State of Arizona
Office
of the
Auditor General

PERFORMANCE AUDIT

Special Study of State Agency

YEAR 2000
COMPUTER
CONVERSION
EFFORTS

Report to the Arizona Legislature
By Douglas R. Norton
Auditor General
February 1998
Report # 98-2

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February 4, 1998

Members of the Arizona Legislature

The Honorable Jane Dee Hull, Governor

Mr. John Kelly, Director
Government Information Technology Agency

Transmitted herewith is a report of the Auditor General, A Special Study of State Agency Year 2000 Computer Conversion Efforts. This report is in response to a May 27, 1997, resolution of the Joint Legislative Audit Committee.

The report addresses the extent to which agencies have made efforts to convert their computer systems so that they accurately process year 2000 data. Commonly referred to as the "year 2000 problem," many computer systems worldwide could malfunction or produce incorrect information because the year 2000 cannot be distinguished from 1900 due to the use of two digits on computer systems to represent the year. A February 1997 review of nine major state agencies conducted by the Statewide Information Technology Planning and Oversight Group revealed that approximately 50,000 software programs and 60 million lines of programming code require change.

Our review of a cross section of 72 state agencies including legislative, executive, and judicial branch agencies found varying levels of progress toward ensuring that computer systems will process data accurately at the turn of the century. Most agencies that operate large, mainframe computer systems report that the majority of their systems are on schedule for timely compliance. Only the Department of Public Safety does not appear to be adequately progressing with its year 2000 efforts. Most agencies operating mid-range or small computer systems also appeared to be on schedule with their year 2000 conversion efforts. However, at least 4 agencies, including the Department of Environmental Quality and the Department of Corrections, are behind schedule on some systems. While the successful conversion of the State's systems depends on the availability, skill, and time dedicated to year 2000 projects, an increasing demand for skilled computer programmers and contractors could jeopardize state agencies' ability to become year 2000 compliant.

As outlined in its response, the Government Information Technology Agency agrees with all of the findings and recommendations. Individual responses from the Department of Public Safety and the Department of Corrections are also included, detailing recent actions they have taken to address year 2000 issues.

My staff and I will be pleased to discuss or clarify items in the report.

This report will be released to the public on February 5, 1998.

Sincerely,

Douglas R. Norton
Auditor General

Enclosure

SUMMARY

The Office of the Auditor General has conducted a performance audit to assess statewide efforts to convert computer systems so that they accurately process year 2000 data. The audit was conducted pursuant to a May 27, 1997, resolution of the Joint Legislative Audit Committee.

Efforts are underway, both in the public and private sector, to ensure that computer systems worldwide accurately process data at the turn of the century. Currently, these computer systems, including many of the systems in the State, use two-digit representations to specify the year. Computer systems using this two-digit format will not recognize the century change to 2000 and will not be able to distinguish the year 2000 from 1900. According to the February 1997 *Year 2000 Statewide Technology Report*, produced by the Statewide Information Technology Planning and Oversight Group, based on a review of 9 major state agencies, approximately 50,000 software programs and 60 million lines of programming code require change. If agencies do not renovate these systems and programs in a timely manner, effective dates for benefits, prisoner release or parole eligibility dates, employee payroll and retirement benefits, and payments to state vendors could be affected.

Most State Agencies Report Year 2000 Efforts Are on Schedule (See pages 7 through 17)

Arizona's state agencies report various levels of progress toward ensuring that their computer systems will process data accurately at the turn of the century. To assess statewide progress on year 2000 efforts, a cross section of 72 out of a possible 119 agencies was surveyed, including large agencies, small boards and commissions, and agencies from all branches of state government. The survey revealed that 8 of the 11 agencies operating large mainframe computer systems reported that their year 2000 efforts were generally on schedule. Information gathered subsequent to the survey revealed that two additional agencies are adequately progressing with their year 2000 efforts. Only the Department of Public Safety does not appear to be adequately progressing with its year 2000 efforts. The survey revealed that larger agencies face greater challenges in converting their large, complex computer systems due to personnel shortages, increased consulting and software costs, and data interface considerations. In contrast, agencies that operate mid-range computer systems, such as mini-computers or wide area networks, and agencies with smaller computer systems, such as personal computers or local area networks, reported they are for the most part on schedule or already compliant. However, 12 agencies that operate

mid-range or smaller computer systems, including the Department of Corrections and the Superior Court, do appear to be behind schedule with all or part of their critical computer system conversion efforts.

While the information these agencies provided offers some assurance of their timely compliance, current agency progress with year 2000 efforts does not necessarily ensure that they will achieve this compliance. The large, complex nature of many of the State's critical computer systems and the remaining work required to correct them increases the likelihood of unforeseen problems and delays, thus increasing the potential for noncompliance.

To reduce the potential for noncompliance, agencies should garner full management support for year 2000 efforts, develop year 2000 project plans, devote adequate time to system testing, consider the compatibility of data exchanged with other organizations, and develop contingency plans to minimize operational disruptions in the event computer systems are not compliant in time. Additionally, the Legislature should consider changing the status of current legislative appropriations for year 2000 projects from reverting to nonreverting. This would allow the Government Information Technology Agency (GITA) to continue to distribute these appropriated monies to agency year 2000 projects based on progress consistent with their year 2000 funding plan, without jeopardizing the forfeiture of these appropriations at the end of the fiscal year.

Increased Demand for Personnel and Contractors Could Hamper Year 2000 Compliance (See pages 19 through 26)

Increasing demand for skilled computer programmers and year 2000 contractors could jeopardize state agencies' ability to convert their computer systems in a timely manner. Since successful conversion of systems, programs, and data depends on sufficient and qualified employees and/or contractors, the availability of these personnel resources is critical. However, despite this enhanced need for programming staff familiar with the State's computer systems, state agencies have experienced an increase in turnover among these positions. For example, agencies such as the Departments of Administration and Economic Security report significant programmer losses in fiscal year 1996-97 due to higher salaries in the private sector, while 19 agencies responding to this survey cite inadequate employee resources as a major barrier to obtaining year 2000 compliance. In addition to the increased turnover, agencies have also had difficulty finding and attracting programmers to fill the vacated positions. The demand for programmers is greater than the supply, and the State usually cannot compete with the private sector for the few available programmers.

Although staffing shortages will continue to challenge agencies and their year 2000 projects, several options are available to increase staff who can work on these projects. First, agencies

should take advantage of the temporary, higher-paying year 2000 positions created by the State Personnel Office. These positions should allow agencies to compete in the marketplace for qualified programmers and/or retain critical staff with irreplaceable knowledge or experience. Additionally, similar to Arizona State University and the State of Oregon, agencies should consider hiring retired agency employees with computer expertise. Finally, the Legislature should consider amending statute to provide bonuses to staff working on year 2000 projects, contingent upon staff working on these projects until their completion and payable at project completion, as an additional incentive for them to remain with the State.

In addition to increasing available staff for year 2000 projects, agencies should take advantage of the numerous private contractors who can offer a wide variety of resources to state agencies. While the State Procurement Office established a multi-vendor contract for the provision of year 2000 services, agency confusion regarding the process for selecting and contracting with vendors has limited its use. Additionally, as the year 2000 approaches, contractors will become more expensive and less available as the demand for their services continues to increase. As such, GITA, the State Procurement Office, and state agencies should coordinate efforts to ensure that all specific contracting needs are met.

GITA Year 2000 Project Support and Oversight Limited (See pages 27 through 32)

During the audit, the Government Information Technology Agency provided limited oversight and support to agencies undertaking year 2000 projects. In its first four months of existence, GITA monitored the year 2000 projects of 9 agencies. Even though only 45 of 119 state agencies reported that their computer systems were compliant, GITA focused its monitoring efforts on the 9 agencies' year 2000 projects because they receive funding through GITA for their projects and are converting many of the most critical computer systems in the State. However, GITA has performed some limited outreach activities to state agencies regarding their year 2000 efforts and has recently begun to perform audits of agency year 2000 projects to verify reported progress.

GITA should take steps to ensure that planned efforts as well as additional measures are implemented to enhance the oversight and support it provides for year 2000 projects. Specifically, GITA should expand its project status reporting requirements to include all agencies that have yet to certify year 2000 compliance. GITA should also continue to implement its plans for auditing year 2000 projects and assisting state agencies with their year 2000 efforts, especially smaller agencies that lack information technology expertise. Additionally, GITA should disseminate information about useful products, problems, innovations, and reference materials regarding year 2000 projects through its newsletter and Web site. Finally, the Legislature should consider appropriating additional monies to GITA to ensure it has sufficient staffing resources for year 2000 project oversight and support.

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INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit to assess statewide efforts to convert computer systems so that they accurately process year 2000 data. The audit was conducted pursuant to a May 27, 1997, resolution of the Joint Legislative Audit Committee.

What Is the Year 2000 Problem?

On New Year's Day of the year 2000, many computer systems worldwide could malfunction or produce incorrect information simply because the date has changed. The century change is significant because the majority of computer systems currently use only two-digit representations to specify the year. For the past several decades, computer systems have typically used two digits to represent the year, such as "97"representing 1997, in order to conserve expensive and limited storage space and reduce operating costs. However, with this two-digit format, the year 2000 cannot be distinguished from 1900. Should system or application programs not recognize the new century, data processing, calculating, sorting, or comparing may generate incorrect results.

While the year 2000 problem may affect computer systems worldwide, the impact on state systems could be significant. Many of the State's systems operate using a two-digit year and will not recognize the century change to the year 2000. As reported in the February 1997 *Year 2000 Statewide Technology Report*, based on a review of 9 major state agencies, approximately 50,000 software programs and 60 million lines of programming code need to be changed.[1] Additionally, approximately 24,000 personal computers across the State require hardware/software assessments, not including personal computers at the universities, which also require review. Should agencies not renovate these systems and programs in a timely manner, effective dates for benefits, prisoner release or parole eligibility dates, employee payroll and retirement benefits, professional licenses, financial data, and payments to state vendors could be affected.

In addition to the potential impact of the year 2000 on computer systems, other systems that contain embedded computer chips could also be affected. These systems, which include elevators, building security systems, air conditioners, telephone systems, and traffic signals, could malfunction or possibly fail as a result of the year 2000 problem.

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[1]   The *Arizona Millennium, Year 2000 Statewide Technology Report* was prepared and issued by the Statewide Information Technology Planning and Oversight Group on February 14, 1997.

State Oversight for Year 2000 Projects

Two agencies have provided primary oversight of and assistance to state agencies acting to address potential year 2000 problems. Prior to July 1, 1997, the Statewide Information Technology Planning and Oversight Group (SITPO) within the Department of Administration provided initial support for agency year 2000 projects. One of SITPO's primary activities involved raising the level of awareness regarding the year 2000 problem throughout the State. Additionally, SITPO instructed agencies on how to request funding for year 2000 projects and completed a survey of all state agencies to determine the status of their year 2000 projects. SITPO also initiated a project based on a model developed by the Gartner Group, a nationally recognized year 2000 authority, to approximate the State's cost to become compliant. Based on this model, SITPO initially estimated that year 2000 compliance would cost the State $70 million.

Effective July 1, 1997, a new agency, the Government Information Technology Agency (GITA), became responsible for year 2000 project monitoring and oversight. Legislation established GITA with the responsibility to plan and coordinate Arizona's information technology. While each state agency is responsible for converting their computer systems, GITA reports that the year 2000 is the single largest computer applications project undertaken by the State and its primary role will be leadership, coordination, and oversight. As such, GITA will review and approve agency plans and project justification requests, establish agency project planning and progress reporting guidelines, hire staff to review agency reports, and periodically review agency progress toward solving the year 2000 problem. Additionally, GITA plans to help establish contracts for products and services to assist agencies in achieving compliance and to provide limited consulting resources to the extent it has available resources. Finally, GITA will centrally administer legislatively appropriated monies for year 2000 projects. Monies will be issued to agencies on a quarterly basis dependent on demonstrated results consistent with the agency's approved year 2000 project plan.

Efforts in Arizona to Address the Year 2000 Problem

Faced with the deadline of ensuring agency computer systems' compliance by the turn of the century, the State has taken steps to address the year 2000 problem. Notable efforts include:

- **Year 2000 Contractor List Developed**—In April 1996, the State Procurement Office (SPO) issued an extensive Request for Proposal (RFP) soliciting responses from private contractors for year 2000 products and services. Based on responses to the RFP, the SPO

selected 14 companies to place on the year 2000 contractor list. By developing such a list, the SPO increased the likelihood that all services and products agencies required for their year 2000 projects would be available.

- **Governors Issue Awareness Memo**—On October 4, 1996, former Governor Fife Symington issued a memorandum to all state agency directors regarding year 2000 system compliance. The former Governor stressed the urgency and importance of year 2000 projects, indicating that agency directors and their chief information officers were ultimately responsible and accountable for project success. The memo further stated that agencies should address the year 2000 problem immediately and discretionary information technology projects should be placed on hold until year 2000 problems are resolved.

  Additionally, on November 25, 1997, Governor Jane Dee Hull issued a memorandum to all state agency directors again stressing the urgency and importance of year 2000 efforts. The Governor also indicated that each agency should be fully engaged in planning, executing, and managing a year 2000 compliance effort.

- **Statewide Agency Survey Completed**—As of January 1997, the Statewide Information Technology Planning and Oversight (SITPO) group within the Department of Administration completed a telephone and mail survey of all 119 state agencies regarding year 2000 issues compliance. The survey revealed that 72 agencies needed assistance ranging from education about the nature of the year 2000 problem to specific consulting and contract help for year 2000 project completion. Additionally, 32 agencies surveyed claimed their computer systems were year 2000 compliant and submitted a letter to SITPO certifying this compliance. The remaining 15 agencies are either legislative branch agencies, judicial branch agencies, or universities, and are not within GITA's jurisdiction.

- **Year 2000 Task Team Established**—Year 2000 project leaders from the State's larger agencies, including the Departments of Administration, Economic Security, Transportation, and Corrections, currently meet on a monthly basis. These meetings, which DOA facilitates, serve as a forum to discuss various year 2000 topics, including agency experiences, reporting requirements, helpful solutions, and lessons learned.

Funding Dedicated to Year 2000 Projects

Agencies can use a variety of sources to fund their year 2000 efforts. The Governor has directed state agencies to absorb the majority of their year 2000 costs by reallocating priorities within their existing budgets. As such, agencies must rely on existing budgets as their primary source of funding for year 2000 projects. In addition, some agencies will receive other sources of funding, including federal dollars. However, should agencies need additional funding for year 2000 projects, they can request appropriated funding through GITA by

submitting project and investment justification documentation. As illustrated in Table 1 (see page 5), the Legislature has appropriated $27.4 million for fiscal years 1997-98 and 1998-99 to assist in funding state agencies' year 2000 costs beyond those that can be absorbed within existing agency budgets. In its appropriations bill, the Legislature stressed that agencies must use reductions in administration, rather than reductions in services, to fund year 2000 projects.

As of August 1997, GITA reported that agencies' existing budgets would contribute $37.9 million in funding; other funding sources, including federal funding, would contribute approximately $2.5 million; and legislative appropriations would contribute $27.4 million in year 2000 project funding. Thus, approximately $67.8 in total funding has been dedicated for year 2000 projects from fiscal years 1996-97 through 1999-2000.

Audit Scope and Methodology

This special study focuses on the efforts currently underway in the State to address computer systems and other operational issues associated with the year 2000 problem. Specifically, the audit focused on the current status of agencies' progress on year 2000 projects, the ability of the State to attract and retain adequate personnel for year 2000 projects, and GITA's ability to oversee and support agency year 2000 projects.

This audit was conducted between June and September 1997. As such, the information presented in this report provides a snapshot of state agency conversion efforts during this time. Due to the evolving nature of these efforts, many agencies cited in this report have likely made significant strides in addressing year 2000 issues subsequent to the completion of our audit work.

Several methods were used to study the issues addressed in this audit, including:

- Surveying a cross section of 72 state agencies including legislative, executive, and judicial branch agencies to obtain information regarding the status of their year 2000 projects and factors affecting these projects;

- Confirming survey results by verifying the reported status of year 2000 projects for four separate agencies;

- Interviewing various individuals involved in the State's year 2000 efforts including several year 2000 project leaders from legislative, executive, and judicial branch agencies; the State Chief Information Officer; GITA management and staff; private contractors; and state personnel and procurement employees;

Table 1

Year 2000 Study
Projected Sources and Distribution of
Appropriated Monies for Year 2000 Projects [1]
Years Ending June 30, 1998 and 1999
(Unaudited)

	1998	1999
Sources:		
General Fund	$10,000,000	$ 8,000,000
State Highway Fund	6,364,000	1,577,000
Personnel Division Fund	500,000	500,000
Board of Cosmetology Fund	190,000	
Technical Registration Fund	85,000	
Watercraft Licensing Fund	75,000	
Technology and Telecommunication Fund	62,000	
Board of Accountancy Fund	54,000	
Total sources	$17,330,000	$10,077,000
Distribution:		
Arizona Game and Fish Department [2]	77,000	
Arizona Health Care Cost Containment System	415,000	129,000
Board of Accountancy	54,000	
Board of Cosmetology	190,000	
Board of Examiners of Nursing Care Institution Administrators and Adult Care Home Managers	35,000	
Board of Physical Therapy Examiners	20,000	
Department of Administration [3]	3,465,000	2,400,000
Department of Economic Security	960,000	
Department of Mines and Mineral Resources	10,000	
Department of Public Safety	968,000	764,000
Department of Revenue	1,540,000	1,140,000
Department of Transportation [4]	6,376,000	1,577,000
Government Information Technology Agency [5]	1,650,000	3,167,000
State Board of Optometry	12,000	
State Board of Podiatry Examiners	23,000	
State Board of Technical Registration	85,000	
State Department of Corrections	1,450,000	900,000
Total distribution	$17,330,000	$10,077,000

[1] The Government Information Technology Agency (GITA) will centrally administer legislatively appropriated monies for Year 2000 projects.

[2] Consists of $75,000 from the Watercraft Licensing Fund and $2,000 from the General Fund.

[3] In 1998, consists of $2,903,000 from the General Fund, $500,000 from the Personnel Division Fund, and $62,000 from the Technology and Telecommunication Fund. In 1999, consists of $1,900,000 from the General Fund and $500,000 from the Personnel Division Fund.

[4] In 1998, consists of $6,364,000 from the State Highway Fund and $12,000 from the General Fund.

[5] GITA will receive monies to provide oversight for year 2000 projects, meet unexpected agency emergencies, and conduct a statewide personal computer needs assessment.

Source: *The State of Arizona Appropriations Report* and the Government Information Technology Agency's projected distribution schedule for years ending June 30, 1998 and 1999.

- Reviewing project investment justifications seven agencies submitted to GITA to analyze project plans and assess the justification for year 2000 project funding;

- Reviewing four agency year 2000 impact assessments to analyze the work involved and agency needs for conducting their year 2000 projects;

- Surveying year 2000 project officials in eight other states regarding year 2000 efforts, experiences, and statewide project structure in those states;[1] and

- Conducting an Internet literature review to obtain supporting information on Year 2000 topics.

This report presents findings and recommendations in three areas:

- Agencies should consider and address several factors in their year 2000 conversion efforts, including the need for management support, proper planning, and adequate system testing, to mitigate the potential disruption of state services to Arizona citizens.

- Increasing demand for skilled computer programmers and year 2000 contractors could jeopardize state agencies' ability to become year 2000 compliant.

- GITA can improve its oversight of year 2000 projects by expanding its monitoring efforts and continuing to implement plans, including year 2000 project audits and increased assistance for agency year 2000 efforts.

This audit was conducted in accordance with government auditing standards.

The Auditor General and staff express appreciation to the director and staff of the Government Information Technology Agency, the project leaders and staff for various state agency year 2000 projects, and other state managers and personnel associated with year 2000 efforts for their cooperation and assistance throughout the audit.

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[1] Eight states facing similar year 2000 problems and exemplifying effective statewide year 2000 project management and coordination were identified and contacted, including Florida, Michigan, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming.

FINDING I

MOST STATE AGENCIES
REPORT YEAR 2000 EFFORTS
ARE ON SCHEDULE

Based on our survey, Arizona's state agencies report various levels of progress toward ensuring their computer systems will process data accurately at the turn of the century. While agencies that operate large, mainframe computer systems report that the majority of their systems are on schedule for timely compliance, agencies operating mid-range or small computer systems report that several systems are already compliant. However, as of August 1997, 13 of the 72 agencies surveyed appeared to be behind schedule with all or some of their year 2000 conversion efforts. Several factors, including management support for year 2000 projects, adequate project planning, and sufficient time and resources to test system changes, will affect an agency's ability to correct its systems and data in a timely manner. Therefore, with GITA's assistance, agencies should ensure they have adequately addressed these factors in order to successfully correct their computer systems and mitigate the potential disruption of services to Arizona's citizens.

Background

To assess statewide progress on year 2000 efforts, a cross section of 72 out of a possible 119 state agencies was surveyed during August 1997. Respondents to the survey included larger agencies, smaller boards and commissions, and agencies from all branches of state government.[1] Overall, the survey attempted to determine the status of agency efforts to correct their computer systems and ensure accurate data processing in 2000. (See the Appendix, pages a-i through a-vi, for survey results regarding the year 2000 status of computer systems operated by the 72 state agencies.)

To provide a basis for reporting the status of statewide year 2000 efforts, agencies were asked to provide information on their year 2000 efforts or projects using an industry-wide approach for organizing and completing these projects. Literature and industry standards suggest that organizations follow a five-phased project approach for successful computer system conversion. If followed, these phases should assist organizations in properly plan-

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[1] Surveyed agencies were primarily selected through the use of the April 1997 Summary of Agency IT Plans prepared by the Statewide Information Technology Planning and Oversight Group. Some agencies not accounted for in this report were also surveyed.

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ning, correcting, and testing changes to computer systems so they will perform correctly in 2000. As illustrated in Table 2, each suggested phase represents a critical year 2000 project activity along with suggested completion dates.

Table 2

Year 2000 Study
Suggested Phases for Year 2000 Conversions

Phase	Phase Description	Suggested Schedule
Awareness	Clearly define the year 2000 problem and the potential service impacts of noncompliance with year 2000 requirements. Obtain management support for conversion efforts.	January 1996 through December 1996
Assessment	Prioritize and plan for system conversions. Also, develop a contingency plan for critical systems and activities in the event of noncompliance.	December 1996 through July 1997
Renovation	Refurbish or replace existing computer systems to ensure accurate date processing.	June 1997 through January 1999
Testing	Thoroughly test converted or replaced systems to uncover and correct errors introduced during the renovation phase, and validate the system's year 2000 compliance (Experts recommend devoting approximately 50 percent of an agency's conversion project time to the testing phase.)	December 1998 through December 1999
Implementation	Integrate renovations into daily operations.	December 1998 through December 1999

Source: United States General Accounting Office, Accounting and Information Management Division, February 1997, *Year 2000 Computing Crisis: An Assessment Guide*; Gartner Group home page, <http://www.gartner.com>, "Time Marches On–Less Than 900 Working Days to January 1, 2000."

Agency Year 2000
Projects in Various Stages

Progress on efforts to convert critical computer systems varies among the 72 state agencies surveyed. Most agencies that operate large mainframe systems reported that their critical systems are on schedule for timely completion. Additionally, agencies that operate mid-range or smaller systems reported that the majority of their systems are already prepared to accurately process data at the turn of the century. Despite this reported progress, some agencies are behind schedule with their year 2000 efforts and progress reported by remaining agencies offers no guarantee of timely year 2000 compliance.

Ten of 11 agencies that operate large systems report year 2000 projects on schedule—Most agencies that operate large mainframe systems reported that their critical systems are on schedule for timely completion. According to our survey, 8 of the 11 state agencies, including the State's 3 universities, that operate large mainframe computer systems reported that their year 2000 efforts were on schedule for timely completion. Additional information gathered subsequent to the survey revealed that 2 other agencies are also adequately progressing with their year 2000 efforts. Only 1 agency, the Department of Public Safety, does not appear to be adequately progressing with its year 2000 efforts.

These 11 agencies reported that 140 separate critical systems must be renovated and corrected by the turn of the century. As illustrated in Figure 1 (see page 10), agencies reported that 46 of these systems were currently in the renovation phase of year 2000 conversion efforts, while agencies also reported 20 systems in the testing stage and 17 systems as compliant. At the time of our survey, 57 systems appeared to be behind schedule, since agencies reported that these systems were in the assessment phase of year 2000 work, a phase that experts suggest should have been completed by July 1997. These included the Department of Transportation's financial system; 5 Department of Revenue systems; 15 Department of Economic Security systems; and 34 Department of Public Safety systems.

Several factors have contributed to the slow progress made by the Department of Public Safety (DPS) on its year 2000 conversion efforts. DPS reports that 48 critical systems must be compliant by the year 2000, including systems that contain information on stolen items and crime suspects. However, the absence of a full-time year 2000 project manager, availability of consultants, and differing management priorities that have shifted programming staff away from its year 2000 project have hampered efforts to convert DPS' computer systems, thus jeopardizing the agency's ability to convert its systems in a timely manner. Conversely, the remaining large agencies appear to be adequately progressing with their conversion efforts. For example:

Figure 1

Year 2000 Study
Status of Year 2000 System Conversions
by Size of Computing Environment
As of August 29, 1997

Large (mainframe)
Total = 140 [1]

Compliant
17

Assessment
57

Testing
20

Renovation
46
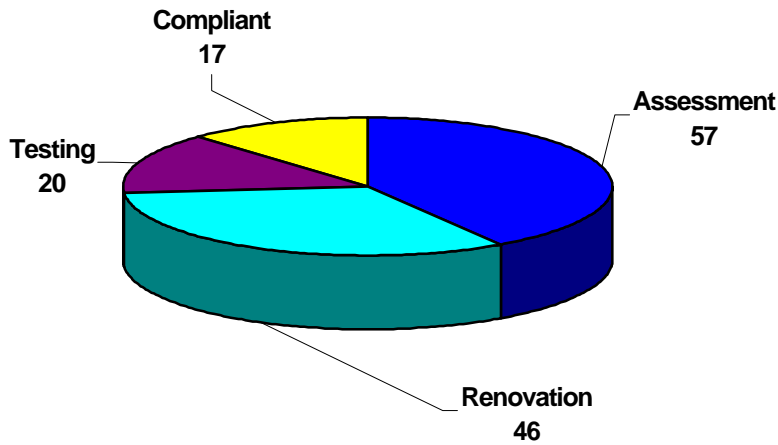
Small (personal computers,
local area networks)
Total = 49

Assessment
9

Renovation
7

Testing
3

Compliant
30
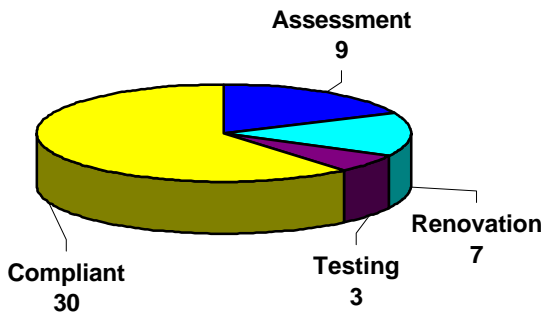
Mid-range (mini-computers,
wide area networks)
Total = 43

Compliant
24

Assessment
6

Renovation
9

Testing
4

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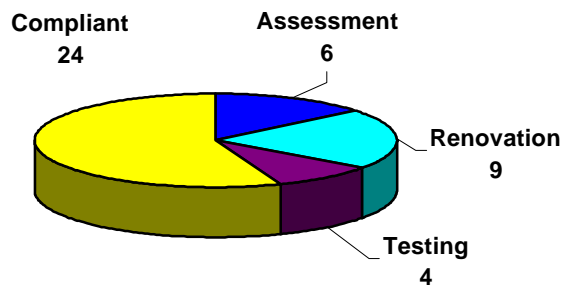
[1]   The status of system conversions for the Departments of Revenue, Public Safety, and Economic Security are reflected as of December 1997.

Source: Agency responses to the Auditor General's year 2000 survey regarding systems' conversions status.

- **Department of Economic Security**—The year 2000 will affect 53 critical DES computer systems and 17 million lines of code. These systems handle a wide range of client-related functions, such as processing unemployment benefits and tracking child abuse investigations. DES reports that 11 systems are already complaint, and that the remaining systems are on schedule for timely year 2000 conversion. While DES reported 15 systems were in the assessment phase of conversion efforts, according to its internal workplan, only 3 systems are behind schedule. However, a DES official reports that renovation work is now beginning for 1 system, while the users of another system have not yet decided on a renovation approach and DES is awaiting vendor software before work can begin on the third system. Even with strong program management and a structured approach that has inventoried all computer systems across all divisions, identified and scheduled critical systems for review and correction, and analyzed data interfaces with outside organizations, the sheer magnitude of DES' year 2000 project presents a formidable obstacle.

- **Department of Revenue**—The Department of Revenue (DOR) reported that 11 critical systems must be compliant by the year 2000, including systems that process state corporate and individual tax returns, and track monies owed to the State. DOR reports that one DOR system is already compliant and according to its internal workplan, all of its critical systems are on schedule for timely year 2000 conversion. Even though DOR reported that 5 systems were in the assessment phase of conversion efforts, DOR has actually completed the analysis and planning for these systems and will begin renovating 3 of the systems beginning in January 1998. Similar to DES, DOR must await vendor software for another system, which it anticipates receiving in September 1998; and is in the process of purchasing a replacement product for the fifth system.

- **Department of Transportation**—The Department of Transportation reported that 4 critical systems must be compliant by the year 2000. The Department reported that 1 system is already compliant, while 2 other systems are being renovated. Only the Department's financial system was in the assessment phase of conversion efforts at the time of our survey, suggesting this system was behind schedule. However, the Department has now completed the assessment phase for its financial system and will begin renovation of this system in January 1998.

While the reported progress offers some assurance of timely year 2000 compliance, the large, complex nature of these critical systems and the remaining work required to correct them increases the likelihood of unforeseen problems and delays, thus increasing the potential for noncompliance. Factors that might lead to unforeseen problems and delays include personnel shortages, increased costs for software and consulting, and data interfaces with other organizations. Should agencies fail to complete year 2000 conversion efforts for these systems in a timely manner, agency operations and customer service could be disrupted. For example, Department of Transportation employees may receive incorrect paychecks if the

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Department's financial system is not year 2000 compliant, while Northern Arizona University students might not obtain housing due to problems with the university's housing and lease system.

Fifteen of 19 agencies that operate mid-range computer systems report year 2000 projects on schedule—In addition to the progress reported by large state agencies, as of August 1997, 15 of the 19 state agencies surveyed that operate mid-range computer systems reported that their systems were on schedule for timely completion. These 19 agencies reported that 43 critical mid-range computer systems, such as mini-computers or wide area networks, must be renovated and corrected by 2000. As shown in Figure 1 (see page 10), these agencies reported that 24 of these 43 systems were already compliant, while 9 systems were in the renovation phase of year 2000 conversion efforts and 4 systems were in the testing phase. In fact, 7 of these 19 agencies, including the Secretary of State, State Land Department, and Department of Commerce, reported that all of their critical systems were compliant.

Despite this progress, at the time of our survey, four agencies reported that six systems were in the assessment phase of year 2000 projects, suggesting that these systems were behind schedule. These included a Department of Environmental Quality system that supports environmental programs, a Department of Water Resources system, two Department of Corrections (DOC) systems, and two Superior Court Systems. DOC has especially struggled with efforts to correct its critical systems:

■ DOC's conversion efforts focus on an inmate management system that processes inmate time calculations and a personnel management system that tracks payroll and personnel information for DOC employees. However, the Department has assigned only one staff to work on its year 2000 project and was preparing a plan to define the project's scope and parameters. Additionally, before the Department can make real progress with its conversion efforts, it needs to install several software upgrades to its systems. Should DOC not complete work on these two systems in a timely manner, inmate sentences could be miscalculated and DOC employee pay and benefits could be issued erroneously.

Twenty-six of 42 agencies with smaller computer systems report that critical systems are compliant—Similar to the number of compliant systems reported by agencies that operate mid-range computer systems, 26 of 42 agencies that operate smaller, less-complicated computer systems reported that their computer systems were already compliant. As illustrated in Figure 1 (see page 10), these 42 agencies reported that 30 of their 49 critical computer systems were already compliant. Since the majority of these systems, such as personal computers or local area networks, operate less complex applications, such as word processing and/or licensing applications, agencies did not have to expend much effort to correct these systems. For example, many of these systems require only a year 2000-compliant version of

software, as opposed to the more labor-intensive process of identifying and changing lines of code within computer programs. Agencies reporting year 2000 compliance for their computer systems include the Board of Podiatry Examiners, the Board of Physical Therapy Examiners, and the Residential Utility Consumer Office.

Despite the relative ease with which some of these agencies have achieved year 2000 compliance, other agencies with smaller systems had yet to commence year 2000 projects or were somewhat behind schedule with their efforts. Eight agencies, accounting for 9 of the 49 smaller computer systems, reported that their year 2000 efforts for these systems were only in the assessment phase. Four of these agencies were awaiting assistance in determining actions they need to take to correct their systems or were awaiting compliant versions of software. For example, at the time of the survey, the Arizona Criminal Justice Commission was awaiting assistance from the Department of Administration to determine what steps it should take to ensure its system is year 2000 compliant. Additionally, the Dispensing Opticians Board reported that its vendor would supply a compliant version of software by June 30, 1999.

Moreover, even though several of these agencies reported that their computer systems are compliant, these systems might not be compliant. Beginning in November 1997, GITA began contacting and/or visiting agencies that had certified their computer systems were compliant to confirm that these agencies and their systems were in fact compliant. However, as of January 1, 1998, 11 of 45 agencies certifying compliance are not year 2000 compliant. Six of these agencies also reported that their systems were compliant in our survey. As a result, GITA is working with these agencies to ensure they take the necessary steps to achieve compliance for their computer systems.

Several Factors Must Be Addressed to Guarantee Compliance

Agencies must consider a variety of factors to better ensure that year 2000 projects will be completed in a timely manner. The Auditor General survey revealed that agencies' ability to successfully achieve year 2000 compliance depends on several factors, including management support, project planning, priority given to year 2000 projects, and sufficient funding. Additionally, industry experts and literature recommend that organizations adequately address other factors, such as system testing, data interfaces, and contingency planning, to better ensure minimal disruptions to agency operations. GITA can assist and ensure that agencies appropriately consider these factors in their year 2000 projects.

Several factors can influence year 2000 efforts—An Auditor General survey identified several factors that might explain the advances made as well as the delays encountered by agencies undertaking year 2000 projects. These factors include:

■ **Level of management support**—Management support for year 2000 efforts improves an organization's commitment to these efforts and its chances for success. Full management support allows agencies to mobilize adequate resources to implement their year 2000 strategy by placing a high priority on year 2000 projects and enabling project teams to obtain necessary resources and funding. Management support becomes more critical for organizations faced with multiple systems conversions, as well as projects that compete with year 2000 efforts for resources and management attention. For example, strong upper-management support at Arizona's Department of Transportation (ADOT) has helped establish year 2000 conversions as a priority in all divisions. Conversely, as previously mentioned, differing management priorities, evidenced by the absence of a full-time year 2000 project manager and staff, have impeded DPS' year 2000 efforts to date.

■ **Year 2000 project planning**—Experts also contend that organizations can reduce the potential for problems associated with system conversions by developing a plan that considers how the year 2000 problem affects both technical and business operations. A year 2000 plan should clearly define an agency's conversion efforts and document schedules for the completion of all tasks and phases. Additionally, a year 2000 plan should address data interfaces and exchanges that an agency encounters with other entities.

Despite the importance of establishing a clear project plan, only 22 of the agencies surveyed reported developing a written year 2000 plan. Agencies with year 2000 plans that incorporate the majority of characteristics previously identified include ADOT, DES, and DOR. Additionally, eight agencies reported they are in the process of developing year 2000 plans. While agencies with compliant computer systems do not need to develop a plan, other agencies that are in the process of converting computer systems, including the Department of Health Services, have not yet developed an appropriate plan to guide their year 2000 efforts.

■ **Competing information technology projects**—While year 2000 projects should merit a high priority, some agencies report that other information technology projects delay year 2000 efforts. For example, DES is currently involved in several very large automation projects, including a system to distribute Aid to Families with Dependent Children and a comprehensive case management system for child protective services. Since these projects are legislatively mandated and require DES' immediate attention, they compete directly with year 2000 activities and, therefore, decrease the number of staff specifically devoted to DES' year 2000 conversion efforts.

■ **Insufficient funding**—Finally, insufficient funding adversely affects some agencies' ability to achieve compliance for critical computer systems. Despite legislative appropriations for year 2000 projects totaling over $27 million for fiscal years 1997-98 and 1998-99, several surveyed agencies, including two large, three medium-sized, and seven small agencies reported that insufficient funding for these projects could prevent them

from achieving compliance. Incomplete initial analyses performed by agencies to develop funding requests partially contribute to this problem.

Additionally, the reverting status of legislative appropriations for year 2000 projects could further reduce available funding. Currently, unexpended legislative appropriations will revert to their fund of origin at the end of the fiscal year. However, GITA does not want to distribute these appropriated monies to agencies for their year 2000 projects until agencies demonstrate satisfactory progress with their year 2000 efforts. Thus, agencies that do not demonstrate progress consistent with their year 2000 project funding plan could be in jeopardy of losing their appropriated funding altogether, due to the reverting status of these appropriations and GITA procedures for distributing these monies. As such, GITA would prefer that appropriated monies not revert at the end of the fiscal year, but be available for distribution to agency year 2000 projects when project progress warrants distribution of these monies.

System testing, data interface considerations, and contingency planning also important—In addition to the need for some agencies to secure management support, develop project plans, and obtain sufficient funding, this review found that other important factors, such as system testing, compatibility with other computer systems, and contingency planning, have not necessarily received adequate consideration. Specifically:

- **Agencies should adequately test system changes**—Year 2000 and information technology experts agree that testing computer system changes is the most critical aspect of year 2000 projects and ensures the accuracy of system renovations or replacements. Specifically, agencies should thoroughly test converted or replaced systems to uncover errors introduced during the renovation phase, validate a system's year 2000 compliance, and verify a system's readiness for implementation. Experts recommend that organizations that operate large mainframe computer systems allot approximately 50 percent of year 2000 project time to testing activities. While 6 of the 11 large agencies surveyed have allotted at least 50 percent of their year 2000 project time to testing and 2 agencies have allotted between 30 and 35 percent of their project time to testing, the remaining 3 agencies have allocated only 25 percent or less of their project time to this critical activity. Further, although some agencies reported that some of their computer systems were already compliant, these agencies also reported that they had yet to test their systems to validate year 2000 compliance and readiness for implementation.

  Additionally, while agencies should test in-house renovations, they should also test software or hardware purchased from vendors. Purchasing software or hardware that vendors guarantee to be year 2000 compliant does not ensure that these items are indeed compliant. For example, the Department of the Navy recently purchased approximately 1,400 new personal computers, with assurances from the vendor that all were year 2000

compliant. However, the Navy subsequently conducted system-date tests and found that several computers were not year 2000 compliant. As such, agencies should not rely on vendor guarantees of compliance for purchased software or hardware, but should test these purchased items to ensure they are year 2000 compliant.

- **Agencies should consider all data interfaces**—Agencies also need to ensure that data exchanged between agencies via computer achieves year 2000 compliance. Specifically, 45 of the 72 agencies surveyed report exchanging data via the computer with other organizations. For example, the Departments of Economic Security, Revenue, and the Arizona Health Care Cost Containment System exchange data with the federal government. Additionally, DPS exchanges data with 45 Arizona law enforcement agencies and the federal government. Therefore, not only must DPS ensure data received from these local law enforcement agencies is year 2000 compliant and compatible with its computer systems, it must also ensure that data it provides to the National Criminal Information Center is compliant and compatible with federal systems. One DPS official stated that he expects this process will be a "coordination headache" between DPS and other law enforcement agencies.

- **Agencies should develop contingency plans**—Finally, while continuing to work on year 2000 projects, some agencies should consider developing contingency plans in case their computer systems are not compliant in a timely manner. The United States' General Accounting Office recommends that federal agencies develop contingency plans, including the development of manual procedures, to ensure the continuity of core agency operations. For example, the DOR recently requested that all assistant directors develop contingency plans documenting their division's operations in the event critical computer systems fail to achieve compliance. Although some agencies have developed contingency plans to minimize operational disruptions, all agencies that anticipate delays or problems in converting their computer systems in a timely manner should develop contingency plans.

GITA can assist agencies—GITA can assist agencies in their year 2000 efforts to ensure adequate consideration is given to all factors that are crucial to achieving compliant computer systems. As previously mentioned, GITA is responsible for information technology in the State and reports that its highest priority project is to coordinate and oversee the statewide year 2000 program. As such, for those agencies that have struggled with their year 2000 projects or have not yet initiated efforts to correct their computer systems, GITA can assist agencies directly, or through procuring consulting services by:

- Increasing agency awareness of the importance of year 2000 projects (and thereby increasing management support);

- Assisting agencies with the development of appropriate plans for year 2000 project completion; and

- Assisting agencies to determine their year 2000 project funding needs.

In fact, GITA has already performed some of these activities for several state agencies. Additionally, for those agencies currently working on year 2000 projects, GITA can ensure that agencies adequately consider all aspects of year 2000 projects (including system testing, data interfaces, and contingency planning) by enhancing its monitoring and support activities, as discussed in Finding III (see pages 27 through 32).

Recommendations

1. The Legislature should consider changing the status of current legislative appropriations for year 2000 projects from reverting to nonreverting.

2. To ensure successful year 2000 project completion, state agencies, with GITA's assistance, should ensure their year 2000 efforts include the following factors:

   - Full management support for agency year 2000 efforts;

   - Development of appropriate year 2000 project plans to guide agency efforts;

   - Thorough analyses to determine project funding requirements and to ensure sufficient funding is available;

   - Sufficient time in year 2000 project schedules to provide for adequate testing of system renovations and/or replacements to uncover errors introduced during the renovation phase, validate a system's year 2000 compliance, and verify a system's implementation readiness;

   - Appropriate consideration of data exchanged via computer with other agencies or organizations, including both data *received* by and *provided* to other sources; and

   - Development of contingency plans should all systems not achieve year 2000 compliance prior to December 31, 1999, including the development of manual procedures in the event computer operations do not function correctly.

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FINDING II

INCREASED DEMAND FOR PERSONNEL
AND CONTRACTORS COULD HAMPER
YEAR 2000 COMPLIANCE

Increasing demand for skilled computer programmers and year 2000 contractors could jeopardize state agencies' ability to become year 2000 compliant. Turnover among critical programming staff and the difficulty several agencies face in replacing these personnel could delay compliance efforts. Additionally, contractors hired to assist agencies' in-house efforts are becoming less available and more expensive. Therefore, the Legislature, state agencies, and GITA should consider various options for retaining and attracting critical staff and ensuring agency contracting needs are met.

Resources Critical for
Project Completion

The successful conversion of systems, programs, and data to meet year 2000 compliance requirements depends on the availability, skill, and time dedicated by project members. The United States General Accounting Office notes that year 2000 conversions require a re-source-intensive investment. In state agencies, many computer systems have been uniquely programmed, and conversion will require significant experience and knowledge. Additionally, much of the data these systems process has been stored using the two-digit year format and also requires significant personnel resources to remedy. Therefore, experienced agency employees often have irreplaceable knowledge and expertise that is needed for successful year 2000 project completion.

In addition to in-house staff, private contractors can also provide year 2000 resources and conversion software that identifies lines of code requiring change. Both agency staff and contractors can play a key role in project management, making programming changes, solving problems, and testing completed work. Without the resource-intensive efforts of both in-house staff and private contractors, agencies could face significant project delays or fail to meet project deadlines.

Inadequate Staffing
Threatens Compliance

Because many year 2000 projects require significant personnel resources, insufficient staffing could affect several agencies' ability to complete their projects in a timely manner. Despite the need for qualified workers, programmers with critical knowledge of state systems frequently leave for private sector jobs. In addition, the demand for year 2000 services throughout the private as well as the public sector makes replacement programmers difficult to attract. Therefore, to better ensure adequate staffing, agencies should consider using competitively salaried year 2000 positions, bonuses for project completion, and retired personnel.

Despite critical need for programmers, turnover has increased—Despite an enhanced need for programming staff due to the critical nature of year 2000 projects, state agencies have experienced an increase in turnover among programmers familiar with the State's computer systems. Nineteen agencies responding to a year 2000 survey cite inadequate employee resources as a major barrier to obtaining year 2000 compliance. For example, the DOA lost over half of its programmers in fiscal year 1996-97. Furthermore, DES experienced a 19 percent turnover rate among its programmers in fiscal year 1996-97 and reported losing 22 employees from June through September 1997. DES also reports retention of knowledgeable staff as a concern and anticipates losing at least 3 programmers a month, with that rate potentially increasing as the year 2000 approaches. Finally, State Personnel Office reports indicate that turnover among state programmers has increased from 10 percent in fiscal year 1993-94 to over 20 percent in the last two fiscal years, with a reported rate of 23 percent in fiscal year 1996-97.

While several factors contribute to the high turnover, several agencies indicated that high salaries offered by private sector companies and other governmental entities influenced state workers to leave. Specifically, agency year 2000 project leaders report that some programmers are sometimes doubling their state salary in the private sector. Indirect compensation, such as company stock options, paid overtime, and bonuses, also entice programmers to leave state service. These high salaries for programmers largely result from the demand for year 2000 services and for programmers experienced with older programming languages. While higher salaries have been the primary motivation for programmers to leave the State, project managers also cite few promotional opportunities and a lack of challenging technology as additional reasons for turnover.

Replacement programmers difficult to find—In addition to increased turnover, agencies have also had difficulty finding and attracting adequate replacements for separated personnel. Agencies hiring for vacated year 2000 staff positions report that they have had little success with traditional hiring mechanisms, such as publicized job announcements, college recruiting, and job fairs:

- **Job announcements**—Due to a lack of qualified applicants and a lengthy hiring process, publicized job announcements have not yielded a great number of candidates for vacant programming positions. For example, only three qualified applicants responded to a September 1997 job announcement posted by the DOR. The Department indicated that the remaining pool of applicants did not have the necessary programming experience to work on its computer systems. However, before the Department could arrange interviews, all three qualified applicants accepted employment with other organizations. Furthermore, year 2000 project leaders indicate that resume-processing delays prevent agencies from interviewing applicants in a timely manner and that they would prefer to interview applicants immediately.

- **College recruiting**—College recruiting frequently does not yield positive results since state agencies directly compete with higher-paying private companies. DES has placed some college students into internships, but found it difficult to attract applicants when competing against private companies.

- **State job fairs**—State job fairs, where many agencies collectively hire for vacant positions, occasionally provide an agency with a qualified programmer immediately. However, agencies report that many job fair applicants are current state employees and, if hired, would simply be switching agencies. Thus, one agency's gain is another agency's loss.

State took steps to address personnel needs—Responding to agency needs for programming personnel, the State Personnel Office created temporary year 2000 staff positions. Specifically, the DOA established year 2000 project manager, project leader, and programmer positions for state employees working full-time on year 2000 projects. The personnel office created these positions to allow agencies to compete salary-wise for programming staff. For example, agencies can pay from $49,500 to $70,000 for year 2000 programmers and $55,500 to $80,000 for year 2000 project leaders, as compared to existing salary ranges of $30,314 to $46,681 for a programmer analyst III and $33,265 to $51,144 for a systems project leader. Additionally, depending on available funding, agencies can establish as many of these year 2000 positions as they need.

Despite the opportunity for agencies to create year 2000 positions with higher salaries, few agencies have done so. Specifically, the Departments of Administration, Revenue, and Transportation have established 26 separate year 2000 positions, but have actually filled only 5 of these positions. While DOR's year 2000 project leader cited a lack of qualified applicants as a reason for not filling more of these positions, other agencies' year 2000 project leaders indicated that additional factors have prevented agencies from using these positions. These factors include:

- **Positions not funded**—Agencies have not requested additional funding to establish year 2000 positions. If agencies wish to establish year 2000 positions, funding for these positions must come from their existing budgets. However, according to year 2000 project leaders, available funding has been designated and spent for other year 2000 items such as hardware upgrades or consulting services.

- **Positions created without mobility assignment**—Year 2000 positions were originally established without mobility assignments, which discouraged currently employed staff from transferring into these temporary, higher-paying positions. Specifically, agencies could not move project-critical staff into year 2000 positions without jeopardizing the ability of these staff to return to their previous positions at the conclusion of year 2000 projects. Therefore, while these positions allowed agencies to retain critical staff by moving them into higher-paying year 2000 positions, many programmers were reluctant to trade their job security for a higher-paying, temporary position. However, as of October 1997 and at GITA's request, DOA agreed to allow agencies to request mobility assignments for these positions on a case-by-case basis. As a result, approved mobility assignments will allow agencies to move critical staff into year 2000 positions and ensure these staff can return to their previous positions at the conclusion of year 2000 projects.

An additional factor that has discouraged agencies from using year 2000 positions concerns the effect these higher-paying positions would have on existing personnel. According to GITA officials, agencies are reluctant to fill year 2000 positions due to the potential impact on the morale of existing staff who would work with and perform job duties similar to the higher-paid year 2000 staff.

State should consider additional retention and hiring options—Although staffing shortages will continue to challenge agencies and their year 2000 projects, the Legislature and state agencies should consider several options to increase available staff for year 2000 projects, including:

- **Agencies should use year 2000 positions**—Agencies should take advantage of the high-salary year 2000 positions created by the State Personnel Office. These positions should allow agencies to compete in the marketplace for qualified programmers to staff year 2000 projects. Additionally, in an effort to retain critical staff, agencies should consider moving highly marketable staff with irreplaceable knowledge or experience into these positions.

- **Bonuses for project completion**—Similar to other states, the Legislature could consider granting agencies the authority to pay bonuses to employees working on year 2000 projects, contingent upon remaining with the State until project completion. Other states have established or are considering establishing bonus plans to entice critical staff to re-

main with them. For example, Texas provides a yearly bonus of $5,000 for up to two fiscal years (fiscal years 1998 and 1999), payable in May 2000 to qualifying staff who remain with the state. Michigan is also considering similar bonus plans in order to entice programmers to remain with year 2000 projects through their completion.

For Arizona to implement a similar bonus plan, the Legislature would need to amend A.R.S. §38-601, which prohibits compensating state employees in excess of their salary, to allow staff working on year 2000 projects to receive a bonus. Similar to Texas, the State could institute requirements for bonus eligibility. These requirements might involve staff qualifications, duration of stay on year 2000 projects, and a requirement that eligible employees sign a contract with the State. Additionally, these bonuses should not be paid until project completion.

- **Retired personnel could be hired**—An additional option that agencies might consider involves hiring retired staff. Retired programming or computer personnel often have extensive experience and expertise with agency computer systems. As such, these personnel might offer an invaluable resource to year 2000 projects. Arizona State University (ASU) and the State of Oregon have already considered retired staff as a potential resource for these projects. ASU recently filled three part-time positions with retired ASU programmers to adequately staff its year 2000 project. In addition, Oregon passed specific legislation permitting retirees to work on year 2000 projects full-time without jeopardizing their retirement status and benefits. These retired programmers have become a valuable resource pool for year 2000 staffing needs in Oregon.

To provide additional staffing resources, agencies should consider hiring retired persons with computer expertise to work on year 2000 projects. Depending on agency needs, retired employees could work either full- or part-time without jeopardizing their retirement status. Specifically, A.R.S. §38-711(22)(e) permits employees to work full-time for as many as 18 months without jeopardizing their retirement through a temporary appointment approved by the director of the Arizona State Retirement System. Discussions with State Retirement officials suggest that this provision can be extended to individuals hired temporarily to work on year 2000 projects. Additionally, retired employees can currently work part-time indefinitely, without having to seek approval.[1] Therefore, agencies should determine whether retired employees could assist their year 2000 efforts and seek the appropriate approvals to hire these individuals.

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[1] According to Arizona State Retirement System guidelines, retired state employees can work 20 or more hours per week for up to 19 weeks in the fiscal year and work fewer than 20 hours a week for the remainder of the fiscal year; or work fewer than 20 hours a week for the entire fiscal year without jeopardizing their retirement status.

Year 2000 Contractors
Will Become Less Available
and More Expensive

In addition to relying on in-house staff to provide resources for year 2000 projects, numerous private contractors can offer a variety of resources to state agencies. While the State Procurement Office (SPO) has established a multi-vendor contract for the provision of year 2000 services, agencies have not extensively used these contractors. Moreover, as the year 2000 approaches, contractors expect to reach workload capacity and will consequently increase prices for their services or become unavailable to agencies. To better ensure contractors remain a viable resource for agency year 2000 projects, GITA, the SPO, and state agencies should coordinate efforts to ensure agency needs for contractors are met.

State establishes contract, but vendors not extensively used—Although the SPO secured the contract services of 14 year 2000 vendors, agencies have not extensively used these vendors or their services. The contract list was created to provide competent and prompt assistance to all agencies, regardless of agency size and type of computer systems they used. Despite the availability of these contractors since April 1996, agencies have used only 2 of the 14 companies on the contract list. Specifically, 4 agencies have retained the services of one vendor to assist in assessing the work involved and agency needs for conducting their year 2000 projects; and to provide software tools that identify source code that needs to be changed to achieve compliance. Additionally, one agency used another vendor to provide staffing for its year 2000 project.

The limited use of year 2000 vendors appeared to result from agency confusion regarding the process for selecting and contracting for these vendors. Some agency year 2000 project leaders indicated that vendors who were not on the year 2000 contract list would better suit their project needs. During a recent year 2000 task team meeting, project leaders specifically mentioned three vendors who provide year 2000 services, but are not on the contract list. However, these project leaders were uncertain as to whether they could use these preferred vendors. Agency attempts to contract with vendors from a separate statewide information technology contract that expired in July 1997 added to the confusion. Agencies thought they could use vendors from this separate contract, but could not until GITA assisted with the implementation of an alternate contract with the same vendors and contract terms as the expired contract. GITA has also explained to agencies that they could seek assistance from vendors who are not on the year 2000 contract list, if vendors on this list did not meet their needs. Agencies would simply need to issue an RFP to procure the services of a preferred vendor, or justify to the SPO the need to hire a specific vendor. Nonetheless, some agencies' uncertainty regarding the ability to contract with certain vendors has delayed their efforts to contract for additional year 2000 project resources.

Contractor services becoming less available and more expensive—While many agencies have not yet sought year 2000 services from contractors, the availability of these services in

the future may be limited and become more costly. The Gartner Group, a year 2000 authority, reports that year 2000 contractors are in low supply and organizations seeking contract assistance can expect long lead times to obtain resources, as well as poorer quality and bid refusals. The Gartner Group also reports that many contractors have analyzed their current and anticipated capacity, determined a maximum number of projects they will engage in, and are rapidly approaching this limit. In fact, three companies that initially contracted with the State to provide year 2000 assistance chose not to re-bid contract extensions for fiscal year 1997-98. One of these companies indicated that it did not re-bid the contract because it no longer wanted to expend resources to enter into a contract with the State and not receive any service requests from state agencies. Furthermore, a contractor remaining under state contract claims it is rapidly approaching capacity and will need to reassess its ability to accept new business in early 1998.

While three contractors chose not to re-bid on their contract extension, two consultants remaining on state contract anticipate price increases for their services. For example, one current contractor, who charges a $50 hourly rate for year 2000 programming services, anticipates 15 percent price increases every three months until the year 2000. Another company under contract indicated that it anticipates charging state agencies 10 to 20 percent more for services at contract renewal.

Coordinated contractor efforts needed—To ensure contractors remain an available resource to agencies, GITA, the SPO, and state agencies should coordinate efforts to ensure all specific contracting needs are met. According to A.R.S §41-3504, GITA is responsible for providing necessary contracting assistance to agencies either through direct assistance from GITA staff, or by procuring contractors for agencies. Therefore, if agencies require additional contracting assistance from a contractor not currently under year 2000 contract, GITA should coordinate with the SPO to ensure that agencies receive the contracting assistance they need.

Recommendations

1. The Legislature should consider amending A.R.S. §38-601 to provide agencies with the authority to pay bonuses to year 2000 employees, if necessary, contingent upon them remaining in state service until project completion.

2. State agencies should consider creating and/or filling year 2000 positions and moving critical year 2000 project staff into these positions, based on available funding.

3. State agencies should consider hiring retired employees with computer expertise to assist with year 2000 efforts. If agencies need these individuals full-time, they should seek approval for a temporary appointment for up to 18 months from the director of the Arizona State Retirement System.

4. GITA, the SPO, and state agencies should coordinate efforts to ensure all contractor services state agencies need are provided under state contract.

FINDING III

GITA YEAR 2000 PROJECT SUPPORT
AND OVERSIGHT LIMITED

GITA should ensure that year 2000 information technology (IT) projects state agencies undertake are adequately progressing. A recently established agency, GITA is statutorily responsible for IT project oversight, including overseeing year 2000 projects. However, until recently, GITA did not have the resources to monitor these projects, thus depriving several agencies of project assistance and/or year 2000 project oversight. GITA can improve its oversight of year 2000 projects by expanding its monitoring efforts and continuing with its plans for auditing year 2000 projects and assisting agencies with their year 2000 efforts.

GITA Responsible
for Statewide IT
Project Oversight

The Legislature established GITA, a new state agency, effective July 1, 1997, to plan and coordinate information technology for state government and to provide related consulting services. As such, GITA plays a major role in planning, reviewing, and monitoring state agency information technology projects, including year 2000 projects. GITA reports that the year 2000 is the single largest computer applications project undertaken by the State and its primary role is to coordinate and oversee the statewide year 2000 program, which GITA estimates will require 20 percent of its resources. Currently, GITA has 18 staff, 4 of whom are contract employees.

Consistent with its statutory authority and responsibility, GITA has implemented several processes for the approval, funding, and monitoring of information technology projects, including year 2000 projects. For example, GITA has instituted a project and investment justification process for the review and approval of proposed IT projects, a project funding process to disburse appropriated funding to agencies on a quarterly basis, and project monitoring procedures that require agencies undertaking major or critical IT projects to submit monthly project status reports for GITA's review.

GITA Provided Limited
Oversight for Year 2000 Projects

Despite established processes to monitor and support year 2000 projects, in its first four months of existence, GITA provided limited oversight for these projects. During this time, GITA focused its monitoring efforts on nine state agencies that received funding through GITA for their year 2000 projects. However, GITA has recently begun to perform audits of year 2000 projects to verify reported progress. Also, during the audit, GITA performed limited outreach activities to agencies that had not yet sought project approval or funding through GITA.

GITA oversight of year 2000 projects limited—During the audit GITA provided limited oversight of year 2000 projects. Even though fewer than 40 percent of all 119 state agencies currently reported that their computer systems were compliant, GITA monitored the year 2000 projects of 9 agencies. These agencies received GITA oversight because they submitted and received approval for year 2000 projects, received funding through GITA for their year 2000 projects, and are converting many of the most critical computer systems in the State. These agencies included the Departments of Administration, Corrections, Economic Security, Public Safety, Revenue, and Transportation; the Arizona Health Care Cost Containment System; the Arizona Lottery; and the Game and Fish Department.[1]

During the audit, GITA restricted its monitoring efforts of these agencies' year 2000 projects to requesting and reviewing monthly project status reports. These reports detail agency and project accomplishments, project concerns or deviations from project plans, progress on major project components or phases, year-to-date costs, and total costs. Despite some initial problems with late and incomplete status reports, GITA reported that all September 1997 reports were received on time. However, some agencies were still not providing all of the required information in monthly status reports, but GITA plans to train these agencies on what information they need to include.

Even though GITA received and reviewed monthly status reports from the nine agencies, it had not provided oversight for other state agencies' year 2000 projects. Since these other agencies internally funded their year 2000 projects and did not seek project approval from GITA, GITA had not provided any year 2000 project oversight for these agencies. However, regardless of whether an agency seeks project approval from GITA, GITA does have the authority and responsibility to monitor all major or critical information technology projects that executive branch state agencies undertake.

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[1] In addition to its mainframe applications, GITA separately monitors the DOA's work on the AS/400 system, a mini-computer housed at DOA that serves the system needs of several agencies. Although maintained by DOA, at least five agencies have applications on this system. These agencies include the Board of Accountancy, the Board of Cosmetology, the Board of Technical Registration, Arizona Pioneer's Home, and DOA, for its telephone directory application.

Until recently, GITA had not audited year 2000 projects—In addition to receiving only a limited number of monthly status reports, until recently, GITA had not performed any audits of agency year 2000 projects to confirm reported progress. However, based on our survey, several agencies reported that systems were either in the renovation or testing phase of conversion efforts, or already compliant; suggesting that project audits could be conducted on these agencies' year 2000 projects. Relying on agency-prepared status reports without verifying reported results and progress through independent audits and inspections of projects may not offer complete and reliable information on the status of year 2000 projects. In fact, one agency official suggested that agencies might be discouraged from reporting anything less than satisfactory project progress because it would invite increased GITA oversight and possibly jeopardize project funding. Therefore, without project audits, GITA has limited assurance regarding the reported progress of year 2000 projects.

Aware of the need to enhance its oversight, GITA has implemented an audit function. GITA recently completed development of an audit program for use in auditing agencies' year 2000 projects and began its first audit in late November 1997. GITA has retained the services of an outside consultant to perform audits of agency year 2000 projects.

GITA has performed limited outreach activities—Finally, GITA has performed limited outreach activities to state agencies regarding their year 2000 projects. In an attempt to increase awareness and stress the importance of year 2000 efforts, GITA has made presentations to management at 6 of the State's larger agencies and to the Governor's Cabinet, and visited and/or contacted a few other agencies to gather information regarding their year 2000 efforts. However, some agencies have not received similar attention or needed assistance. For example, 13 agencies responding to this year 2000 survey indicated a lack of knowledge regarding steps they should take to ensure their computer systems are compliant. One agency representative indicated that many smaller agencies do not have information technology staff and do not have the expertise to solve computer problems; another agency representative requested a contact name for cost-free advice from auditors who conducted this survey.

GITA management recognizes that several agencies, especially the smaller agencies that may lack information technology expertise, do not know where to go or whom to call for assistance. As such, GITA recently hired a consultant to provide assistance and review the year 2000 efforts of medium-sized and smaller agencies. Additionally, GITA reported that it compiled and sent a package to medium-sized and smaller agencies in late September 1997 to determine project progress and needs. However, GITA did not receive a response to this package and will rely on its consultant to contact and assess the efforts of these agencies.

GITA Should Enhance
Oversight and Assistance

GITA should take steps to ensure planned efforts as well as additional measures are implemented to enhance the level of oversight and assistance provided for year 2000 projects. First, GITA can increase its monitoring efforts through expanded agency reporting and by continuing to implement its audit function. Second, GITA should increase the level of support and assistance it provides to agencies with little or no information technology expertise. Finally, to support increased oversight and assistance, GITA should ensure that adequate staffing resources are devoted to year 2000 information technology projects.

GITA should expand monitoring efforts—Similar to other states, GITA should expand the level of project reporting it currently requires. As of August 1997, GITA required status reports only from those agencies that received year 2000 project approval and funding through GITA. By contrast, other states, such as Texas and Oregon, require ***all*** agencies working on year 2000 projects to report the status and progress of their projects to year 2000 project offices. Specifically, Texas requires mission-critical agencies to report project status monthly and all other agencies to report quarterly. Oregon requires all agencies to report monthly until the agency submits a letter certifying year 2000 compliance for all computer-related systems.

Similarly, GITA should expand its status reporting requirements to all executive branch state agencies that continue to work toward year 2000 compliance. Specifically, GITA should request monthly status reports from all large and medium-sized state agencies and quarterly status reports from all smaller agencies that have yet to certify year 2000 compliance for all computer systems. By expanding reporting requirements, GITA can better assess statewide progress on year 2000 projects and better determine where assistance is needed.

In addition to expanding its reporting requirements, GITA needs to ensure that its auditing plans are implemented. As previously mentioned, GITA has developed an audit program and started conducting audits of year 2000 projects in late November 1997, beginning with the Department of Public Safety. GITA has preliminarily scheduled 5 large agency year 2000 projects for review, but plans to audit all large and half of the medium-sized agency year 2000 projects, depending on available funding. By conducting audits of year 2000 projects, GITA can confirm reported progress and make recommendations for corrective action if required.

GITA should expand level of support it provides to agencies—While increasing its oversight of state agency year 2000 projects, GITA should also increase the level of support it provides to agencies. Consistent with its plans, GITA should contact those agencies that have not yet certified year 2000 compliance, and determine what, if any, assistance they need. For those agencies that have certified year 2000 compliance for all computer systems, GITA should confirm that these agencies performed all the necessary steps to achieve compliance. For

example, as mentioned in Finding I (see pages 7 through 17), some agencies may not be devoting sufficient time to perform necessary testing of system changes to ensure these systems will accurately process data after the turn of the century. Therefore, a project review conducted by GITA could determine that agencies need to perform additional work to guarantee year 2000 compliance for their computer systems.

In addition to determining if agencies need assistance, GITA could serve as a useful information source for agencies engaged in year 2000 efforts. Using a variety of mechanisms, such as its Web site or its newsletter, GITA could disseminate to state agencies information about useful products, problems, innovations, and reference materials, as well as general year 2000 information.

GITA needs to devote adequate staffing resources to year 2000 project oversight—In order to expand its level of year 2000 project oversight and support, GITA needs to ensure that adequate staffing resources are devoted to these projects. Currently, GITA devotes .5 FTE and 3 full-time consultants to year 2000 project oversight and support. This current staffing level appears to be sufficient at the present time for the increased monitoring and outreach activities recommended in this report. However, as the year 2000 draws closer, agencies may increase their need for outside assistance, at which time GITA's staffing resources may be inadequate. Therefore, GITA should continually evaluate agencies' needs for year 2000 project assistance and oversight, and ensure that it has dedicated a sufficient number of staff to meet these year 2000 project needs.

To ensure that GITA devotes adequate staffing resources to year 2000 project oversight and support for the duration of agency year 2000 efforts, the Legislature should consider appropriating additional monies for this purpose. Currently, GITA will receive General Fund appropriations of $300,000 in fiscal year 1997-98 and $100,000 in fiscal year 1998-99 for year 2000 project oversight. However, these appropriated monies appear to be insufficient for the level of year 2000 project oversight and support GITA needs to provide, especially if GITA needs to increase its oversight and support of these projects or extend its oversight and support beyond fiscal year 1998-99. As such, GITA anticipates requesting additional, non-reverting appropriated monies to provide a sufficient number of staff for year 2000 project oversight and support for the duration of these projects.

Recommendations

1. The Legislature should consider appropriating additional, nonreverting monies to GITA to ensure that GITA can devote sufficient staffing resources to year 2000 project oversight and support.

2. GITA should request monthly status reports from all large and medium-sized state agencies and quarterly status reports from all smaller agencies that have yet to certify year 2000 compliance for all computer systems.

3. GITA should continue with its plans for auditing year 2000 projects, and its plans for contacting and assisting medium-sized and smaller agencies that have not yet achieved year 2000 compliance.

4. GITA should consider providing critical and useful information for year 2000 projects, such as product information, problems, innovations, and reference materials, to state agencies via its Web site.

5. GITA should continually evaluate the staffing resources it has dedicated to year 2000 project oversight and assistance and ensure a sufficient number of staff are devoted to meet agency year 2000 project oversight and support needs.

Agency Response

January 29, 1998

Douglas R. Norton
Auditor General
2910 North 44th Street
Suite 410
Phoenix, AZ 85018

Dear Mr. Norton:

The Government Information Technology Agency (GITA) appreciates the opportunity to respond
to the findings and recommendations of the performance audit conducted between June and
September 1997. In general, your findings and recommendations generally track our own. Given
the broad scope and dynamic nature of this project, your staff is to be commended for pulling
together a report that touches on many of the major issues of concern.

Before responding specifically to the report findings, I want to discuss some general issues,
clarifications and concerns that provide additional context. A project as diverse and broad as
Year 2000 depends heavily on the quality of the management effort. In particular, the proper
assignment and understanding of roles and responsibilities among agencies and individuals helps
distribute the workload where those competencies exist.

To the extent these roles and responsibilities become blended or confused, successful management
of this effort becomes more difficult. Entities with direct responsibilities in this effort include the
Legislature, the Governor's Office, Agency Directors, the Human Resources, Procurement and
Information Services Divisions at the Department of Administration, and GITA. The
performance audit adequately describes tasks that many of these responsible parties should
consider or undertake. It does not clearly articulate the specific roles and responsibilities each has
within the context of Year 2000 work.

On Table 2 (page 8) of the performance audit, a matrix is employed to describe the various phases
of Year 2000 activities, with a suggested schedule. The report frequently refers to this framework
in describing whether an agencies is behind or ahead of schedule on their work. A matrix like this
is a useful tool for understanding the kinds and sequences of activities agencies must undertake.
Its usefulness is limited, however, when used to gauge the progress of individual projects. There
is such variety among agency systems that while an agency may not be in the suggested phase of

work for all applications, it may be working on a planned schedule that is appropriate for that agency's needs.

Another general area of concern relates to Year 2000 software problems. There is a general lack of clarity regarding different aspects of the software problem that could cause confusion for the reader. While hardware problems are not specifically addressed, the audit report develops some major conclusions based on software issues. Computer software can be divided into two types: system and application.

1. System software provides instruction to the computer. On large computers, some of the better known names are MVS, CICS, VTAM, DB2 and TSO. There are usually more than 150 system software products on a mainframe computer. On PCs, some of the better known names are DOS, NT, WORD, EXCEL, LOTUS and PARADOX. There are usually less than 25 products on each PC. This software is provided by vendors and upgrading to Y2K versions requires only one to three months. Usually there is very little modification required by the State's computer personnel.

2. Application software transfers user transactions to and from system software. On large computers in the State government, some of the better known names are CHILDS, AFIS, HRMS, NCIC and Accounts Receivable. On PCs, some of the names are Licensing, Investigation, and Accounting. Exhibit 1 provides a listing of the agencies, number of mission critical application systems (in brackets) and current status of Y2K efforts. GITA has determined there are more than 250 mission critical application systems. Application software requires from six months to 5 years to convert to Y2K compliance. Usually, most of the modifications must be done by the programmers. It is estimated the State's mission critical systems have over 70 million lines of code that must be addressed.

The Appendix of your report provides the results of the Auditor General's survey. For the small agencies, fifty-one percent of the systems listed are for system software which requires little time to convert. For large agencies, there is no mention of system software. The large agencies house seventy percent of the mission critical application systems in the Auditor General survey and some will require multiple years to convert. Despite this, the audit findings argue that GITA needs to spend more time working with the smaller agencies. In order to focus our resources on the appropriate problems at the appropriate time, GITA is concentrating on the mission critical application systems first and on the large agencies. In October 1997, GITA expanded its scope of work to include medium and small agencies, knowing that their repair, renovation or replacement activities will not be as complex or time consuming. That commitment will continue to expand as the deadlines for activity grow nearer.

Agencies submitting individual responses to this audit report include the Departments of Correction and Public Safety. They are found attached to the back of the GITA response.

Finally, it is important to note that as GITA and other states tackle this once-in-a-millenium problem, we are constantly confront and learning from new challenges. We are striving for continuous improvement in our efforts to minimize disruptions and failures in government operations. The performance audit does provide important guidance to us and to the other agencies that will be extremely helpful to us.

The attached document constitutes GITA's formal response to your audit recommendations.

Sincerely,

John B. Kelly
DIRECTOR

FINDING I
MOST STATE AGENCIES REPORT YEAR 2000 EFFORTS ARE ON SCHEDULE

Recommendation 1 – The Legislature should consider changing the status of current legislative appropriations for year 2000 projects from reverting to non-reverting.

Response - The finding of the Auditor General is agreed to and the audit recommendation will be implemented subject to Legislative approval of the recommendation from the Office of Strategic Planning and Budgeting and the Joint Legislative Budget Committee to do so.

In its letter to OSPB in October describing Critical Budget Issues, GITA did ask for consideration of this request. We are pleased that both OSPB and JLBC have recommended this change in the FY 1999 budget documents.

Recommendation 2 - To ensure successful year 2000 project completion, state agencies, with GITA's assistance, should ensure their year 2000 efforts include [a number of critical success factors].

Response - The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

As part of its oversight responsibility, GITA is working closely with agency senior management to develop an awareness and adherence to a set of Year 2000 success concepts. In addition to the concepts listed in the performance audit, the following represents additional factors which contribute to the success of Year 2000 activities:

- Understanding that Y2K is largely a management and not a technical problem.
- All Y2K activities should be consolidated under the senior end to end executive.
- A non-technical senior executive in each agency should be appointed by the agency director and given end-to-end responsibility for all Y2K activities.
- Senior management should set priorities and allocate resources.
- Non-essential projects should be reduced to a minimum and each project should be approved by the senior executive before it is undertaken by technical staff.
- Careful and ongoing review of all Year 2000 tasks are required to determine the extent of funding requirements.
- Y2K progress should be communicated regularly throughout the agency at all levels.
- Dedicated project managers should be assigned to Y2K projects and the management of the Year 2000 project plans.
- A monthly progress report should be used to measure progress.
- Testing is generally 60% of the total effort. Project plans should include sufficient test time.

With regard to the recommendation that contingency plans be in place, GITA recommends further that contingency plans should be mandatory for systems in which coding renovation is not completed by January 1, 1999. Further, contingency plans should also be mandatory for systems for which progress reports are turned in late for three consecutive months.

FINDING II
INCREASED DEMAND FOR PERSONNEL AND CONTRACTORS
COULD HAMPER YEAR 2000 COMPLIANCE

Recommendation 1 - The Legislature should consider amending A.R.S. §38-601 to provide agencies with the authority to pay bonuses to year 2000 employees, if necessary, contingent upon them remaining in state service until project completion.

Response - The finding of the Auditor general is agreed to and a different method of dealing with the finding will be implemented.

GITA agrees that a Year 2000 incentive payment to employees will help retain employees for the Year 2000 duration. Any such bonus should only be paid to employees who remain on the state payroll and upon successful completion of the Year 2000 projects. GITA is currently conducting discussions with the Department of Administration Human Resources Division (ADOA-HR) to discuss ways of approaching the Legislature with this recommendation.

Recommendation 2 - State agencies should consider creating and/or filling year 2000 positions and moving critical year 2000 project staff into these positions, based on available funding.

Response –The finding of the Auditor General is agreed to and a different method of dealing with the finding will be implemented.

GITA recommends that the ADOA-HR work closely with each agency to create an inventory of existing staff to determine who has the most critical skill set and knowledge of agency application systems. This information will be used to develop a plan of action and a broad array of responses that can be used to help retain key technical personnel during the next two years.

GITA is working closely with the ADOA-HR to find ways to address the existing information services employee supply/demand gap. Some of the general categories being investigated include:
- ⇒ Rewards and Incentives
- ⇒ Career Advancement Opportunities
- ⇒ Positive Work Environment
- ⇒ Improved Hiring Practices

Recommendation 3 - State agencies should consider hiring retired employees with computer expertise to assist with year 2000 efforts. If agencies need these individuals full-time, they should seek approval for a temporary appointment for up to 18 months from the director of the Arizona State Retirement System.

Response - The finding of the Auditor General is agreed to and the audit recommendation is subject to Agency management approval and ADOA Human Resources endorsement..

GITA is working closely with the major agencies to determine their needs for hiring retired employees with legacy computer skills. Collaborative personnel activities involving GITA, ADOA-HR and Agencies that have occurred since September 1, 1997 and included:

- Preparation of a notice advertising our need for publication in a private sector retiree newsletter;
- Additional opportunities to recruit potential candidates to fill temporary Year 2000 positions are being developed;
- We have asked the ADOA-HR for guidance and assistance in determining what issues may be a barrier to rehiring retirees and the best methods for addressing those issues.   For example, should they be hired as temporary appointments, through contract employment agencies or as independent contractors?

Recommendation 4 - GITA, the SPO, and state agencies should coordinate efforts to ensure all contractor services state agencies need are provided under state contract.

Response - The finding of the Auditor General is agreed to and the audit recommendation will be endorsed by GITA. State contracts are the responsibility of ADOA SPO..

The ability to rapidly access necessary services through consulting contracts is a key component to success in Year 2000 project activities. Collaborative procurement activities involving GITA, ADOA-SPO and Agencies that have occurred since the conclusion of the Auditor General Y2K Audit Review have included :

- Additional vendors with Y2K tools, products and services have been acquired to replace and complement vendors that did not renew their contract under State Contract 01686. (Nov - Dec 1997)
- GITA has provided a forum each Tuesday at 10AM (Arizona Information Technology Forum) where information technology companies can present their products and services to interested agencies.
- Effective January 2, 1998 an information technology professional services contract was awarded to approximately 50 companies. This contract can be used by any state agency needing technical assistance for both Y2K and non Y2K projects. The new contract covers a broad range of technical skills and competencies and will be beneficial to all agencies IT projects and activities.
- Agencies that are replacing systems rather than just fixing them are contracting directly with vendors to provide a full range of services along with replacement products. These activities are being carried out following established procurement rules and guidelines, as well as GITA oversight procedures.
- As agencies have reached the point of fixing and testing applications and computer code, more contractors from the original list of fourteen contractors awarded in June of 1996 have been utilized.
- Additional contract needs are being evaluated by ADOA-SPO, GITA and individual agencies on a periodic basis through the multi-agency Statewide Y2K Task Team that meets the first Tuesday of every month

Conditions identified in Finding II of the Audit Report that relate to coordinated contractor efforts have all been addressed. GITA will continue to work closely with ADOA-SPO, vendors and state agencies to ensure agency specific needs for contractors are being met.

FINDING III
GITA YEAR 2000 PROJECT SUPPORT
AND OVERSIGHT LIMITED

Recommendation 1 - **The Legislature should consider appropriating additional, non-reverting monies to GITA to ensure that GITA can devote sufficient staffing resources to year 2000 project oversight and support.**

Response - The finding of the Auditor General is agreed to and the audit recommendations will be implemented subject to the agreement by the Legislature to support the FY 1999 budget recommendation from OSPB.

GITA has requested an appropriation from the legislature for an additional $1 million in non-reverting monies to be used for additional, non-FTE, staffing resources to be dedicated to Year 2000 project oversight and support. Of particular concern to us at the moment is the need to recruit personnel to coordinate the identification and assessment of data interfaces, and the need to research and publish information relating to hardware, software, and embedded chip issues to assist agencies in their continuing efforts to address problems that have, or have not yet, been identified. GITA notes that it did not have permission to use any appropriated funds for Year 2000 project oversight at the time the audit was conducted.

Recommendation 2 - GITA should request monthly status reports from all large and medium-sized state agencies and quarterly status reports from all smaller agencies that have yet to certify year 2000 compliance for all computer systems.

Response - The finding of the Auditor General is agreed to and the audit recommendations will be implemented.

Since the audit was performed:
- GITA has instituted monthly status reports from all large and medium-sized state agencies.
- Quarterly status reports are required from smaller agencies that have not yet certified computer systems as Year 2000 compliant.
- GITA will be requiring the senior manager of each large agency to submit a monthly grade report of Year 2000 progress. The agency grade will be incorporated into a GITA report card which will show the relative progress made by each large agency in relationship to all other large agencies and project timelines.

Recommendation 3 - GITA should continue with its plans for auditing year 2000 projects, and its plans for contacting and assisting medium-sized and smaller agencies that have not yet achieved year 2000 compliance.

Response - The finding of the Auditor General is agreed to and the audit recommendations will be implemented.

GITA has completed its On Site Performance Assessments, and is preparing reports, for the Department of Public Safety and the Department of Transportation. GITA is planning to perform similar assessments for the remaining major agencies throughout the last two quarters of FY 1998. The tentative sequence of assessments is as follows:

⇒ Department of Corrections
⇒ Department of Revenue
⇒ Department of Economic Security
⇒ Department of Health Services
⇒ AHCCCS
⇒ Department of Administration

GITA is continuing to work closely with the medium-sized and smaller agencies to assist those that have not achieved Year 2000 compliance, particularly in helping to identify potential problems with LAN/WAN and database applications.

Recommendation 4 - GITA should consider providing critical and useful information for year 2000 projects, such as product information, problems, innovations, and reference materials, to state agencies via its Web site.

Response - The finding of the Auditor General is agreed to and the audit recommendations will be implemented.

GITA has implemented programs to provide awareness of the Year 2000 problems and issues through the Y2K task force meetings, CIO council meetings and the dissemination of Y2K awareness materials and information. Starting in September 1997, we have launched an agency newsletter, entitled GITA BITS, in which we have published several articles to raise issues and awareness about Y2K. We concur that more can and should be done in this area, particularly with changes to our web site content.

Recommendation 5 - GITA should continually evaluate the staffing resources it has dedicated to year 2000 project oversight and assistance and ensure a sufficient number of staff are devoted to meet agency year 2000 project oversight and support needs.

Response - The finding of the Auditor General is agreed to and the audit recommendations will be implemented subject to the agreement by the legislature to support the FY1999 budget recommendation from OSPB.

GITA is aware of the need to dedicate additional staffing to the Year 2000 project oversight and assistance. Requests for additional funding have been sent to the Legislature. In the meantime, GITA has prioritized the Year 2000 oversight work and has allocated its personnel resources to the agencies where the most risk is evident.

Over the course of the last seven months, GITA has been gearing up its oversight activities in response to the identification of real needs. During the audit, agency activities were focused on

assessment and early project phase requirements. Oversight on our part would have provided little value at that stage. As time goes on, project monitoring becomes a more vital element to help ensure project success. GITA will constantly evaluate our activities and resources needs to deploy appropriate staff to continually improve project monitoring and support.

EXHIBIT 1
YEAR 2000 CRITICAL SYSTEMS COMPLETION
SUMMARY REPORT   LARGE AND MEDIUM AGENCIES
as of 1/29/98

AGENCY NAME (# Critical Systems)	Analysis and Planning Completed %	Replacement or Reprogramming Completed %	Testing Completed %	Implementation Completed %
LARGE AGENCIES:				
ADOA-Az. Dept. Of Administration (17)	90%	50%	30%	30%
ADOC-Az. Dept. Of Corrections (2)	100%	10%	10%	5%
ADOT-Az. Dept. Of Transportation (9)	95%	40%	35%	35%
AHCCCS-Az. Health Cost Care Containment System (18)	100%	39%	39%	29%
DES-Dept. Of Economic Security (53)	80%	56%	42%	40%
DHS-Dept. of Health Services (15)	96%	90%	90%	90%
DOR-Dept. Of Revenue (13)	82%	19%	14%	13%
DPS-Dept. of Public Safety (48)	85%	20%	15%	10%
MEDIUM AGENCIES AND COURTS:				
Agriculture (4)	100%	100%	100%	95%
Banking (1)	100%	100%	100%	100%
Courts (14)	95%	90%	90%	85%
DEQ-Dept. of Environmental Quality (18)	50%	10%	10%	5%
DOE-Dept. Of Education (7)	100%	57%	38%	29%
Game and Fish (5)	91%	72%	69%	68%
Insurance Dept. (5)	100%	95%	95%	95%
Juvenile Corrections (1)	100%	70%	70%	70%
Land (Pending Input)				
Lottery (9)	100%	90%	90%	80%
Registrar Of Contractors (11)	100%	95%	90%	90%
Retirement (4)				
Water Resources (7)	100%	100%	100%	95%

ATTACHMENT: INDIVIDUAL AGENCY RESPONSES

January 30, 1998

Mr. Douglas R. Norton, CPA, Auditor General
Office of the Auditor General
2910 North 44th Street, Suite 410
Phoenix, Arizona 85018

Dear Mr. Norton:

I would like to take this opportunity to respond to some of the comments made in your report of
the performance audit, on the Year 2000 Study. On page nine of the draft report, it was
mentioned of the slow progress made by the Department of Public Safety, on the Year 2000
conversion efforts. Since the report was written, we have made several changes that will greatly
improve our standing on the Year 2000 conversion.

Attached is a correspondence copy from Mr. John Kelly, Government Information Technology
Agency Director, addressing their findings and recommendations resulting from the on-site
performance assessment done at DPS.

Mr. Richard Carlson, Assistant Director, was appointed as the Senior Management Sponsor. Mr.
Carlson is responsible for approving/disapproving all project requests, and has already placed
several non-mission critical projects on hold. In addition, Mr. Graciano Cervantes Jr.,
Information System Services Section Manager is the Project Manager for the Year 2000, and is
assigned on a full-time basis. Keane, Inc., has also been contracted to assist with the
Department's conversion efforts.

In light of these changes, the Department should be on schedule to meet the Year 2000
conversion deadline, and all efforts are progressing adequately. Should you have any questions,
please call me or a member of your staff may contact Mr. Richard Carlson, at (602) 223-2250.

Sincerely,

Joe Albo
Director

ec

Attachment

cc: Mr. Art Ranney, GITA

ARIZONA DEPARTMENT OF CORRECTIONS
RESPONSE TO AUDITOR GENERAL REPORT
YEAR 2000 STUDY

In June 1997, at the time of the Auditor General's discussions with the Arizona Department of Corrections (ADC) staff regarding the status of the Year 2000 project, we were experiencing some difficulties with staffing. We had recently lost the two staff assigned to the project and had only just hired a replacement. Additionally, it was not until August of 1997 that the Department received its first allocation of Year 2000 monies. As a result, the ADC was behind schedule, as indicated in the Auditor General's report. However, since June, the ADC has made substantial progress in its efforts to ensure Year 2000 compliance.

During the past year the ADC has hired several consultants to provide adequate levels of support in the areas of its mainframe applications, its local area network and personal computer hardware and software. We have prepared a project strategy plan that calls for the establishment of a full time project manager and subject matter expert groups who will work with the ADC Information Technology Services Bureau and contract consultants to complete the necessary analysis, contingency planning, system modifications, testing and implementation support. In total, the ADC has identified 29 full and part-time employees who will be dedicated to this critical project. As a result of these actions, the ADC believes it has ensured timely compliance with the Year 2000 requirements for its computer systems.

For our mission-critical system, the Adult Inmate Management System (AIMS), we have made the following progress since our discussions with the Auditor General's staff in June and July:

- established a Y2K test environment,
- upgraded our Data Base Management System, IMS, from version 2.2 to version 4.1,
- created change management procedures for our AIMS programs,
- identified every date field in every data base segment of the AIMS IMS data base,
- identified every date field in every AIMS program,
- identified the modifications needed for each date field in the AIMS applications, and
- modified approximately 10% of the identified changes in the AIMS programs.

It should also be noted that the ADC is negotiating a contract with the Computer Management Sciences, Inc. (CMSI) to update AIMS' most critical and complex program module to the Year 2000 compliancy level. This module is the Inmate (sentence) Calculation (ICAL) program. It is anticipated that CMSI will complete its work during the first six months of 1998.

Another area of progress is with the Local Area Network (LAN) and PC hardware and software. The ITS bureau has an inventory of its hardware base that has been submitted to the Department of Administration. We are in the process of visiting each PC and its peripherals and validating its Y2K compliancy. Y2K tests and procedures have been developed, bureaus have been contacted and we are currently 20% through the testing and implementation phases at the Central Office site.

The Arizona Department of Corrections is poised to accelerate the timely completion of this project. Strategic plans have been made, a significant commitment of personnel is anticipated, and progress is being recorded.

STATE OF ARIZONA
GOVERNMENT INFORMATION TECHNOLOGY AGENCY
1102 W. Adams
Phoenix, AZ 85007

December 29, 1997

The Honorable Jane Dee Hull
Office of the Governor
1700 W. Washington
Phoenix, AZ 85007

Dear Governor Hull:

On November 10, 1997, the Government Information Technology Agency launched its first "on-site performance assessment" of a state agency to review activities to address computer problems associated with the Year 2000 "bug." Our initial effort was directed at the Department of Public Safety because of the number of mission critical applications they maintain, and their importance in preserving public health and safety.

Our assessment consisted of a number of interviews, performed by ITAC board member Steve Finn, with agency senior management, business unit managers and select IT staff. Upon conclusion of these interviews, Mr. Finn and I presented Director Albo with a debriefing on our findings and recommendations to improve the chances that DPS will be successful in addressing their Year 2000 challenges.

I am writing to tell you that Director Albo was at all times receptive and cooperative with our requests for information and access. Upon hearing our preliminary recommendations, he was extremely responsive in making a series of organizational changes that I believe will help DPS make tremendous improvement in their Y2K activities. He has elevated responsibility for all Year 2000 activities to a senior manager, has appointed a Y2K project manager, and has shelved selected projects that were competing for personnel time and attention. At all times, DPS senior staff, led by Director Albo, were courteous, responsive and eager to address any recommendations we offered. The entire process was a model for interagency partnership to address a serious statewide problem.

At your convenience, I would be pleased to brief you or your staff on our findings and recommendations, and the subsequent actions taken by DPS. As always, thank you for your support and assistance in this matter.

Sincerely,

John B. Kelly
Director

cc: Joe Albo
       Ted Ferris
       Chris Gordon
       George Weisz
       Tom Betlach

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APPENDIX

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APPENDIX

YEAR 2000 STUDY CONVERSION STATUS BY AGENCY
COMPUTER SYSTEM SIZE AS OF AUGUST 1997

Listed below are the agencies surveyed, the size of each agency's computing environment, a description of each agency's critical systems, and each system's conversion status. The survey included responses from 11 agencies that operate in large computing environments, 19 agencies that operate in medium computing environments, and 42 agencies that operate in small computing environments. Each system's conversion status is reflected as of August 1997, with the exception of system conversion efforts in the Departments of Economic Security, Public Safety, and Revenue, which are reflected as of December 1997. An explanation of the three computing environments follows:

■ **Large**—Agencies operating in this environment typically use mainframe computer systems.

■ **Medium**—Agencies operating in this environment typically use mid-range computer systems, such as mini-computers or wide area networks (WAN).

■ **Small**—Agencies operating in this environment typically use stand-alone personal computers or local area networks (LAN).

	Agency	Computer System Size	System Description	Status
1	Arizona Health Care Cost Containment System	Large	1. Administers Medicaid 2. Financial system	Renovation Renovation
2	Arizona State University	Large	3. Tracks university personnel/payroll 4. Tracks/monitors ASU's financial transactions 5. Processes registrations; grades	Renovation Testing Testing
3	Department of Administration	Large	6. Statewide financial system 7. Statewide human resource management system	Renovation Renovation
4	Department of Economic Security	Large	8. Tracks data for senior citizen clients, contracts, and makes payments to providers and clients	Testing
			9. Client tracking and provider payments for shelters for the homeless and abused	Testing
			10. Tracks provider contracts and processing of monies for Community Services Administration	Assessment
			11. Collects and processes demographic, social services, and medical assistance data and transactions	Testing
			12. Supports following agency functions: Budget, Accounting, Finance, Accounts Payable, Purchasing, Payroll, Personnel, Fixed Assets, Grants Management, and Contracts	Testing
			13. Accounts receivable collections system for overpayments	Assessment
			14. Revolving fund check writing system	Assessment
			15. Tracks department and FTE position budget for the fiscal year	Renovation
			16. Billing system for developmentally disabled clients with third party liability insurance	Assessment
			17. Sends updates to the Social Security system	Assessment
			18. Creates and transfers alert messages for DES clients	Testing

Agency	Computer System Size	System Description	Status
		19. Collects data from the Family Assistance Administration system	Compliant
		20. Generates warrants for DES clients receiving general assistance	Assessment
		21. Produces earnings reports for federal reporting	Compliant
		22. Verifies death information	Compliant
		23. Verifies income for supplemental social security insurance	Compliant
		24. Verifies IRS client data	Compliant
		25. Verifies client wages to the Unemployment Insurance Wage system	Renovation
		26. Provides daily information to AHCCCS for medical eligibility	Assessment
		27. Provides monthly information to AHCCCS for medical eligibility	Testing
		28. Generates reports on Food and Nutrition Services denied individuals	Compliant
		29. Produces reports for Temporary Assistance for Needy Families denied clients	Compliant
		30. Deletes clients from the Income & Eligibility Verification System	Compliant
		31. Enumerates clients for social security verification	Compliant
		32. Eligibility determination for welfare benefits	Testing
		33. Handles child support cases for Child Support Enforcement	Renovation
		34. Processes medical and dental claims for children in foster care	Renovation
		35. Tracks foster children in state care and pays providers for services to these clients	Renovation
		36. Central intake and tracking system for investigating child abuse	Renovation
		37. Data storage, processing, and retrieval for child welfare business functions	Testing
		38. Tracks, verifies, and initiates payment for all phone invoices	Renovation
		39. Tracks developmental disabled clients in state care and pays providers for services to these clients	Assessment
		40. Payroll tracking for Arizona Industry for the Blind employees	Renovation
		41. Tracks children in child care and pays providers for services to these clients	Renovation
		42. Maintains and monitors clients eligible for job training	Testing
		43. Monitors clients who are food stamp recipients during job training	Testing
		44. Monitors payments to Jobs Opportunities and Basic Skills clients	Renovation
		45. Processes claimant unemployment applications, produces unemployment insurance checks	Renovation
		46. Processes wages received from statewide employers	Assessment
		47. Processes interstate claims, wage requests, and wage transfers	Assessment
		48. Handles the processing of applicant registrations and employer job orders	Renovation
		49. Processes data from wage reports, generates statements, issues refunds, and applies payments to various debt categories	Assessment
		50. Scans and stores master file application images	Assessment
		51. Proprietary American Management System software product	Renovation
		52. Provides work assignments, maintenance of collection history on accounts, and management reports	Assessment
		53. Tracks the status of employer appeals for Unemployment Insurance tax charges	Assessment
		54. Initial processing of employer's quarterly unemployment insurance tax remittances	Assessment
		55. Tracks client's services purchased for clients, and expenditures per federal and state guidelines	Renovation
		56. Tracks client's services purchased and expenditures in order to provide required information to federal, state, and local authorities	Compliant

	Agency	Computer System Size	System Description	Status
			57. Tracks unemployment figures for federal agencies	Compliant
			58. Tracks unemployment figures for federal agencies and produces mailing surveys for employers	Renovation
			59. Tracks appeals made by DES clients	Testing
			60. Tracks fraud in DES programs	Renovation
5	Department of Education	Large	61. Financial and accounting system	Testing
			62. Calculates formulas to get money to schools	Renovation
6	Department of Health Services	Large	63. Tracks statewide behavioral health clients and services	Compliant
			64. Statewide database of birth/death certificates	Renovation
			65. Tracks clients in family health programs	Assessment
			66. Immunization database	Compliant
			67. Fingerprint checks; EMT information; day care facility licenses	Compliant
			68. Tracks services for disabled children	Renovation
7	Department of Public Safety	Large	69. Contains warrants held by Arizona law enforcement agencies	Assessment
			70. Information on vehicles stolen in Arizona	Assessment
			71. Contains entries on stolen articles of numerous types	Assessment
			72. Contains data on boats of any kind that have been reported stolen	Assessment
			73. Contains data on weapons of any kind which have been reported stolen or recovered weapons	Assessment
			74. Contains data on securities, currency, money orders, bonds, stocks, and travelers checks that have been reported stolen	Assessment
			75. Contains entries on persons that have been reported missing	Assessment
			76. Information on unidentified deceased persons, disaster victims, recovered body parts, and living persons	Assessment
			77. Contains information on harassment protection orders and injunctions	Assessment
			78. Maintains an index of more than 250 million vehicle records	Assessment
			79. Contains information on members of violent gang terrorist groups	Assessment
			80. Contains arrest, disposition, and custody information on offenders arrested in Arizona	Assessment
			81. Interstate exchange of criminal history record information	Assessment
			82. Contains information on convicted sex offenders who reside in Arizona	Renovation
			83. Provides a central index of offenders with records	Renovation-Compliant
			84. Contains information provided by the Arizona Department of Corrections for persons currently or previously under their jurisdiction	
			85. Provides statewide crime statistics	Assessment
			86. Contains subject-in-process information (arrests, bookings, etc.)	Assessment
			87. Contains information about items pawned in Maricopa County	Assessment
			88. Criminal history information	Assessment
			89. Contains incomplete information on offenders derived from rejected arrest fingerprint cards and dispositions	Assessment
			90. Houses gang member information	Assessment
			91. Enter/retrieve information on suspects in ongoing investigations	Assessment
			92. Generates investigative report numbers	Assessment
			93. Maintains intelligence reports gathered by investigators	Assessment
			94. Enter/retrieve information from field interview reports	Assessment
			95. Repository of information on suspects with scars, marks, tattoos, oddities, and other physical characteristics	Assessment
			96. Maintains officer hours, activity, expenditures, arrests, drug seizures, assets seized, and case control information	Assessment
			97. Maintains information for each security guard agency, private investigator agency, and persons employed as a security guard or private investigator	Testing

	Agency	Computer System Size	System Description	Status
			98. Tracks all property and evidence processed by the Depart-ment	Assessment
			99. Retrieval of driver's license information	Assessment
			100. Allows investigators to identify specific vehicles from full or partial license plates or vehicle identification numbers	Assessment
			101. Provides accountability for all department report numbers issued	Assessment
			102. Records data entered daily by the Highway Patrol Bureau	Renovation
			103. Tracks requisitions and purchase orders	Assessment
			104. Tracks activities and case loads for Department crime labs	Renovation
			105. Contains information on employee leave balances, overtime, and hours worked for Department employees	Renovation
			106. Leave balances interface to Department of Administration	Assessment
			107. Records employee evaluations	Renovation
			108. Tracks employee history, evaluation data, classification levels, and testing information	Testing
			109. Processes employee information for record keeping and statistical purposes	Renovation
			110. Monitors and tracks the status of telecommunications equipment	Assessment
			111. Assigns and tracks bureau projects, photo lab, and print shop order processing	Assessment
			112. Monitors and reports on the activity of stocked times valued at $500 or less and with a life of one year or less	Renovation
			113. Contains the daily work schedules of all Highway Patrol Bureau personnel	Testing
			114. Maintains a directory of persons certified to use terminals	Testing
			115. Provides statistical reports	Assessment
			116. Maintains data field edit standards for use by the Criminal Investigation Bureau	Renovation
8	Department of Revenue	Large	117. Depository of all monies owed from all of the proper tax systems	Testing
			118. Creates and updates income tax assessments on both indi-vidual and corporate tax returns	Assessment
			119. Processes all state corporate tax returns	Assessment
			120. Processes all state income tax returns	Renovation
			121. Addresses the valuation and assessment of real and personal properties for client counties	Renovation
			122. Documents and validates taxpayer filing of transaction privilege tax documents and money	Assessment
			123. Processes all withholding returns and ensures they are correct and timely	Renovation
			124. Electronically transfers bank transactions	Compliant
			125. Appeals tracking, warrant tracking, license and registration, tax exemption, training inventory, and tax roll corrections	Assessment
			126. Used for data entry and remittance processing	Assessment
			127. Includes programs written to provide interfaces between it and the various tax systems	Renovation
9	Department of Transportation	Large	128. New financial system; handles payroll	Assessment
			129. Issuing of driver's licenses	Renovation
			130. Tax and revenue gathering system	Renovation
			131. Vehicle registration system	Compliant
10	Northern Arizona University	Large	132. Tracks housing requests; admissions leases	Assessment
			133. University reporting; enrollment; budget requests	Renovation
			134. Accounts payable; travel; grants management	Renovation
			135. Billing; student records; accounts receivable; admission	Renovation
			136. Tracks employee records; produces paychecks	Renovation
11	University of Arizona	Large	137. General ledger; purchasing and procurement	Renovation
			138. Admissions; registration; accounts receivable; financial aid	Renovation
			139. Internal phone system servicing/billing user departments	Renovation
			140. Personnel/payroll records; generates paychecks	Testing

	Agency	Computer System Size	System Description	Status
1	Arizona Game and Fish Department	Medium	141. Financial accounting 142. Hunting and fishing licenses 143. Ships licenses to dealers 144. Statewide watercraft registration system	Compliant Compliant Renovation Renovation
2	Arizona State Retirement System	Medium	145. Tracks retirement fund assets, contributions	Renovation
3	Attorney General	Medium	146. Litigation support & timekeeping 147. File and print service 148. Word processing	Renovation Compliant Compliant
4	Corporation Commission	Medium	149. Tracks corporations registered in Arizona	Compliant
5	Department of Agriculture	Medium	150. Registration (horse hauling; pesticides); fees	Compliant
6	Department of Commerce	Medium	151. Contact management programs 152. Word processing	Compliant Compliant
7	Department of Environmental Quality	Medium	153. Safe drinking water and groundwater 154. Support of environmental programs	Compliant Assessment
8	Department of Insurance	Medium	155. Licensing; consumer complaints; premium tax collection	Testing
9	Department of Water Resources	Medium	156. Tracks water site inventories and usage 157. Word processing; spreadsheets; e-mail	Assessment Compliant
10	Industrial Commission of Arizona	Medium	158. Accounts payable; in-house accounting; docketing 159. Processes and disburses workers' compensation claims 160. Optical disk library unit—stores files	Compliant Compliant Compliant
11	Joint Legislative Budget Committee and Legislative Council	Medium	161. Creating and managing text; budgets	Renovation
12	Registrar of Contractors	Medium	162. Tracks contractor licenses and bonds; hearing file database	Compliant
13	Secretary of State	Medium	163. Financial information on candidates 164. Used to set up elections; calculate votes 165. Notary certifications 166. All Secretary of State Office publications 167. License documents scanned into system	Compliant Compliant Compliant Compliant Compliant
14	State Department of Corrections	Medium	168. Prison system (handles inmate sentences) 169. Department's personnel data—used by management for reporting	Assessment Assessment
15	State Land Department	Medium	170. Tracks state property leases 171. Billing system for state lands	Compliant Compliant
16	State Real Estate Department	Medium	172. Licensing retrieval/manipulation 173. E-mail; document management	Renovation Testing
17	State Treasurer	Medium	174. Investment accounting system 175. Non-investment oriented transactions	Compliant Renovation
18	Superior Court	Medium	176. Handles domestic and some civil cases 177. Adult probation 178. Receives and disburses child support payments 179. Summons for juries and related processing 180. Docketing; case management; filings	Testing Renovation Assessment Compliant Assessment
19	Supreme Court	Medium	181. Juvenile probation data 182. Adult probation data 183. Trial court system	Testing Renovation Compliant

	Agency	Computer System Size	System Description	Status
1	Arizona Board of Regents	Small	184. Word processing; info sharing; spreadsheets	Compliant
2	Arizona Council for the Hearing Impaired	Small	185. Word processing; data management; financial reports	Compliant
3	Arizona Criminal Justice Commission	Small	186. Word processing; accounting; statistical analyses	Assessment
4	Arizona Pioneers' Home	Small	187. Nursing home software—trust fund; resident information	Compliant
5	Arizona State Board of Pharmacy	Small	188. Licensing; permits; billing	Compliant
6	Arizona State Veterinary Medical Examining Board	Small	189. All licensing	Compliant
7	Arizona Veteran's Service Commission	Small	190. Clinical; financial; admissions 191. Fiduciary (trust) functions 192. Veterans' services	Compliant Compliant Assessment

	Agency	Computer System Size	System Description	Status
8	Board of Cosmetology	Small	193. Word processing; deposit information; service measures	Renovation
9	Board of Executive Clemency	Small	194. Word processing; spreadsheet; database	Compliant
10	Board of Homeopathic Medical Examiners	Small	195. Licensing function (complaint functions in the future)	Compliant
11	Board of Medical Examiners	Small	196. Licensing and regulatory activities 197. Allows users access to license information	Renovation Renovation
12	Board of Occupational Therapy Examiners	Small	198. Word processing; licensing; databases	Compliant
13	Board of Physical Therapy Examiners	Small	199. Word processing; database; complaints; licensure list	Compliant
14	Board of Respiratory Care Examiners	Small	200. Licensing and word processing	Compliant
15	Commission on Judicial Conduct	Small	201. Tracks judicial complaint data; word processing	Compliant
16	Commission on the Arts	Small	202. Word processing; correspondence; financial; payroll	Renovation
17	Department of Juvenile Corrections	Small	203. Statewide tracking of youth in Juvenile Correction's system 204. Word processing applications	Compliant Testing
18	Department of Library, Archives and Public Records	Small	205. Communications; e-mail; filesharing; Internet; databases	Compliant
19	Department of Liquor Licenses and Control	Small	206. Database for licensing, investigations, hearings	Compliant
20	Department of Mines and Mineral Resources	Small	207. Databases of state mines and mineral deposits	Assessment
21	Department of Weights and Measures	Small	208. Licensing database	Assessment
22	Office of Tourism	Small	209 Word processing; databases; spreadsheets	Compliant
23	Personnel Board	Small	210. Intraoffice communication; verbatim transcripts	Compliant
24	Radiation Regulatory Agency	Small	211. Word processing; licensing and registration; accounting data	Compliant
25	Residential Utility Consumer Office	Small	212. Word processing	Compliant
26	State Board for Private Post-Secondary Education	Small	213. Word processing	Compliant
27	State Board of Accountancy	Small	214. Word processing; Lotus; accounting program	Compliant
28	State Board of Appraisal	Small	215. Word processing; Microsoft Publisher; accounting package	Compliant
29	State Board of Chiropractic Examiners	Small	216. Database of chiropractors & their records	Compliant
30	State Board of Dental Examiners	Small	217. Tracks licensing; provides reports	Testing
31	State Board of Directors for Community Colleges	Small	218. Word processing; database; spreadsheets	Renovation
32	State Board of Dispensing Opticians	Small	219. Word processing; licensing; spreadsheet; Powerpoint	Assessment
33	State Board of Equalization	Small	220. Secured assessment rates; decisions and appeals	Compliant
34	State Board of Funeral Directors and Embalmers	Small	221. Licensing and disciplinary databases; word processing	Compliant
35	State Board of Nursing	Small	222. Database for AS400 information 223. E-mail; telecommuting (dialing in/out); backup	Testing Compliant
36	State Board of Optometry	Small	224. Recordkeeping	Compliant
37	State Board of Podiatry Examiners	Small	225. Database; complaints; word processing	Compliant
38	State Board of Psychologist Examiners	Small	226. Licensing and complaint information; internal budget records	Assessment
39	State Board of Technical Registration	Small	227. Administrative work 228. Tracking technical registrants and applicants	Assessment Assessment
40	State Mine Inspector	Small	229. Safety inspections	Compliant
41	Structural Pest Control Commission	Small	230. Stores site inspection records 231. Word processing; spreadsheets	Renovation Renovation
42	Veteran's Memorial Coliseum	Small	232. 90 percent word processing; some graphic design	Assessment