is intended to ensure that agencies are:

- Employing cost efficient means in deploying all web-related services;
- Evaluating and expanding the services offered through the AAYS Portal;
- Adhering to published statewide policies and standards;
- Maintaining a consistent look-and-feel in the website designs;

Web Portal: Original selection of a business partner for Web Portal development and maintenance was made in 2001. Presently, this contract has been extended while a long-term RFP is developed and awarded. Through use of the portal, benefits can be realized from reengineering and streamlining of business processes. For example, an agency, attempting to place a paper form online, discovered that a full-scale re-evaluation of their requirements resulted in a far more efficient, cost-effective process. Moreover, identification of common needs among agencies has identified new opportunities for a shared component architecture.

Online Licensing: Bolstered by the successes of online renewals for both the Department of Real estate and the Registrar of Contractors; the Department of Insurance and other larger agencies are now adding online license renewals. A common approach for small agencies is currently under development. This new

application, referred to as the Common Licensing System, facilitates online license registration, renewal and back-office automation using shared infrastructure components and services.

Intra-agency efficiencies: As intra-governmental functions are administered online, government services have become more integrated and efficient in Arizona. One example is the efficiency achieved by an agency passing data electronically to another agency instead of using a paper transmittal; this process is underway at AHCCCS and DES as well as other agencies. This type of electronic data transfer yields higher accuracy as well as faster delivery. These efficiencies began with data/information content and common data formatting discussions among communities of interest.

Agency E-mail Naming standards: As part of Governor Napolitano's policy regarding government efficiency, standardization of agency e-mail addresses has been encouraged. This is a good example of making access easier for citizens. The .gov naming convention is recommended for all Arizona State agencies, boards and commissions to standardize web and e-mail addresses, giving citizens the assurance that they are accessing an official state government website. To preserve the integrity of the .az.gov name space, .az.gov domains are limited to Arizona government organizations at the state and local level. In the future, az*agencyname*.gov will become the standard for all state agencies.

GOAL 3: GROWTH OF STATE ECONOMY*: enhancing economic development for the State of Arizona through application of information technology.*

Governor Janet Napolitano has identified economic development, especially rural economic development, as one of her top priorities in 2006. Advanced telecommunications infrastructure is crucial for economic development in Greater Arizona. Broadband availability helps to break down both time and distance barriers in conducting business. It is also a key factor in job creation outside the metropolitan areas. Broadband is defined to be a telecommunications connection of at least 1

Megabit per second (1 Mbps). Treating telecommunications as a critical state infrastructure is the first step in support of the Governor's Council efforts to expand broadband throughout the State and foster job growth in Arizona's rural communities. Such ventures as the Telecommunications Privatization Program, wherein state agencies will use a common telecommunications infrastructure, and the CANAMEX Corridor WiFi Implementation are two initiatives already well underway in this area.

"In the past year, broadband services have come significantly closer to reality for Arizona citizens"

In terms of attracting higher wage jobs to Arizona, information technology is itself a high-tech industry. Arizona must continue to innovate in the area of IT and adopt industry-wide best practices and standards, if it is to continue to lure business to our state. Moreover, the need for education in key areas of information technology has been identified repeatedly by state agencies in their IT plans. In fact, during FY 2006 64% of agency objectives listed in the agency IT plans were concerned with staff training.

Statewide Objectives

- Promote sharing and consolidation of telecommunication networks.
- Aggregate cross-jurisdictional government needs for broadband services.
- Solicit demand through community activism to speed broadband deployment.
- Foster competition to encourage better services at lower prices to under-served areas of Arizona.
- Improve funding for K-12 education and libraries by increasing State's use of E-rate subsidies to fund both Internet connectivity and network infrastructure within Arizona's schools.
- Promulgate use of industry best practices through increased use of policies and standards, especially in the areas of quality assurance and enterprise architecture; thus, following the pattern set by successful states in the development and management of telecommunication infrastructure.

- Educate and expose IT personnel and businesses to newer technology and improved IT processes.

Statewide Performance Measures

- Percentage of participation of school districts and libraries in applying for E-rate subsidies within Arizona. Once education officials have determined their eligibility for obtaining Federal Communication Commission (FCC) E-rate subsidies, the optimistic goal for participation by eligible schools in FY2007 is 80%. This goal was not reached in 2005 for several reasons. First, in Arizona there are disincentives for school administrators to process E-Rate applications, since the statutory Excess Utilities funding formula demands re-imbursement to state coffers of E-rate dollars in return for used Excess Utility dollars. The second obstacle is that less than half of *approved* E-rate funds are ever used by schools due to lack of administrative tracking at the school level. Work is underway to resolve both of these issues.

- Total amount of Federal grant monies obtained for broadband deployment. A tentative goal of $1M in Federal grant monies was set for FY2006, up from the $500K obtained in 2004. In 2005, Arizona's Hopi Nation received about $1.6 Million in Grant dollars to complete a Broadband Network on their lands, thus exceeding the goal by 60%. The goal for FY 2007 will be to receive Federal grant monies of approximately $1.5 to 1.6 Million.

- Number of successful broadband infrastructure projects underway or implemented in Arizona. At least one successful broadband implementation is the measure of success of economic growth for FY2006. This goal was met with a successful completion of a broadband Wi-Fi corridor from Rio Rico to Green Valley, near the Mexican border, for emergency responders. The goal for FY2007 will be five broadband projects either underway or completed.

  Currently, GITA and Department of Commerce have identified the Town of Superior as a Broadband project for CY 2006. Through ongoing support from GITA, organizations such as the Maricopa Association of Government's Telecommunications Advisory Group (MAGTAG), and many other public and

private groups within and outside Arizona; communities have validated the use of WiFi Networks as broadband infrastructure enhancements. In fact, the City of Tempe completed a WiFi build-out covering the city in 2005. The cities of Chandler, Gilbert, and Phoenix have begun similar WiFi build-outs this year. Not only are Flagstaff and Scottsdale formally contemplating such build-outs, but so is the town of Sahuarita in Pima County. Others will soon follow.

- Number of agencies using the AZNET. In 2005, a Telecommunication Privatization contract was established to consolidate, streamline, standardize and update the hodgepodge of agency communication interconnections including phones, voice over Internet Protocol (VoIP) and video. Of approximately 140 state executive agencies, all but 15 of the agencies have transitioned to AZNET as of April. The goal for FY2007 will be for all state agencies to be fully operational using a common communications system administered by a common entity.

Background: The deployment of broadband into any area or community requires two primary telecommunications services: middle-mile and last-mile. However, major obstacles are precluding middle-mile development. Middle-mile includes high capacity trunk lines and associated infrastructure connecting Internet Service Providers (ISPs) to the Internet while last-mile covers the Internet connection between the ISP and end users. Although an increasing number of companies have expressed interest in providing last-mile services in underserved or un-served rural areas, the lack of reasonably priced middle-mile connections thwarts success. Major barriers to middle-mile deployment are the length of time to achieve the return on investment for telecom providers, access to rights-of-way, and the lack of an overall coordinated statewide strategy.

Current Initiatives Underway

Formation of Communications Infrastructure Advisory Committee: Initial steps of a comprehensive broadband policy were undertaken in late 2005 as approval was received from the Governor's Council on Information and Technology (GCIT) to form

the Communications Infrastructure Advisory Committee (CIAC). This committee has been empowered to advance a number of earlier policy recommendations.

Statewide Strategic Telecommunications Plan: In 2004, the Arizona Legislature appropriated $500K for community and regional telecommunication assessments. Continuing appropriations need to be obtained and future assessment activities funded. Most importantly, findings from these assessments need to be incorporated into a Statewide Strategic Telecommunications Plan. This plan will replace a less comprehensive one developed in 1996 and will be the first attempt to establish a *statewide* vision. It will establish priorities, identify policy changes, highlight areas of telecommunications deficits, and set the course for long-term solutions over many years to come. The Arizona Telecommunication and Information Council (ATIC), as well as many regional business and planning councils, will be key players in this effort to develop an effective statewide telecommunications infrastructure through the implementation of a statewide strategic plan.

Newer technologies enable people, who are less technical, to spend less time gathering data and more time analyzing information.

Establishment of a Broadband Authority: Another recommendation approved by GCIT was the creation of an Arizona Broadband Authority along with an Arizona Broadband Universal Service Fund (ABUSF). This Authority, when created, would be empowered to issue bonds, grants, low cost loans, and long-term financing to encourage private sector development of middle mile and last mile broadband telecom solutions. Besides ABUSF, sources of additional funding would include Federal, State and private sector grants and appropriations. In FY2007, efforts are continuing as strategic planning and task groups are being established to further these objectives.

Right of Way Policies impacting Telecommunications. A further GCIT recommendation is the exploration of the numerous Right of Way access issues related to Broadband and telecommunications. Under CIAC, a task group will be operational in 2006 to investigate changes and make recommendations to Rights of Way policies beneficial to the advancement of broadband infrastructure in the State.

Prioritization of Federal Funds and Resources: Broadband deployment is a national, state, and local community issue. Although Arizona has lagged behind other states

in the acquisition of federal grants, subsidies, and loans directed at broadband deployment, efforts are underway to close this gap. One of the goals of CIAC will be to provide leadership and help communities-of-interest qualify and apply for such grants, subsidies, and loans in the State of Arizona.

CANAMEX: CANAMEX, a strategic trade corridor connecting Mexico, the United States, and Canada, traverses Arizona starting at Nogales passing through Wickenburg and leaving the state at Hoover Dam, and then reentering and leaving again as part of Interstate 15. As part of Arizona's telecommunications infrastructure enhancement, development of broadband connectivity along the corridor is being promoted. This effort includes the deployment of a Wireless Fidelity (WiFi) network along the route.

Initially, a $500K Federal grant was acquired to implement broadband along a 30-mile southern segment of the CANAMEX Corridor near Arizona's International border with Mexico at Nogales. The Homeland Security grant covered the area along I-19 from Rio Rico to Green Valley. This proof-of-concept project enables a secure connection to a WiFi implementation for many as 100 first responder vehicles. The network also provides connectivity for a number of other public and private sector users, affording broadband where none existed before and allowing both secure and commercial communications.

The 'smart corridor' project is a precursor to providing a wireless umbrella over the entire CANAMEX route. Other desirable implementations would fill in communications gaps between Wikieup and Congress along several 60-mile swatches of I-93. Each 1 Mbps+ wireless connection yields web-based availability of both video and audio communication. Among the benefits will be the facilitation of emergency response for victims of traffic accidents, and the connection of libraries and schools to the Internet, eventually providing service to all citizens living within or passing through the corridor.

E-rate Subsidies: Congress created the E-Rate program as part of the Telecommunications Act of 1996 in an attempt to provide Internet access to schools and libraries that otherwise wouldn't be able to afford broadband. The program

provides 20% to 90% discounts on telecommunications services and equipment. Its funds are targeted to schools and libraries serving children of low-income families and are based on the percentage of students participating in the federal school lunch program. $2.25 Billion, from consumer phone taxes collected by the Universal Service Administrative Company (USAC) under the auspices of the FCC, is allocated annually to provide schools and libraries throughout the US with high-speed Internet and telephone services.

An alarming downward trend in E-Rate subsidies for Arizona schools and libraries was identified starting in FY 2004; i.e., from $68M to $40M to $22M. To maximize use of Federal subsidies at the local school district level, a task force was created in 2005 to determine reasons for the statewide shortfall. Two fundamental contributors were uncovered: 1) the statewide carrier service contract was not renewed in sufficient time for school districts to qualify for applications processed against it as a qualified USAC-470 contract; thus school and library personnel were forced to issue their own '470-certified' RFPs, as required by USAC policy, compelling schools to make a hard choice between the cost of a competitive RFP and the benefits derived from such an application; and 2) once qualified, many school districts budgets changed, creating a hardship due to the required 10% to 40% matching funds.

The first issue was resolved in mid-January 2006, when a new eligible statewide contract was awarded. However, insufficient time remained to apply for the available funding in the very narrow USAC application window (November through February). Fortunately, this new contract will substantially reduce the cost for schools to qualify for these subsidies in the future.

IT Training Initiative: The Enterprise Procurement System recently awarded an overall Training contract providing a shopping list identifying potential vendors experienced in IT training available to state agencies and their staff to update them on information technology and future trends.

GOAL 4: EFFICIENT GOVERNMENT: *Sharpening efficiencies and augmenting quality of life for Arizona citizens through leveraged common IT resources and an IT infrastructure employing an enterprise perspective.*

Improvements in the process of information generation to support better, fact-based decisions are a vital key to government efficiency. Relevant information is often not available due to the lack of technical expertise required to access and compile the information from incompatible computer systems, and then manually manipulate the information for analysis and presentation to the ultimate user. Newer technologies enable people, who are less technical, to spend less time gathering data and more time analyzing information. A majority of state agency IT plans mentioned improved efficiency as an IT goal for FY 2006, in addition to their goals for staying ahead of the technology curve.

Arizona's Enterprise Architecture provides the "technology building code" necessary for interoperable, enterprise-wide information technology solutions.

Statewide Objectives

- Leverage IT resources across agencies;
- Enable interagency deployment of customer services;
- Decrease the complexity and improve the connectivity of the State's IT environment.

Statewide Performance Measures

- Promote open policies and standards for hardware, software, and associated infrastructure, yet drive the state infrastructure toward an interoperable enterprise architecture. Statewide IT standards in the areas of management practices, quality assurance, web development, enterprise architecture and security have been developed and are published on the GITA website. Arizona's enterprise architecture provides the "technology building code" for interoperable, enterprise IT solutions. Adherence to the five domains of enterprise architecture standards by state executive agencies will be measured. Overall adherence of major state agencies to the Enterprise Architecture standards was measured in FY 2006 to be at an overall 73%. The goal for FY2007 will be overall agency compliance to Enterprise Architecture standards of at least 80%.

- Encourage agencies to buy target technologies when upgrading infrastructure. The goal is to have 100 percent of agencies using both the Target Technology standard and the questionnaire. Due to limited funding and hardware upgrade refresh cycles generally extending over 3 years, this goal is far from being met. Barely 2% of the major agencies are using Target Technologies within the State in FY 2006.

- Ensure all IT organizations follow the Enterprise Architecture through the Project Investment Justification (PIJ) process. The goal is to assess 100 percent of incoming PIJs to comply with the Enterprise Architecture standard. Although all incoming IT projects are assessed to compliance with EA standards, overall adherence to the domains is increasing very slowly due to limited IT funding. In FY 2006, all *approved* PIJs complied with the EA standards.

"... large-scale and high-risk projects are monitored toward successful implementation using lifecycle analysis as well as quality assurance methodologies and industry best practices."

Current Initiatives Underway

Technology Building Code: Arizona's Enterprise Architecture provides a "technology building code" necessary for interoperable, enterprise information technology solutions. GITA, in partnership with the Arizona CIO Council, completed the initial development of white papers, policies, and standards that enable disparate systems to communicate and interoperate in FY2004; as a measure toward providing more efficient, responsive government. Policy and standards documents have been published at http://azgita.gov/policies_standards/ defining the overall architecture program and its approach to five domains. In addition, supplemental requirements for software applications, productivity tools, database access, and data modeling have been produced. A fresh look at service delivery architecture models is underway. Meanwhile agencies are encouraged to consider the web services behind the Service-Oriented Architecture (SOA) as a viable approach to reaching an ultimate statewide Enterprise Architecture.

Policies, Standards and Procedures (PSPs): The State's strategic perspectives are reflected in the statewide IT policies and standards that, in turn, provide a framework for individual agencies to establish their own policies, standards, and procedures. Development and updating of statewide policies, standards, and

procedures continues, with emphasis on those standards that support the goals in the State IT Vision. Policies, Standards, and Procedures (PSPs) are designed to improve timeliness, quality, and efficiency of State government IT systems as well as provide direction to agencies on IT architectures, infrastructure, strategies, and operations.

Arizona Health-e Connection: A roadmap to produce a statewide infrastructure for electronic exchange of health information between professionals and hospitals has been constructed and approved by the Governor. Starting with the Governor's executive order in August, a series of joint meetings between healthcare providers, consumers of healthcare and government agencies were conducted to elicit a feasible approach to "reaching 100% digital health data exchange" incorporating clinical, financial, legal, technical, and governance aspects of this extensive effort. The next steps involve implementation of the detailed plan.

Throughout 2005, as many as 122 projects, encompassing nearly half a billion dollars of total development costs, were being monitored.

GOAL 5: EFFECTIVE GOVERNMENT: *Strengthening quality products and faster services by improving internal government effectiveness and productivity.*

As business processes are reengineered to create the efficiencies necessary to preserve quality of service in the face of limited budgets, technology should play a major role in their implementation. Effective processes are necessary to create and maintain government efficiencies. Agencies, both small and large, are being educated and encouraged to manage their IT as an important resource through the annual state-mandated IT plans. The effectiveness of IT systems and procurement of quality IT products is also a measure of movement toward more productive government in Arizona.

Resource and information sharing is also a key ingredient in achieving effectiveness. The movement towards a statewide enterprise architecture includes an associated technology table for support of agencies in assessment of new IT purchases. Agencies are strongly encouraged to use common products, not only for volume cost savings, but to permit interoperability and reduce overall maintenance costs. Communities-of-interest are in the early stages of identifying common data elements

and store them in identical formats for future information sharing. The 2-1-1 project has been instrumental in initiation of this fundamental process.

Statewide Objectives

- Integrate the IT and business planning processes to ensure better alignment of IT with business goals;
- Ensure IT project success by providing increased project oversight for high-risk projects;
- Improve the project monitoring process by including an Enterprise Architecture compliance review to the existing statewide standards;
- Advance use of quality assurance and project management methodologies statewide.

Agencies are strongly encouraged to use common IT products, not only for volume cost savings but to permit interoperability and reduce overall training and maintenance costs.

Statewide Performance Measures

- Moving information technology toward the statewide enterprise architecture standard. The goal is to eventually have 100 percent of submitted projects in alignment with statewide architectural technology targets. In FY2006, 83 percent of reviewed IT projects were meeting published architectural technology targets and 100 percent of approved IT projects met the targets.
- Increased use of planning and certified project managers for IT projects. The goal is to have 100 percent of executive agencies using the IT planning tool, PARIS, on its website at www.azgita.gov/apps/. In FY2006, 100% of all executive agencies updated their IT plans. In addition, classes in effective IT project management are being held at various state agencies.
- Agencies tracking and accurately maintaining IT inventory. The goal is for all executive branch agencies to use the online IT inventory tool, ISIS (Information Services Inventory System) on the GITA website. In FY 2006, 100% of executive state agencies updated their inventory using the ISIS online tool.

Current Initiatives Underway

Project Investment Justifications: Agencies are required to submit a Project Investment Justification (PIJ) for all IT projects expending over $25,000. The PIJ is basically a business case supporting the benefits and plans for a specific IT project. Projects under $1 million dollars are reviewed by the GITA director, while those $1 million and over are approved by ITAC. Enterprise architecture compliance is a key part of the PIJ.

Strategic IT Planning: All state agencies are required to perform annual IT strategic planning to ensure effective use of their IT resources. As such, an IT plan is required by state statute to be submitted by September 1st of each year. In years past, each IT plan identified the agency's business goals and associated IT goals along with objectives and performance measures to be met in the next three years. Changes to this philosophy were introduced in FY 2006 to provide measurable effectiveness of the statewide standards. Focus on the major IT spenders and those agencies possessing critical processes (Group 1 as listed in Appendix A) is intended to provide a clearer picture of statewide gaps and issues.

Numeric assessment of compliance level to both security and enterprise architecture standards over the present and next three years revealed several areas in need of statewide change and common funding. These areas included the need for a more realistic implementation of encryption standards, better testing of backups, and improved IT security awareness training.

Project Oversight: IT projects are monitored and mentored toward successful implementation statewide by GITA. Additionally, large-scale and high-risk projects are given special attention encouraging use of successful implementation methodologies including life-cycle analysis and other best practices. Outstanding issues are reviewed by both GITA and ITAC and timely recommendations for improvements or corrections are provided.

Focal points of the review include project scope, management, roles, responsibilities, reasonable schedules, change control, cost containment, and effective utilization of resources. These reviews help ensure the projects are managed in an appropriate

Project management training increases professionalism, ensures that benefits are realized and improves the likelihood that projects are delivered on time and within budget.

manner and that sound business practices are being followed from both IT and financial perspectives. Finally, agencies are encouraged to integrate quality assurance (QA) into project development either by designating qualified staff or contracting for third party QA services.

Project Management: Project management training increases professionalism, ensures that benefits are realized, and improves the likelihood that projects are delivered on time and within budget. To that end, education of State agencies about the benefits of modern project management methods and techniques, including those developed by the Project Management Institute, is underway. Both Departments of Transportation and Revenue have training programs underway for their project managers. In addition, GITA has plans for a Project Management Forum to be held during the summer of 2006.

Since many of these projects involve millions of dollars and have great strategic importance to the state, a project missing its intended purpose or costing more than planned creates large financial and potential political problems for an agency. Throughout 2005, over 122 projects encompassing $445,000,000 of total development cost were being actively monitored. The currently active projects as of early May 2006 are listed in order of overall project cost in Appendix B.

Quality Assurance(QA): The importance of quality assurance for IT, including a formal project management methodology, cannot be overstated. GITA sponsored an all day QA Forum for IT in August 2005 to foster knowledge transfer from industry to academia to government and share key results with state and county agencies. More than one hundred attendees from both state and county agencies spent a full day learning about the importance and key lessons learned from practice of IT quality assurance. GITA will continue to provide thought leadership and focus to the State's quality assurance direction. Raising the awareness of the benefits of a robust QA program will provide government with a perspective on best practices and current state of IT QA. Examples of successful QA programs and lessons learned from other agency's implementations will be used to leverage and supplement individual agency initiatives.

SUMMARY OF EXECUTIVE AGENCY IT PLANS

Agency IT plans have increased in the level of maturity and are more business-oriented today than in past years. ***The biggest change has been in recognition of the power of the Internet and the evolving technology surrounding it.*** This year, IT security is also one of several recurring themes which includes both E-government and infrastructure improvement.

Not only are agencies writing IT plans in business terms, but they are also providing insight into their future IT direction. The five major areas of emphasis mentioned are as follows:

- Recognition of evolving technology and the way business is being conducted;
- Need for enhancing staff and their training, due to the above;
- Provision of more information and services online to better serve customers;
- Improvement of IT infrastructure along with software and hardware upgrades;
- Enhanced automation yet, at the same time, frustration due to rapid technology changes and costliness of retention and training of IT staff;

The intention is to enable state government to bypass these business inefficiencies by implementing strong quality assurance practices.

Distinguishing between Goals & Objectives

The Governor's Office for Strategic Planning and Budgeting (OSPB) defines strategic planning based upon mission, vision, goals, and objectives. GITA uses their methodology for purposes of strategic IT planning, which is in turn reflected by the executive agencies in their IT plans. However, this year GITA has chosen to focus attention on the major agencies, defined by IT expenditures in years past and/or performing critical governmental functions. Therefore only the major agencies were required to update their IT plans. Other agencies responded to a checklist of pre-formatted trends, issues, goals and objectives. Appendix A lists the Arizona

executive agencies broken into two categories; namely Group 1 entailing major agencies and Group 2 composed of the smaller boards, agencies and commissions.

Mission addresses the organization's identity and, as such, is all encompassing and rarely changes. It is basically the ultimate rationale for the existence of the agency, board or commission while **vision** is the agency's compelling, conceptual image of the desired future and represents a global, continual purpose for the organization.

An organization's **goals** provide a framework for more detailed levels of planning. Goals are more specific than the mission statement yet general enough to stimulate creativity and innovation. Goals describe the desired "to-be" state of the agency and are planning targets. An agency's strategic issues may lead to strategic planning goals. For example, a strategic issue may be a problem with dealing with rapid IT technology changes. The goal may be an IT training program.

… Goals are more specific than the mission and address the desired 'to be' state of the agency whereas objectives are activity-oriented and reflect targets for achieving goals…

By contrast, **objectives** reflect the specific and measurable activities necessary for accomplishing agency goals. As opposed to goals, objectives are specific, quantifiable and time-bound. The key word here is quantifiable as performance measures are typically associated with objectives in order to assess progress in achieving the overall goals. Objectives represent activities while goals are desired states.

SUMMARY OF EXECUTIVE AGENCY IT TRENDS

The ***power of evolving technology and the influence of the Internet***, through more sophisticated customer expectations, seems to have affected almost all agencies. Last year, agencies' IT plans were focused on broad business issues with a predominant customer-service orientation. However, this year training and staff retention seem to have taken center stage. Although 59 percent have goals reflecting more efficient operations and 58 percent of agencies have goals regarding customer service, 76 percent of agencies list goals related to retaining and/or training employees.

Continued emphasis on the part of State agencies on ***collaboration and working across boundaries*** will not only drive shared services but also improve government efficiency through interoperability. Communications are also a key component. The growth of wireless and broadband has jump-started many new possibilities in this fertile area. The use of statewide enterprise architecture targets will also make these collaboration attempts more successful in the long run.

Agencies' infrastructures had been a prominent theme in previous years. Beginning in FY 2003, agency goals started addressing bandwidth expansion and telecommunication improvements for wireless, PDAs, and remote telecommuting capabilities. The ***application of evolving technology to the rural regions of Arizona*** has also come to the forefront. Agencies see new ways of doing business using remote communications and laptops, making jobs more satisfying and staff more effective. The prominence of infrastructure seems to have risen to the forefront again with 46% of Group 1 agencies possessing goals related to infrastructure improvement rather than last year's focus on connectivity and communications.

… Sharing data and services is seen as the first step in moving towards operating the state as a true enterprise…

In past years, Internet delivery of information and services had been an important theme. It was the most often mentioned trend in both FY 2004 and FY 2005. However, in FY 2006 Internet customer communications was mentioned by slightly less than half of the agencies as a key IT trend across Arizona. Key trends across state agencies this year include the following:

- 69 percent of agencies have objectives for new system development
- 67 percent have goals to improve their connectivity
- 52 percent of agencies consider changing technology as a positive influence for providing new service delivery methods.
- 48 percent of agencies see the Internet as a positive trend in delivering information and services to customers

During the planning process, agencies are asked to list any trends that they foresee impacting their IT program's ability to support the business of the agency. The **top IT**

trend categories for the last four years have been slowly evolving from use of the Internet and remote connectivity to evolving technology and the **recognition of a growing need for collaboration between agencies and with customers**.

Evolving Technology

The trend most often mentioned in past years dealt with the use of the Internet to provide information and services. However, in the last two years, the focus seems to have moved beyond the Internet alone to evolving technology. In general, this is seen by GITA as a broadened IT awareness on the part of the State agencies that the Internet is only part of a changing paradigm. Perhaps agencies are recognizing that more than infrastructure improvements are required to truly incorporate IT into the business process. This trend is part of a growing awareness of the need to re-engineer business processes to better incorporate information technology.

A common thread of infrastructure improvement has also been seen. Productivity has also crept into agency goals, a new theme altogether. Connectivity to the agency network was the second most popular objective mentioned last year. This issue is often related to agencies' telecommuting programs; however, some agencies are also providing employees access to agency data and computing services, such as e-mail from the field.

Enhanced Staff & Training Needs

Enhanced staffing and training needs hit a high this year among trends across state agencies. Although IT training has been a growing concern in the last few years, loss of skilled IT staff seems to have prompted this year's dramatic response.

Other Trends Noted

Citizens embracing new technologies and pressuring agencies into website improvement was seen as a continuing trend across the state. E-government, surprisingly, was improved over last year but still not very strong despite many

agencies moving toward online licensing. This trend is viewed as a positive step towards acceptance of IT as part of the business and acknowledgement of the movement towards a paperless society. Sharing data with other agencies moved from fifth place to tenth place in rank order. This drop is viewed negatively since data sharing represents the first step in moving toward operating the state as a true enterprise, resulting from the establishment of IT architecture targets. The following table summarizes the top ten most frequently mentioned categories within state agencies across the last three fiscal years:

Category	FY 2004	FY 2005	FY 2006
Enhanced staff & training needs	16%	58%	76%
Remote connectivity to agency network	8	13	67
Evolving technology	38	28	52
Use of Internet to provide information and services	50	60	48
Productivity	n/a	n/a	47
Infrastructure improvement	n/a	20	46
IT security	n/a	22	33
Citizens embracing new technologies	28	24	27
E-government	16	11	18
Sharing data with other agencies	18	22	6

Note: FY2006 data reflect a different collection methodology from previous years, based on separation into Group 1 and Group 2 agencies.

SUMMARY OF EXECUTIVE AGENCY IT ISSUES

Each year, state agencies list issues having a negative impact on their IT program's ability to strengthen and support the business of the agency. These issues identified by each agency are then analyzed and categorized into six general concerns. Not surprisingly, many of the same issues emerged as in previous years. However, security and privacy issues now appear among the top two mentioned overall. The top IT issue categories and response percentages identified by state agencies across the past three fiscal years are listed in the following chart:

Issue Category	FY 2004	FY 2005	FY 2006
Lack of funding	52%	62%	42%
Lack of IT staff	32	58	76
New technology	33	40	36
IT security concerns	20	40	48

Note: FY2006 data reflect a different collection methodology from previous years, based on separation into Group 1 and Group 2 agencies.

Although inadequate IT funding was most often identified as having a negative impact on being able to support the agency's mission for all fiscal years, this year it took a backseat to IT staff issues. Perhaps, there has been some recognition on the part of agency IT functions that funding will never be sufficient to do all that is desired. It's also possible that the payoffs of automation have been more fully realized.

Lack of qualified IT staff has been among the top four issues for the last three years. This category was often expressed in conjunction with problems in staff retention, recruiting qualified IT staff, and IT training. Several medium and small agencies mentioned they did not even have full-time positions for information technology. The fact that this issue has been prominent for so long suggests a need for some sort of shared pool of personnel for the smaller agencies in this area. Private sector job growth appeared to fuel this trend in recent years; however, raises for state employees in late FY06 should alleviate this problem in the future.

Need for adequate IT security was identified by 40 percent of agencies, noting a growing concern over responses in past years. For some agencies, this deficiency means developing and implementing function business continuity and disaster recovery while others need to address specific security standards such as backup testing, user authentication and awareness training. The annual TISA questionnaire appears to be raising overall agency awareness of the important role of security in today's Internet and IT world. New guidelines require major agencies to assess their current capabilities by percentage compliance with each standard.

AGENCY IT GOALS & OBJECTIVES

Summary of Most Frequently Cited Agency Objectives in FY 2006:

- **69% of agencies have objectives dealing with new system development**
- **67% list objectives related to connectivity**
- **64% of objectives are concerned with staff training**

Recognition that IT requires Strategic planning not merely operational planning

While in FY 2005, agency IT plans became increasingly customer-focused; FY 2006 brought even greater improvements in the arena of customer concerns and aligning technology and business goals. In particular, agencies grew better at articulating the business reason for doing IT. New system development and re-engineering of older systems grew in emphasis from FY 2005 to FY 2006, with more than two-thirds of the major agencies identifying objectives dealing with system development. The top four agency goals cited in FY 2006 were efficiency at 59%, customer service at 58%, productivity or agency effectiveness at 47%, and infrastructure improvement at 46%. These goals are being satisfied through the objectives called out above; i.e. development of new systems, improving connectivity and training of IT staff. In addition, website improvement was also listed as an agency objective 63% of the

time. IT security is a frequent objective (58%) and consolidation of systems (52%). These objectives underscore the importance of reaching customers through the Internet and the maturity of systems development in data and service sharing.

This year GITA's focus was on the major agencies, so that all statistics reflect the agencies listed as Group 1, supplemented by the limited set of responses available to Group 2 agencies, as listed in Appendix A; i.e., the Group 2 agencies submitted a streamlined IT plan with no performance measures. The streamlined IT plan involved a pull-down list of possible trends, issues, goals and objectives extracted from popular categories in recent years. Each of the Group 2 agencies also had the option of writing in additional trends, issues, goals or objectives. As in the past, major agencies set goals for the next three years in their IT plans. In addition, the process still included identifying one or more objectives associated with each of their IT goals. Again, objectives are defined as activities necessary to achieve goals and are required to be measurable. Performance measures for each objective were estimated for the current and the next three fiscal years.

The following chart shows the top goal categories and percentage of agencies with at least one goal in those categories:

Goal Category	FY 2004	FY 2005	FY 2006
Improve overall efficiency	38%	27%	59%
Improve customer service	55	20	58
Improve productivity	n/a	11	47
Enhance IT infrastructure	9	19	46
Improve technical knowledge	53	22	33
Enhance IT security	9	17	33
Develop or improve online access to information & services	37	32	18

Note: FY2006 data reflect a different collection methodology from previous years, based on separation into Group 1 and Group 2 agencies.

Some of the most popular goal categories have changed dramatically over the past few years, while others simply increased or decreased in prominence. One of the most significant differences from past years is that goals to enhance IT infrastructure, which had dropped in the past two years, dramatically rose this year. These goals were often expressed as 'technology refresh' or 'implementing new hardware and software'. Perhaps, these goals are cyclical.

In addition, the goal of improving overall agency efficiency more than doubled; possibly reflecting one way to make use of reduced funding. The frequency of this goal may also be due to governor focus and the fact that it is a statewide goal.

Customer service still holds a prominent place. Enhancement of customer service, a business goal, is still mentioned by over half of the agencies. GITA views this as a very positive trend, hence the statewide goal of government accessibility.

The goal category dealing with improvement of technical knowledge fell to fifth place this year; although still tied with IT security enhancement. Identity theft and privacy concerns as well as Internet worms and viruses are probably behind the rising interest in IT security. In addition, more people and more agencies are using the Internet and realizing the impact of security interdictions.

Improving productivity was mentioned more frequently during the past two years indicating a highly desirable trend. Finally, goals to enhance staff capabilities, referring mainly to goals on training, retention, or recruitment, saw a huge increase but were addressed by the 2006 Legislature.

Although the development and/or improvement of online access to information and services have been falling in frequency as a goal; the presumption is that the decrease is due to the large number of implementations in this area already.

AGENCY IT PLAN SYNOPSIS

As a national leader in information technology, Arizona was one of the first states to create a state chief information officer. Arizona sets the standard for best practices in government information technology planning and has received multiple awards for its advanced thinking. The State's practices have become a model of efficiency and accountability. The benefits of these efforts have been felt in the State in the form of improved customer service, increased accessibility to State government, and greater access to information technology. National recognition has been achieved for Arizona's IT accomplishments including awards from the Center for Digital Government in Information Technology in 2002, and again in 2004.

Building on the foundation laid by seven years of planning and oversight, Arizona is focussing on streamlining government efficiency through e-government initiatives. IT planning and coordination will serve as the cornerstone of Arizona's homeland security and business continuity efforts. A new strategic direction in IT planning should make the process more objective and measurable in the future thus facilitating progress.

"…The most important development shown in IT plans over the last two years is the growing awareness, on the part of the agencies. of the power of IT as a tool."

Agencies are asked to incorporate goals and objectives set forth in this Statewide Strategic IT Plan into the development of their own business and IT plans. Although the direction of IT planning has been modified, agencies are encouraged to carry on the established process of IT planning started five years ago by GITA. These collaborative efforts will ensure that Arizona sets the standard for excellence in the delivery of government services to its people, enabled by optimal processes and technology.

The most important development shown in agency IT plans over the last two years is the growing ***awareness of the power of IT as a tool***…a tool with cost-reducing, efficiency-producing capabilities, especially when the business process can be re-engineered to take advantage of its full capability. Associated with the tool's power comes an inherent cost, also being recognized by agencies. With respect to IT, agencies are realizing that changing and upgrading hardware and applications implies increased costs. This is true of staff training and staying abreast of new

developments as well. The new theme seems to be managing 'with' technology rather than trying to manage 'the' technology.

Based upon review of their IT plans, there seems to be a new recognition on the part of state agencies of the value of shared services moving them to collaboration and working across boundaries that will ultimately improve efficiencies. Communications fits into this equation as a key component. The growth of wireless and broadband has jump-started many new possibilities in this fertile area. The use of statewide enterprise architecture targets will make these attempts more successful in the long run.

Recognition of the ***power of evolving technology and the influence of the Internet*** seems to have affected almost all agencies. In the past, when agencies' plans were focused on business issues, they were predominantly customer-service oriented; however, this year the business issues seemed to be broader concentrating around three goals: customer service, keeping ahead of the technology curve and improving agency efficiencies.

In summary, information technology has moved from the sole domain of large firms to an integral part of almost every business in Arizona. Access to information will be at the heart of economic development throughout rural Arizona. The importance of bringing information technology to rural Arizona has been recognized. Not only is more information about services and related links being provided to citizenry but the speed and power of the Internet is also driving more autonomy to agencies' websites.

FINDINGS FROM AGENCY IT PLANS

After careful review of the state agency's IT plans, the following findings highlight items that need to be addressed as part of their annual IT planning process.

- Multi-agency integration of services is still an uncommon topic in agency IT plans, yet these kinds of projects have the largest potential for providing enhanced services to citizens at the same time reducing the costs and time to provide those services. Elimination of individual agency perspectives

within government thinking is essential to efficient operations as an enterprise.

- Re-engineering of business processes will accomplish more to truly incorporate IT in the business process than mere infrastructure improvement. This trend is based on the ever-widening number of state agencies mentioning re-engineering.
- Growing use of new technologies by the state's citizens is viewed as positive by most agencies. These agencies plan to take advantage of this trend by offering more Internet services. Several state agencies mentioned they were being driven by expanding Internet maturity and heightened expectations of their customers.
- Inadequate IT funding was most often identified as having a negative impact on being able to support agencies' missions over all fiscal years. However, this year differs from years past in that there is recognition on the part of agencies that funding will never be sufficient to do all that is desired.
- Hiring and retention of qualified IT staff has been a prominent issue for the past four years on the part of both larger and small agencies. This year, for the larger agencies in particular, improvements in salary were addressed; now staff education is needed. This issue also suggests a need for some sort of shared pool of IT personnel for smaller agencies, boards and commissions.
- Many agencies' IT plans remain project-based, rather than business-results based. Although agencies should be measuring business outcomes, many agencies still measure only IT implementation.
- Consideration of shared IT consulting services for the smaller agencies would clearly be in the best interests of the state to improve service delivery as well as the efficiency and effectiveness of many of the boards and commissions.

RECOMMENDATIONS BASED ON AGENCY IT PLANS

These recommendations are meant to guide future IT planning efforts on the part of the agencies, boards and commissions.

Agencies need to integrate IT planning with business planning processes. As mentioned previously, those agencies that link their IT plans in support of the business of the agency tend to have a tighter integration of their IT and business planning process. At a minimum, business planners should be included in the agency IT planning process and IT planners should be invited to the agency business planning process. Agencies should focus on the re-engineering of their business processes rather than simply infrastructure improvement.

Agencies must look for ways to share data and integrate services to better serve the public. A statewide standard for an enterprise IT architecture to promote consolidation of data and sharing of services has been in place in Arizona for three years. Additionally, the State web portal has been established and provides opportunities to expand portal services among smaller boards and commissions. Agencies should consider the use of the Internet and e-government to improve more of their services.

Appendix A

AGENCIES BY GROUP

Group 1 Agencies

Administration, Arizona Department of
Agriculture, Arizona Department of
Arizona Health Care Cost Containment System
Attorney General, Arizona Office of the

Corporation Commission, Arizona
Corrections, Arizona Department of

Economic Security, Arizona Department of
Education, Arizona Department of
Emergency and Military Affairs, Arizona Department of
Environmental Quality, Arizona Department of

Game & Fish Department, Arizona
Gaming, Arizona Department of
Governor, Office of the

Health Services, Arizona Department of
Industrial Commission, Arizona
Juvenile Corrections, Arizona Department of

Land, Arizona Department of
Liquor Licenses and Control, Arizona Department of
Lottery, Arizona

Parks, Arizona State
Public Safety, Arizona Department of
Radiation Regulatory Agency
Revenue, Arizona Department of
Registrar of Contractors, Arizona
Retirement System, Arizona State

Secretary of State, Arizona
Tourism Office, Arizona
Transportation, Arizona Department of
Veterans' Services, Arizona Department of
Water Resources, Arizona Department of

Group 2 Agencies

Accountancy Board, Arizona
Acupuncture Examiners Board
Administrative Hearings, Office of
Appraisal, Arizona Board of
Arts, Arizona Commission on the
Auditor General
Auto Theft Authority, Arizona

Barbers, Arizona Board of
Behavioral Health Examiners, Arizona
Biomedical Research Commission
Building & Fire Safety, Arizona Department of*

Charter Schools, Arizona State Board for
Chiropractic Examiners, Arizona Board of
Citizens Clean Election Commission
Commerce, Arizona Department of
Cosmetology, Arizona Board of
Criminal Justice Commission, Arizona

Deaf and Blind, Arizona School for the*
Deaf and Hard of Hearing, Arizona Commission for the*
Dental Examiners, Arizona Board of
Dispensing Opticians Board

Equalization, Arizona Board of
Executive Clemency, Arizona Board of
Exposition and State Fair, Arizona

Financial Institutions Department, Arizona
Funeral Directors & Embalmers Board

Geological Survey, Arizona
Government Information Technology Agency, Arizona

Historical Society, Arizona
Homeopathic Medical Examiners Board
Housing, Department of

Indian Affairs, Arizona Commission of
Insurance, Arizona Department of

Medical Board, Arizona
Mine Inspector
Mines & Mineral Resources

Naturopathic Physicians Examiners Board
Navigable Stream Adjudication Commission
Nursing, Arizona Board of
Nursing Care Examiners Board

Occupational Therapy Examiners Board
Optometry, Arizona Board of
Osteopathic Examiners, Arizona Board of

Personnel Board
Pharmacy Board, Arizona
Physical Therapy Examiners Board
Pioneers Home, Arizona
Podiatry Examiners Board
Postsecondary Education
Postsecondary Education, Private
Psychologist Examiners Board

Racing, Arizona Department of
Real Estate, Arizona Department of
Regents, Arizona Board of
Residential Utility Consumers Office
Respiratory Care Examiners Board

School Facilities Board
Structural Pest Control Commission, Arizona

Tax Appeals Board, Arizona
Technical Registration, Arizona Board of
Treasurer, Arizona State

Veterinary Medical Examiners Board, Arizona

Weights and Measures, Arizona Department of

* Previously a member of Group 1 agencies

Appendix B

ACTIVE IT PROJECTS AS OF MAY 2006

Project Identifier	Project Title	Responsible Agency	Total Cost ($K)
RV01016	Business Reengineering/Integrated Tax Systems (BRITS)	Revenue, Department of	124,304.2
DC99007	LAN/WAN Infrastructure for ADC Prisons	Corrections, Department of	31,816.0
RT01001	Public Employee Retirement System Conversion	Retirement System, State	30,358.9
RT01002	ASRS Imaging System	Retirement System, State	14,246.0
DE01012	HIPAA Compliance Modifications	Economic Security, Department of	13,137.4
HS03001	Computer Hardware Strategic Replacement Plan	Health Services, Department of	9,213.0
DT01006	Intelligent Transportation System (ITS)	Transportation, Department of	8,392.5
PS99004	Statewide Mobile Data Computer / Computer-Aided Dispatch System	Public Safety, Department of	7,461.8
AG04003	Case Management System	Attorney General, Office of the	7,079.2
HC04001	IP Telephony/Contact Center	AHCCCS	5,616.0
HC01001	AHCCCS Customer Eligibility (ACE)	AHCCCS	5,233.3
DE04009	Multi-Year IT Equipment Replacement	Economic Security, Department of	4,834.0
RV04001	Arizona Property Assessment and Taxation System (APATS)	Revenue, Department of	4,169.0
HS03005	Integrated Technology Project – Office of Vital Records	Health Services, Department of	3796.8
HC05003	Technology Refresh Project	AHCCCS	2,760.0
PS04005	Arizona Criminal Justice Information Systems Network Conversion to TCP/IP	Public Safety, Department of	2,678.0
HS05003	Laboratory Information Management System Implementation Project	Health Services, Department of	2,498.0
DE05009	Enterprise Data Storage Expansion	Economic Security, Department of	2,370.5
HS06007	EMTrack	Health Services, Department of	2,064.8
HS06004	MEDSIS Upgrades and Enhancements	Health Services, Department of	1,808.0
HS05005	Digital Record System	Health Services, Department of	1,691.6
RT03001	ASRS Financial System	Retirement System, State	1,681.0
HS05006	Learning Management System Implementation Project	Health Services, Department of	1,589.7
AD04005	Tri-Agency Disaster Recovery	Administration, Department of	1,500.0
DE05005	Active Directory Rollout & Exchange Migration	Economic Security, Department of	1,139.6
PS06005	ACTIC Wire Room Development	Public Safety, Department of	931.0
AD04001	PC Refresh Plan for FY 2004 thru FY 2007	Administration, Department of	916.0
DE05017	Telephony Improvement	Economic Security, Department of	881.7
AD06002	Enterprise Data Storage	Administration, Department of	792.0
DE06018	IPT Telephony & Data Systems Upgrade	Economic Security, Department of	756.5

RT05001	New Software and Network Upgrade	Retirement System, State	717.8
HS05004	WIC Citrix Server Implementation	Health Services, Department of	697.9
HS06006	Neometrics Upgrade	Health Services, Department of	693.0
DE06011	FAA Change Contact Center – IP Telephony	Economic Security, Department of	684.0
LD05001	Arizona Fire Map	Land, Department of	632.0
GF03004	Infrastructure Upgrades	Game & Fish, Department of	605.2
PS06003	GangNet Database	Public Safety, Department of	601.4
DE05002	Document Imaging - OnBase	Economic Security, Department of	583.4
DT05023	e-Forms & Business Process Automation for ITG Infrastructure Protection	Transportation, Department of	576.9
DE06016	DERS/EA Integrated Adjudication System (IAS)	Economic Security, Department of	558.6
TR03001	Information Systems and Infrastructure Emergency Refresh	Treasurer, Arizona State	557.0
PS05005	Capital & Accountable Equipment Inventory Upgrade	Public Safety, Department of	498.0
GF03001	PC Replacement	Game & Fish, Department of	460.0
HC05006	Technical Interface Project System (TIPS)–Phase 1	AHCCCS	457.7
DT04008	Address Standardization & Returned Mail Processing	Transportation, Department of	424.6
DE06009	eCalc – Statewide Arrears Calculator	Economic Security, Department of	413.7
DT05009	Tabs On Demand	Transportation, Department of	411.0
ID05003	Online Insurance License Renewal System	Insurance, Department of	406.2
DE05016	ONXT 2.6 Upgrade	Economic Security, Department of	403.1
ID05002	Computer Workstation & Software Replacement	Insurance, Department of	394.0
AD06003	DMT #30808 MAGNET-2 Network Upgrade	Administration, Department of	383.0
DE06004	AzSECURE Project	Economic Security, Department of	357.5
HC05004	Healthcare Group Telephony Project	AHCCCS	355.0
TO05001	Office of Tourism Web Initiative	Tourism Office, Arizona	350.0
ED05004	Copier Replacement	Education, Department of	340.3
DE06008	FAA IVR Application Development Project	Economic Security, Department of	323.1
DC06003	ADC – IPT Telephone System	Corrections, Department of	308.1
ME05002	FY2006-07 IT Refresh	Medical Board, Arizona	305.0
DE06010	DERS/EA Enhanced Internet Tax & Wage System	Economic Security, Department of	295.5
AG04001	Network Security	Attorney General, Office of the	275.0
DT06004	Maintenance Budgeting System	Transportation, Department of	258.4
DT05012	Estimated Engineering Construction Cost (E2C2)	Transportation, Department of	247.5
DT05021	Aeronautics Airport Capital Improvement Program (ACIP) Application	Transportation, Department of	246.2
DE06019	DMT30971 Gilbert – IPT Voice & Data System	Economic Security, Department of	226.7
EV06001	Smart NOI Upgrade	Environmental Quality, Department of	213.0
DT05008	ITD Engineering Computer Aided Design & Drafting Software Tracking Database	Transportation, Department of	210.5
DT06013	CQCQA - Cement Quality Control & Quality Assurance for Structural Testing	Transportation, Department of	207.5
LO03001	Microcomputer Technology Refresh: FY2005-07	Lottery, Arizona	207.3

RC04001	Network Upgrade	Racing, Arizona Department of	204.3
BD05001	Document Imaging for Banking	Financial Institutions, Department of	195.6
SD05001	Assistive Learning Devices	Deaf & Blind, Arizona School for the	193.0
DE05010	DERS/EA work Opportunity Tax Credit System (WOTC)	Economic Security, Department of	189.0
HS06009	SIREN Hardware Enhancements	Health Services, Department of	188.0
DE04017	UI Data Cross Match	Economic Security, Department of	187.7
SD06001	Educational & Assistive Technology	Deaf and Blind, Arizona School for	186.2
GF03002	PC Hookups for Wildlife managers	Game & Fish, Department of	170.0
PS06008	Computer Upgrades for Highway Patrol District	Public Safety, Department of	163.5
PS04009	Fleet Management Software	Public Safety, Department of	160.4
LD06002	Arizona Imagery Project	Land, Department of	155.9
DT06014	Requirements Management Solution	Transportation, Department of	155.8
DT05026	Registration Compliance Tablet PCs	Transportation, Department of	139.7
HS06002	Online Licensing Renewal System (OLRS)	Health Services, Department of	129.0
LO06001	Network Data Separation, Security and UPS	Lottery, Arizona	122.8
LO05001	AS/400 Mid-Range Computer Upgrade	Lottery, Arizona	110.0
RV04002	Barcode Enabled Fillable Tax Forms	Revenue, Department of	99.1
AG05004	Remote Site Server Refresh & Data Backup Solution	Attorney General, Office of the	99.0
DT05027	EPIC 3	Transportation, Department of	97.6
DT05018	ADOT Data Center Server Consolidation	Transportation, Department of	95.8
AD06004	Internet Gateway Upgrade	Administration, Department of	91.0
DE06007	SUTA Dumping Detection System (SDDS)	Economic Security, Department of	89.6
PS05011	FBI Response Processing	Public Safety, Department of	84.0
DT02015	SPR #534: Digital Signatures	Transportation, Department of	83.4
DC06002	Educational Computer System Replacement for ASPC Tucson	Correction, Department of	78.4
EV03003	UST Program Tier 2 RBCA Standard Calculation Software	Environmental Quality, Department of	77.0
DT05022	Officer Activity Recap Reporting	Transportation, Department of	75.2
DT06011	Digital Image Exchange	Transportation, Department of	65.3
DT05020	Secure Remote Access Solution	Transportation, Department of	63.6
DT06005	Five Year Program Subprogram Tracking System	Transportation, Department of	60.0
EP05002	Arizona Technology Commercialization Program (ATCP)	Commerce, Department of	59.5
HS06008	New Laptops for Emergency Operations Center	Health Services, Department of	54.0
DT06012	Interoperable Transportation Communications Resources	Transportation, Department of	46.0
ST06001	Network Upgrade	Secretary of State	37.7
NB06001	Simple Common Online License Renewal System (SCOLR)	Naturopathic Physicians Examiners, Board of	27.1

Revised 5/9/06