CITY OF SIMI VALLEY

INSIGHT 2010

Five-Year Technology Strategic Plan

2005 – 2010

Department of Administrative Services
Information Services Division

MISSION STATEMENT

The Information Services Division demonstrates excellence in public service by connecting people and processes through the effective use of reliable information and technology, while providing a balance between customer needs and expectations.

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OVERVIEW

In 1994, the City of Simi Valley adopted a five-year Information Technology Strategic Plan known as MIS 2000. In the years since its adoption, the plan has successfully served as a framework for the development of the City's use of information systems technology. The plan was instrumental in expanding the network to a Citywide Wide Area Network (WAN) and providing standardized electronic productivity tools for all office staff, including word processing, spreadsheets, presentation software, and e-mail. Two major projects were included as part of MIS 2000: the creation of a Geographic Information System (GIS) and the replacement of the Financial Management Information System (FMIS). Both projects have been implemented and have had a major impact on City operations.

Although the MIS 2000 plan has run its course, the fundamental principles established by the plan continue to guide the operations of the Information Services (IS) Division of the Administrative Services Department. In order to build upon the success of the first plan, IS undertook a Citywide effort to produce a successor five-year Information Technology Strategic Plan.

Due to technology's pervasiveness in government today and the mission critical role that it has assumed in multiple operational areas of the organization, information technology strategic planning has become more difficult, but also more important, since the original MIS 2000 plan was developed. The rapid advances in technology sometimes give the impression that planning is futile. It is difficult to envision the technology that will be available in five years. As an example, the MIS 2000 plan makes no mention of the Internet.

It is the difficulty in predicting the future, however, that makes technology planning so critical. A five-year technology plan by nature must be a high level plan that sets direction without specifically naming the technology. Without establishing that organizational direction prior to encountering new trends in technology, the City of Simi Valley runs the risk of making key decisions based on trendy technological solutions to the challenges of the moment. Without clear direction, the City could be pulled first in one costly direction and then in another before finding the correct course. Information technology strategic planning helps to prevent costly missteps along the path to achieving City objectives. The City's fundamental direction on technology was established in MIS 2000 and remains unchanged today. As stated in MIS 2000, "The City's intention is to be neither 'first' nor 'last' with respect to new technology."

The strategic planning process was a multi-year endeavor by the City to create a blueprint for the development and use of information technology that will guide the City for the next five years. The effort included input from all City departments and had three main objectives: 1) to assess the current state of technology use within the City; 2) to identify the technology issues that are likely to impact the City over the next five years; and 3) to develop a *best practices* approach for addressing technology issues over the next five years. The planning process sought input on all technology issues faced by departments, and is designed to address Citywide technology issues. Department-specific applications, such as the Integrated Police

System (IPS) Project, Supervisory Control and Data Acquisition (SCADA), and the not yet completed implementation of the Public Works Work Order system are included in the plan.

The INSIGHT 2010 Information Technology Strategic Plan is the result of that planning effort. The study found that, overall, technology is currently meeting the core needs of City operations. Departments did, however, identify several key issues that they believe need to be addressed to assure that technology continues to meet their needs in the future. The issues and the strategies developed to address those issues fall into six distinct categories, or strategic elements. This strategic plan document is organized around presenting the objectives for meeting the needs identified within each category. Appendix A contains a summary of these strategies.

Costs, funding sources, and the business justification for the objectives and their related initiatives have not been identified in this strategic document. However, they will be identified and reviewed in detail prior to the implementation of each objective when the appropriate technology has been selected.

METHODOLOGY

To initiate the strategic planning process, Department Directors received a memorandum informing them of the Administrative Services Department's intent to undertake an Information Technology (IT) strategic planning effort to replace the MIS 2000 Strategic Plan, which had reached the end of its life. The memorandum gave an overview of the process and asked the Directors to designate one or more participants on the strategic planning committee.

The strategic planning team that developed the issues, goals, and strategies addressed as part of the INSIGHT 2010 plan consisted of six department representatives and five IS representatives. The following individuals made up the strategic planning team:

Committee Member	Department/Division
Dan Paranick	City Administration
Jody Kershberg	Administrative Services
Joe Hreha	Community Services
Patty Hufford-Farmer	Environmental Services
Mary Humphries	Police Department
Robin Rector	Public Works
Steve Hargis	Information Services
Kevin Kane	Information Services
Donna Price	Information Services
Aaron Russell	Information Services
Linda Treasure	Information Services

A project kick-off meeting was held to discuss the goals for developing an IT strategic plan and the planning process. The project team reviewed a proposed questionnaire to be used to assist departments in evaluating their information technology issues and needs. The needs assessment questionnaire was designed to do three things: 1) provide a description and evaluation of current technology used by each department; 2) provide department feedback on known IT issues; and 3) identify specific IT issues for each department. Department representatives completed the questionnaires with input from their departments.

While departments were completing the questionnaires, the IS team met to discuss infrastructure issues and develop strategies for addressing them. When the questionnaires were returned from the departments, the IS team compiled the issues and needs into a unified document. The full strategic planning team met again to discuss the issues, goals and proposed strategies and form a consensus.

Based on the information provided by the needs assessment questionnaires, the evaluation of the technology infrastructure developed by the IS team, and the strategic discussions held by the full strategic planning committee, a list of issues, goals, and objectives was submitted to Department Directors for their prioritization. The list of issues and goals that departments were asked to prioritize, along with their ratings, is found in Appendix B. Department

priorities were wide ranging; however, an indication of overall organizational priorities develops when all elements of the questionnaire are considered together. The timeframe for the implementation of specific objectives is based on issue and goal priorities, as well as feedback provided by Department Directors on how soon they would like to address certain issues.

Following the compilation of all information gathered during the planning process, IS organized the information into this plan document for adoption. Before Citywide implementation, this plan requires review and approval by:

1. Strategic Planning Committee
2. Department Directors
3. City Manager
4. Information Technology Review Committee
5. City Council

Once adopted, this plan will serve as the guideline for technology decisions made over the next five years.

FINDINGS

The Needs Assessment Questionnaire was divided into three separate sections designed to provide distinct sets of information. The first section addressed the service areas of the departments that use the technology. In this section, departments reported on their primary responsibilities, their organizational structure, and their service drivers. This information is important to understand the environment in which the technology will function and the service that it will support. The second section evaluated the current use and effectiveness of technology, and the third section identified technology issues of importance to the departments in looking ahead to the future.

The primary conclusion that can be reached from questionnaire responses is that, overall, technology in use today is meeting the needs of the City of Simi Valley. Departments do, however, have current issues that need to be resolved in order for technology to be most effective. Departments also have visions of where they want to take their operations over the next five years and what technology can do to support their goals.

Information provided in Section I of the Needs Assessment Questionnaire, Departmental Service Area, indicates that the primary service drivers for the City of Simi Valley are:

INTERNAL	EXTERNAL
City Ordinances/ Policies/ Procedures/ Resolutions	Federal, State, and Local Legislation, Regulations, Codes, and Mandates
City Council, Commissions, and Committees Instructions and Expectations	Public Expectations and Awareness
City Budget	Funding Sources (Grants and Other Revenue)
Staffing Issues	
Departmental Requirements, Policies and Expectations	

Additionally, the City of Simi Valley has a need to exchange information:

- Between departments
- With citizens
- With vendors, contractors, consultants, and customers
- With other local, state, and federal agencies

The most significant conclusion drawn from Section II of the Needs Assessment Questionnaire, Status of Current Systems, is that the intensity of technology use is quite high when technology is appropriate for the job function. Twenty-four (24) out of 48 service areas responding to the questionnaire use technology to fulfill their job responsibilities more than 70% of the time.

Automation has not been as appropriate for support of some service areas (e.g. Environmental Services Field Operations) as it is for other service areas. Among service areas where

technology is not currently used extensively, the reasons given focused on a lack of available computers and a lack of training. The following summary table shows the percentage of employees, by department, who utilize technology to fulfill their job responsibilities.

AS = Administrative Services
CA = City Attorney
CS = Community Services
CM = City Manager
ES = Environmental Services
PD = Police Department
PW = Public Works

	AS	CA	CS	CM	ES	PD	PW	TOTAL
# EMPLOYEES	43	7	85	28	65	196	219	643
# USERS	43	7	30	28	55	196	107	466
% USERS	100%	100%	37%	100%	85%	100%	49%	72%

The number of computer accounts issued by IS each year is evidence that the percentage of users in Community Services, Environmental Services and Public Works is increasing each year.

Departments were also asked to identify core applications and provide information concerning how often they use the application and how important the application is to their operations. In addition, departments rated the core applications as to how effective they are in meeting the department's service support needs.

The core applications identified by departments are:

- Financial/HR Information System (SAP)
- Networking (Novell Netware)
- E-mail (Novell Groupwise)
- Web browser (MS Internet Explorer and Netscape Navigator)
- Office productivity (MS Office)
- Permitting (Accela 'Permits' Plus)
- GIS (ESRI ArcGIS)
- Project Management (MS Project)
- Forms view (Acrobat Reader)
- Drafting (AutoDesk AutoCAD)

SAP, Networking, E-mail, Web browsing, and Office productivity were all identified by one or more departments as "Critical" applications. SAP, Networking, E-mail, Office productivity, and Drafting were all identified by one or more departments as being "Continuously" in use. Departments were asked to rate the functionality of core applications on a scale of 1 to 4, with 4 being highly functional and 1 being least functional. Only three applications received a functional rating below 3 from one or more departments. They were SAP, ArcInfo and ArcView. Although three work units rated SAP below a 3, the majority (seven out of ten) gave it a functional rating of 3 or 4.

The following tables show how departments ranked the core applications. Several departments provided rankings for each service unit that utilizes the application. As a result, the number of responses for each application varies.

FREQUENCY OF USE

SYSTEM	CONTINUOUS	DAILY	WEEKLY	MONTHLY	AS NEEDED	TOTAL
SAP	4	5				9
NETWORKING	3	7	1			11
GROUPWISE	4	10				14
WEB BROWSER		11			3	14
OFFICE	4	9			1	14
'PERMITS' PLUS		6	1		2	9
ARCINFO					1	1
ARCVIEW			2			2
MS PROJECT		1				1
ACROBAT READER		1			1	2
AUTOCAD	1	1	1		1	4
TOTAL	16	51	5	0	9	81

IMPORTANCE

SYSTEM	CRITICAL	HIGH	MEDIUM	LOW	TOTAL
SAP	5	4			9
NETWORKING	4	7			11
GROUPWISE	3	10	1		14
WEB BROWSER	2	4	8		14
OFFICE	5	7	2		14
'PERMITS' PLUS		7	1		8
ARCINFO			1		1
ARCVIEW				1	1
MS PROJECT			1		1
ACROBAT READER	1		1		2
AUTOCAD	1	2	1		4
TOTAL	21	41	16	1	79

FUNCTIONAL RATING

APPLICATION	HIGH	←———		LOW	TOTAL
SAP	1	6	2	1	10
NETWORKING	5	5			10
GROUPWISE	7	7			14
WEB BROWSER	8	5			13
OFFICE	9	4			13
'PERMITS' PLUS	3	4			7
ARCINFO				1	1
ARCVIEW			1		1
MS PROJECT					0
ACROBAT READER	2				2
AUTOCAD	1	2			3
TOTAL	36	33	3	2	74

Departments were also asked when their employees utilize City systems. Hours and days of use for core applications vary significantly between service units; however, a majority of the needs for system availability and IS support can be met during the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday. Almost all of the needs can be met during the hours of 6:00 a.m. to 8:00 p.m., Monday through Saturday. Several departments felt that IS staff should be available additional hours to support their users.

Section III of the Needs Assessment Questionnaire, Information Technology Issues, asked the departments to identify their technology issues and needs. Information provided in this section was used to develop the list of strategic issues and goals. While all departments reviewed the issues, goals and priorities, only six of the seven City departments completed this section. The four information management challenges most often identified by departments were: 1) Document Management; 2) Lack of User Training; 3) Use of the SAP system; and 4) Staffing issues.

Departments generally agree that the network is adequate to meet current needs and that systems are adequately available. All departments stated that they receive adequate support from IS. The results were mixed, however, on the quality of support received from vendors, contractors, and other service providers. All departments believe that the desktop systems in use are adequate to support their needs, and most of them are satisfied with the current replacement cycle. The one comment received about desktop systems was the desire for flat panel monitors. This issue was addressed as part of the FY 2002-03 budget process, and flat panel monitors were adopted as the City standard. While they are generally satisfied with the desktop systems themselves, departments are generally dissatisfied with the adequacy of work areas where the computer equipment is used.

Departments generally believe that the City has adequate computer usage policies, but most believe that the policies need to be updated. On the other hand, departments generally believe that user procedures are inadequate. When asked who should have primary responsibility for

preparing operating procedures, five of the departments agreed that it should be departmental staff. Four of the six departments reporting felt that their staff was adequately trained to use the technology required for their jobs. However, of the two departments that disagreed, one of those departments, Environmental Services, strongly disagreed. Departments identified five computing skills that all employees should have: 1) Keyboard and mouse skills; 2) Windows navigation; 3) MS Office (word processing, spreadsheets, database, presentations); 4) Groupwise e-mail; and 5) Internet browser. When asked what type of training departments would like to have available for staff, all six reported that they would like to see professional on-site training available for some specialized applications. The on-site training would be in addition to the current voucher system, which works well for industry standard-applications.

All reporting departments indicated that the City's Wide Area Network is either secure or somewhat secure. Departments believe that the greatest threats to the network are lost data, outdated equipment, and viruses. They are least concerned about outside attack, physical damage, and theft.

As a part of the planning process, the planning team identified both the existing standard enterprise applications and the additional applications that departments would like to see added as standards. The current Citywide standard core applications are:

1. Financial/HR Information System (SAP)
2. Networking (Novell Netware)
3. Desktop operating system (Windows 2000 or above)
4. Application server operating system (HP-UX)
5. Database engine (Oracle)
6. E-mail (Novell Groupwise)
7. Web browser (MS Internet Explorer)
8. Office productivity (MS Office)
9. Permitting (Accela Permits Plus)
10. GIS (ESRI ArcGIS)
11. Project management (MS Project)
12. Drawing (MS Visio)
13. Drafting (AutoDesk AutoCAD)
14. Palm computing (Palm OS/Intellisync)
15. Help desk software (Heat)
16. Network and Infrastructure Security (Symantec)

The proposed additional standard core applications are:

1. Report writing (to be determined)
2. Forms (Adobe Acrobat)
3. Desktop publishing (to be determined)
4. Web development tools (to be determined)
5. Document management (to be determined)
6. Photo editing (to be determined)
7. Case Management (to be determined)

Five of the six departments stated that they have employees who need access to systems while working in the field. Most employees working in the field need to be able to communicate using tools such as e-mail and the Internet, but many of the functions performed in the field require the use of specific software, such as data capture and imaging.

Most of the departments use GIS, but not to the extent that they feel they should. Comments about GIS included requests for additional user training and a need to make GIS an enterprise priority. When asked where they felt responsibility for maintaining GIS data should reside, four of the six departments said it should be shared between IS and the user departments. Likewise, when asked who should have responsibility for generating GIS output, five of the departments responded that the responsibility should be shared between IS and user departments.

Four departments report that they are currently using some type of electronic document management. The Police Department has the most sophisticated process at this time. They have adopted the LaserFiche product for use in their Records Management Section. At the same time, only three departments are actively scanning documents.

All of the departments expressed a knowledge of and interest in e-Government initiatives. All but one of the departments see an advantage to making standard forms available to the public via the Internet, and four of the departments would like to see their forms on the City web site within a year.

The Needs Assessment Questionnaires returned by all departments are available for review from IS.

STRATEGIES

The City of Simi Valley Technology Strategic Plan is divided into six major elements that must all be addressed in order to produce a comprehensive plan. The six elements are:

I. Infrastructure
II. User Community
III. Service and Support
IV. Enterprise Applications
V. Major Departmental Applications
VI. Emergency Operations Center

Each element is addressed separately, but all must be dealt with as a whole in order to achieve the City's technology goals. The issues, strategies and objectives identified during the planning process are described in detail below. Some objectives address the solution to more than one issue and are repeated under each applicable strategy. Appendix A contains a summary table of the following information.

I. Infrastructure

Infrastructure includes all elements required to maintain the electronic data systems for the City. These are the building blocks upon which all systems accessed by end-users are based. Maintaining the infrastructure is the primary task of the technical staff. Infrastructure issues must be addressed in order to address all other technology issues in the City.

Six of the seven departments listed infrastructure issues as being of the highest concern to them. Three departments listed an "adequate" network as their number one issue. "Adequate" is understood to mean reliability and performance commensurate with the amount of work performed; so, if the network is not available when they need it or is too slow for their processing, then the network is not adequate. Two other departments listed an adequate network as their second or third most significant issue. Three additional departments listed a secure network as their highest priority issue. A "secure" network means that users do not have to worry about viruses, hackers or malicious co-workers viewing, stealing or altering data. Additionally, three departments listed adequate storage as their second most important issue.

A good computer and network infrastructure is required in order to build any successful services. The City's network infrastructure had some deficiencies that have recently been addressed; the improvements made through the security audit remediation process have drastically improved the network infrastructure such that modern services can be built and the City's resources secured. The City's network infrastructure is comprised of 1GBs fiber connections to most City buildings; the remaining buildings are connected via T1 phone lines. All network switches were upgraded during the last year and operate at gigabit speeds. Within City buildings, servers are connected via 1GBs fiber. Desktops are connected via 10/100mbs

copper; future desktop connections will be fiber to within a few feet of the desktop and CAT6e (10/100/1000mbs) copper to the desktops.

In contrast, the City's computer infrastructure must be upgraded in order to support modern technology services. Existing servers at the City conform to an outdated industry standard architecture called Client-Server. For over ten years the technology industry has been moving towards an architecture called Service Oriented, Web-Enabled or 3-Tier. This architecture offers several distinct advantages over older architectures; namely:

- Fewer resources required on the client computer;
- Disaster recovery features are part of the architecture at multiple levels;
- Applications are designed to compliment the architecture; and
- More efficient use of Citywide computing resources are possible.

Conforming to a Web-Enabled, service delivery architecture, should the City wish to keep pace with the technology industry, will require significant changes to the City's current architecture. The most significant changes are listed below.

- **Using only applications that are web-enabled.** The majority of applications available today are web-enabled; in a few years if will be difficult, if not impossible, to buy applications that are not web-enabled. As applications are upgraded, the City must upgrade to only web-enabled applications.

- **Offering services instead of servers.** If the appropriate technology service is delivered then departments should not care what resources were used to deliver that service. Today departments do care about the servers, the network, etc.; some departments like to know exactly what hardware their contributions have purchased. To get departments to focus on services delivery instead of hardware will require a change in their thinking about how IS resources are funded and allocated.

- **Combining applications** onto blade servers that are part of server clusters and using "partitioning" to run multiple applications on the same hardware. Whether multiple servers cooperate to deliver a service or a single server is partitioned to deliver several services, departments must learn to not care about the hardware but to focus on the service. Then IS can deliver services that are web-enabled, and can load balance requests amongst all available servers. Any clustering will occur at the web server and application level, not at the hardware or Operating System level.

- **All servers are centrally located** in climate controlled, power conditioned and physically secured data centers.

- **Data storage is physically separate from memory and computing resources.** This is accomplished via a Storage Area Network (SAN). A SAN consolidates storage resources into one large, redundant, highly available pool. In addition to

enabling optimal storage across all resources, a SAN also simplifies the management and backups of all storage.

Part of the computer infrastructure is the Operating Systems (OS) that execute on the hardware. As referenced in previous section, the City prefers the Windows OS for desktop computers, Hewlett-Packard's (HP) Unix (HP-UX) OS for application servers and Novell's Netware OS for network servers. Many debates exist over the best OS and the Linux OS has taken significant market share from other OS in recent years. In 2003 Novell purchased a Linux company and has announced plans that all services available under Netware will also be available under Linux very soon. Such changes in the technology industry will necessitate decisions about the City's OS use.

The IS Division pays close attention to technology industry changes and constantly evaluates new technology that might enhance the City's investment in technology. The timing of changes in OS is hard to predict and depends on many factors, including: market share, application capability, support horizon, peripheral support, availability of skilled analysts, ease of training, number of applications written for the OS, etc. Over the next five years the OS for network servers will most likely move gradually away from Netware and towards Linux. Likewise, if Linux proves to be a good application server, a gradual move away from HP-UX will also occur; thus allowing the City to reduce the number of OS it supports while also aligning itself with the predominant movements in the technology industry.

Each infrastructure element is described below with its associated strategies.

Issue: The City desires a secure Wide Area Network with adequate performance and appropriate storage infrastructure to meet its computing needs today and five years into the future.

Strategy: Provide a centrally managed, high performance, high availability, secure network.

A. **Network hardware and software** includes all of the elements that allow City computers to communicate with each other and work together as a unit. Hardware elements considered part of the network include switches, routers, hubs, data cables, wireless transmitters and access points, and network interface cards. The routing software and communication protocols used to navigate the network are also elements of the network. Information can be transmitted over the network using various communication protocols and modes of transport, including wired, wireless, and Internet vehicles. Network Operating System software will be addressed under item "E".

I-1 OBJECTIVE: Continue the current policy of funding all network interconnect equipment in the Computer Equipment Replacement Fund with a four-year replacement cycle.

I-2 OBJECTIVE: Implement the improvement recommendations contained in the Network Health Assessment Report over a three-year period.

I-3 OBJECTIVE: Transition to the Internet Protocol (IP) as primary communication protocol throughout the network.

I-4 OBJECTIVE: Create network documentation that includes a logical and physical diagram of the existing Wide Area Network (WAN) and Local Area Network (LAN) topology.

I-5 OBJECTIVE: Install no less than high-speed high-capacity "CAT6E" cable for all new data cable installs, with a fiber optic backbone.

I-6 OBJECTIVE: Provide network connectivity to all remote City facilities via fiber optic cable, T-1 line, or City owned wireless network.

I-7 OBJECTIVE: Consider providing network access to City employees working in the field or from any other off-site location within Simi Valley, where service delivery and staffing efficiencies can be improved.

I-8 OBJECTIVE: Web-enable City applications wherever possible to facilitate remote access to City systems, where service delivery and staffing efficiencies can be improved.

B. **Mainframes and servers** are the relatively large computers that run the centrally supported enterprise-wide applications and allow City employees to work collaboratively. The City currently supports five major applications running on mainframe systems. The FMIS system runs on a 14-year old HP computer and is in the process of being phased out. It's replacement, the Financial/HR Information System (SAP) runs on much newer HP computers. Additionally, the City's Geographic Information System (GIS) and permitting system ('Permits' Plus) are housed on HP computers, as is the City's current Police Computer Aided Dispatch and Records Management System (CAD/RMS).

The Police Department is in the final processes of implementing the Integrated Police System (IPS). The software vendor for the IPS system is Versaterm. The Versaterm system also runs on an HP computer. The older system, Spillman, has been moved to an HP computer and will be maintained as a historical database for at least five years.

Servers run the network operating system and network applications such as the e-mail system (Groupwise) and network security system. Servers also provide local space for data storage. The City currently utilizes 18 servers.

I-9 OBJECTIVE: Continue the current policy of funding all servers in the Computer Equipment Replacement Fund with a four-year replacement cycle and extend the policy to mainframe computers.

I-10 OBJECTIVE: Pursue opportunities to consolidate servers.

I-11 OBJECTIVE: Move toward separation of storage and processors. (See items D, I-16 through D, I-18).

I-12 OBJECTIVE: Plan for server clustering to provide redundancy and high availability when financially justifiable.

C. **Desktop computers** (PCs and more powerful workstations) extend City technology to City employees. PCs allow employees to utilize office productivity tools and access the network and mainframe supported applications. Workstations can perform the same functions but are used primarily to perform specific tasks requiring higher-powered computing. Workstations in the City currently perform tasks in Graphics, GIS, and Water and Sanitation System management. Printing services are generally centralized to provide the highest quality, most cost effective printouts.

I-13 OBJECTIVE: Continue the current policy of funding PC computer equipment in the Computer Equipment Replacement Fund with a four-year replacement cycle and extend the policy to workstations. Workstations are high-powered computers that are required to perform extraordinarily intensive processing. Workstations typically have more central processing units (CPU), more memory, larger disk storage, and better displays than desktop computers.

I-14 OBJECTIVE: Continue to provide high quality laser printers in centralized locations for workgroup printing via the network.

I-15 OBJECTIVE: Provide a desktop system for all employees with a regular work area and provide access to City systems for all other employees, where service delivery and staffing efficiencies can be improved.

D. **Storage** in many forms serves as the repository for electronic information created and maintained by the City. As the amount of data and its complexity continues to grow exponentially, storage will become an increasingly challenging issue. In the City's current model, data is stored with the system that generates it in the same computer box or in a disk array attached to it. In this model, as the data requirements grow, larger computers are also needed.

I-16 OBJECTIVE: Develop and implement a plan to centralize network storage using the most functional and cost effective technology.

I-17 OBJECTIVE: Consider creating a policy of funding centralized storage area network (SAN) equipment in the Computer Equipment Replacement Fund with a seven-year replacement cycle.

I-18 OBJECTIVE: Ensure that there is adequate backup software and hardware to efficiently backup the centralized network storage.

E. **Operating Systems** are the programs that make the hardware function and allow the City to run productive applications. An operating system is required for the desktop computers, the mainframes and servers, and the network itself.

I-19 OBJECTIVE: Continue to support a mixed operating system environment utilizing Novell Netware for file and print services, Microsoft Windows and Hewlett Packard UNIX for application servers, and Microsoft Windows for desktop environments. Continue to evaluate new OS to maximize benefit to the City and remain current with the technology.

I-20 OBJECTIVE: Accommodate MAC OS and Palm OS on the network for special uses.

I-21 OBJECTIVE: Upgrade to manufacturer's most current release 12 to 18 months after the released version is out of Beta test status. This typically equates to staying no more than 2 minor versions behind the latest version. Avoiding the latest version allows the manufacturer time to locate and resolve problems before we upgrade to a particular OS version.

F. **Facilities** used to house the computer and network equipment are critical to ensuring safety and proper performance. Mainframes, servers, and interconnect devices should all be housed in clean, safe, secure, dedicated rooms with proper climate control, dedicated power source, and adequate space.

I-22 OBJECTIVE: Provide an appropriate, controlled environment in each City facility where mainframes, servers, or interconnect equipment are housed.

I-23 OBJECTIVE: Ensure that all power supplies on mainframes, servers, interconnect equipment and disk arrays are plugged into Uninterrupted Power Supply (UPS) circuits with a minimum run time of one hour for the required load. Additionally, all critical systems, as defined in the Findings Section of this report, must be plugged into circuits with redundant circuit breakers and powered by backup electrical generators.

G. **Work areas** are the locations where desktop equipment is housed and used by employees. For most employees, work areas are a "cubicle" type arrangement with one or more work surfaces and work storage facilities.

I-24 OBJECTIVE: Ensure that all newly designed work areas provide adequate room to effectively store and use a desktop PC type computer with adequate work surfaces for paper documents. The work area should include easy access to cabling and include a surge protector dedicated to the computer equipment. The work area should be arranged to encourage ergonomically correct use of the computer equipment.

H. **Standardization** of hardware, software, and other system components creates an environment that promotes efficiency, cost effectiveness, and a higher level of service because a minimal number of staff with a single set of skills is required to maintain the systems. Additionally, cost savings can be realized through bulk purchases, and the need to purchase fewer maintenance tools. Common components provide time and cost savings and make it

easier to integrate systems and train users. As high a degree of standardization as possible is most desirable; however, exceptions may be necessary based on very specific needs.

I-25 OBJECTIVE: Adopt the following policies for choosing and maintaining hardware standards:

- Purchase only tier 1 products from a major manufacturer
- Include more memory than the recommended minimum for the OS to ensure that multiple applications can be executed concurrently without a performance penalty
- Hardware requirements are based on the software requirements

I-26 OBJECTIVE: Evaluate the PC hardware standard annually and maintain one standard until the next evaluation period.

I-27 OBJECTIVE: Utilize the following established guidelines when purchasing hardware:

- Replace only the components that need replacement (some components of a system have a longer life than others)
- Conserve energy
- Be ergonomically correct
- Be compatible with the work area
- Be cost effective to continue to use (have the best warranty, repair history, etc.)

I-28 OBJECTIVE: Continue the current policy of never being more than 2 minor versions behind the current standard for software applications. Never lose software maintenance due to continued use of obsolete software.

I-29 OBJECTIVE: Citywide software applications will conform to the City standards wherever possible. IS will evaluate requested deviations to the City standards on a case-by-case basis. The requesting Department will have to submit written justification for the deviation to be considered.

I. **Disaster Prevention and Recovery** are two important elements in ensuring that technology will be available as needed for service continuation under any condition. Many different elements of technology management contribute to the safety and security of City systems. These elements include physically protecting the hardware, securing the data, managing access to systems, preventing misuse of systems and/or malicious attacks, and maintaining tools and plans for disaster recovery.

I-30 OBJECTIVE: Maintain a comprehensive hardware and software inventory.

I-31 OBJECTIVE: Annually update a Citywide installed application inventory with an assessment that yields information about the criticality of City Information Systems and clearly indicates which systems require updating. The inventory and risk assessment can then be incorporated in the City's disaster planning.

I-32 OBJECTIVE: Maintain current licenses that meet manufacturer requirements on all software installed on City-owned hardware.

I-33 OBJECTIVE: Develop, implement, and annually test a backup policy for all centrally supported systems and data. The policy should include identification of files to be backed up, frequency of backups, and retention and storage of backups.

I-34 OBJECTIVE: Employ an off-site storage facility for backup and archival digital media and microforms.

I-35 OBJECTIVE: Conduct an internal and external network security assessment; test and take corrective action each year.

I-36 OBJECTIVE: Maintain maintenance and support contracts at appropriate levels for all systems based on their risk assessment.

I-37 OBJECTIVE: Maintain active virus protection software on all servers and desktops.

I-38 OBJECTIVE: Enforce a policy for the appropriate use of both system and user passwords.

I-39 OBJECTIVE: Require written departmental approval for employee access to City supported systems.

I-40 OBJECTIVE: Disable user accounts upon separation of employee.

I-41 OBJECTIVE: Develop a formal emergency operation plan for critical City technology.

II. User Community

The user community consists of all employees who utilize City of Simi Valley technology in the performance of their jobs. The more knowledgeable a user community is the more value will be obtained from the technology. Staff training was the highest ranked issue after the network infrastructure, and a fully trained user community was the overall highest ranked goal for departments. Access to systems for employees who are away from a City facility workstation is also of interest to departments. While remote access is not considered a major issue for departments, web-enabled access to systems was the second highest ranked goal overall.

Issue: In order to fully realize its investment in information technology, the City needs a user staff that is fully trained and competent to use the systems.

Strategy: Maintain a well-trained user community able to take full advantage of available technology.

II-1 OBJECTIVE: Define core technology competencies that all employees should possess. Departments identified five computing skills that all applicable employees should have:

1. Keyboard and mouse skills
2. Computer literacy
3. Word processing, spreadsheets, presentations
4. Groupwise e-mail system
5. Internet browser

II-2 OBJECTIVE: Assess core competencies of current employees and provide necessary training for any deficiencies.

II-3 OBJECTIVE: Assess prospective employees, as appropriate, for core competencies and assign training for deficiencies.

II-4 OBJECTIVE: Provide SAP basic navigation training for all new SAP users as well as specific process training for their individual job requirements.

II-5 OBJECTIVE: Continue the voucher system to provide standard office tool training.

II-6 OBJECTIVE: Provide in-house (train the trainer) or consultant based training for enterprise applications not in wide enough release to be provided through local training sources.

II-7 OBJECTIVE: Require vendor provided training for all new product implementations.

II-8 OBJECTIVE: Update existing technology use policies and review them annually. Require verification that all employees have received copies of the current policy documents.

II-9 OBJECTIVE: Require application developers, whether contract or in-house, to provide operating procedures for all City-specific applications. Departments will take responsibility for creating additional procedures as appropriate.

Issue: Employees working away from their regular work area in a City facility could be more productive if they had access to City systems.

Strategy: Provide web-enabled access to City systems for employees working away from a regular City facility work area.

II-10 OBJECTIVE: Take advantage of services that allow remote access for employees.

II-11 OBJECTIVE: Web-enable City applications wherever possible to facilitate remote access to City systems.

II-12 OBJECTIVE: Consider deploying Wireless access points inside the City of Simi Valley buildings where cabling is infeasible.

III. Service and Support

Whether provided by in-house staff, vendors, or contract service providers, technical service and support is required to maintain and enhance City computer systems. Regardless of how knowledgeable or well trained the computer users are, there will always be tasks that they cannot or should not perform. A sound strategy for providing service and support is key to the successful use of information technology.

Issue: Departments continue to experience increased needs for technology support that include programming assistance and longer hours of support staff availability.

Strategy: Maintain a full-service IS Division, either through City staffing, or outsourcing, that provides complete support for the City's use of information technology.

III-1 OBJECTIVE: Create service level agreements between IS and user departments that define the responsibilities of each for the support of City technology.

III-2 OBJECTIVE: Stagger shifts for PC/Network support staff to ensure coverage during core usage hours.

III-3 OBJECTIVE: Establish a PC/Network support ratio of one IS employee assigned to PC/Helpdesk support per 150 nodes. A node is defined as a desktop PC or printer. Currently the ratio is 1:159 at the Police Department and 1:214 for the rest of the City.

III-4 OBJECTIVE: Provide software programming support through development of existing IS staff, hiring, or outsourcing.

III-5 OBJECTIVE: Identify sources to provide functional and technical consulting support and maintain business relationships that ensure continuity of critical services.

III-6 OBJECTIVE: Ensure a backup knowledge base for all infrastructure systems and enterprise applications through cross-training of IS staff.

IV. Enterprise Applications

Enterprise applications are those computer systems that are used, either by most employees to perform routine tasks, by multiple departments to perform major tasks, or to provide critically essential applications to the City. Examples of enterprise systems include e-mail systems, word processing and spreadsheet applications, financial management systems, permitting systems, and GIS, among others. Many departments have critical applications used exclusively to support that department's activities. Since department-specific applications are strategic to the operation of the departments that use them, they are included in this strategic planning

process (see Section V. Major Departmental Applications), and are identified as critical systems for infrastructure planning.

Each enterprise application issue is described below with its associated strategies.

A. A **Geographic Information System (GIS)** is a database system with a spatial component that allows users to tie information together, including aerial imagery, through its relationship to a point or area on a map. GIS is a powerful tool for analyzing spatial data that has proven its value in many government operations.

Issue: The City has a Geographic Information System (GIS) that is currently underutilized. While GIS has potential applications in all City operations, all departments reported GIS as an issue of mid-level importance to them. This ranking may be the result of a lack of awareness of the organizational value of GIS.

Strategy: Fully utilize the City's (GIS) by maintaining a broad spectrum of up-to-date data and customized applications that can be accessed throughout the City by users trained to take advantage of GIS tools.

IV-1 OBJECTIVE: Design and implement plans for maintenance of map base layers that are required for GIS uses Citywide and develop a standard network directory location for information type to facilitate access by GIS users.

IV-2 OBJECTIVE: Design and establish a policy for GIS database development and usage. The policy will govern the sharing of GIS outside the City. The policy will also ensure that the hardware and licenses are compliant with the software requirements, that the products and services maintain integrity and accuracy, and that resource usage is appropriately monitored.

IV-3 OBJECTIVE: Design and implement a maintenance strategy to manage the design and development of all databases associated with the GIS base map and each of the subsequent map layers.

IV-4 OBJECTIVE: Define department-specific layers to be maintained by department staff. Develop a methodology for use by the departments in maintaining department-owned data and a methodology for standardizing metadata to provide information about what data is available.

IV-5 OBJECTIVE: Implement ArcIMS, a web-enabled application, as a method to deliver selected GIS applications to a Citywide user base.

IV-6 OBJECTIVE: Provide City staff with ongoing training in the use of GIS and GIS related tools. Training opportunities should be a combination of user training provided by Department staff, Information Services GIS staff and formal training. GIS users should be informed of opportunities for GIS training at local training facilities. Department staff responsible for maintaining GIS data layers should be provided with ESRI certified training.

IV-7 OBJECTIVE: Provide ongoing information sessions on the value of GIS for City staff and decision-makers. Informational opportunities include continuing, and encouraging participation in, regular City GIS User Group meetings, providing informative presentations for other City group meetings, meeting with user departments or potential user departments for informal discussions, and providing notice of informational sessions presented locally by other organizations.

IV-8 OBJECTIVE: Pursue sources of geo-spatial data and collaborative data sharing arrangements. Maintain active participation in the Channel Islands Regional Geographic Information Systems (CIRGIS) Collaborative, the Ventura County Municipal GIS Users Group, and local ESRI Users Group.

B. The **Financial/Human Resources Information System** was implemented in SAP in November 2001. SAP is designed to fully integrate all financial, purchasing, payroll, and HR functions and distribute them throughout the City.

Issue: The City has used SAP since 2001 and wants to ensure that it receives the most benefit from its investment.

Strategy: Utilize the SAP system to the greatest advantage of the City, including efficient and effective use of its capabilities and the optimization of its functionality.

IV-9 OBJECTIVE: Develop and implement a plan to provide regular, ongoing training and information to current and new SAP users. Train-the-trainer practices should be used as often as practical.

IV-10 OBJECTIVE: Ensure a backup knowledge base for all technical functions and process management through thorough training of multiple process leads in each functional module.

IV-11 OBJECTIVE: Identify sources of backup functional and technical support (outside of the City) and maintain business relationships that ensure rapid response when required.

IV-12 OBJECTIVE: Develop and support SAP Process Owners who have primary responsibility for SAP modules, querying, reporting, user training, and system enhancement.

IV-13 OBJECTIVE: Upgrade the SAP system so that we are within 2 minor releases of the current version and annually evaluate additional functionality that should be configured. Both upgrades and additional functionality will require staff training to be fully effective.

C. **Electronic Document Management (EDM)** is a system for storing and retrieving document images. Enterprise document management systems require careful planning to implement and extensive resources to support, but they are becoming critical applications in many operations due to the massive requirements for documentation in today's governmental environment. Several departments currently scan and save documents electronically, but the City has not implemented an enterprise-wide document management system. The Police

Department has made a substantial investment in LaserFiche and uses the product for police records management. While four of the seven departments listed electronic document management as a low priority issue, three of the departments indicated that document management was their third most significant issue, and two of those departments listed electronic document management as their number one goal.

Issue: The City requires a methodology for managing its ever-increasing volume of paper documents.

Strategy: Adopt and implement a records management policy that includes the electronic storage and retrieval of documents wherever appropriate.

IV-14 OBJECTIVE: Implement the recommendations of the 2002 records management study conducted by Gladwell Governmental Services, Inc. prior to consideration of an Enterprise Document Management system (EDM).

IV-15 OBJECTIVE: Choose an enterprise document imaging system and implement a pilot project. Evaluate future implementations as appropriate.

IV-16 OBJECTIVE: Convert existing paper documents to electronic format where appropriate.

D. The **'Permits' Plus** system provided by Accela, Inc. is used by multiple departments for issuing and tracking permits of various types and providing case management functions. The application is closely related with the City's GIS. Issues related to the 'Permits' Plus system were not evident in the initial needs assessment questionnaires; however, by the time departments were asked to prioritize the issues and goals, 'Permits' Plus had become an issue that was expressed in the comments provided by Environmental Services.

Issue: The City has successfully implemented 'Permits' Plus as an enterprise permitting application and is now ready to expand the use of the system.

Strategy: Encourage growth of the permitting system through the addition of permit types and functional modules.

IV-17 OBJECTIVE: Continue regular Permits User Group meetings to develop and maintain standards, address enterprise issues, and determine development path.

IV-18 OBJECTIVE: Develop and support application process owner for each division's use of 'Permits' Plus.

IV-19 OBJECTIVE: Explore expanded use of 'Permits' Plus system within the City.

IV-20 OBJECTIVE: Encourage incorporation of additional permit types and additional user departments.

IV-21 OBJECTIVE: Explore application of additional system modules to increase system use and value. Applications of interest include imaging, mobile data collection, report writing and GIS integration.

E. **Enterprise Application Standards**

Issue: Standardization of applications and application development promotes efficiency, cost effectiveness, and a higher level of service. The City of Simi Valley wishes to maintain application standards for the most commonly used application types.

Strategy: Applications used enterprise-wide will be standard throughout the organization.

IV-22 OBJECTIVE: Enterprise applications will continue to be supported centrally by IS. IS will coordinate the purchase of all enterprise software, as well as install and maintain the software.

IV-23 OBJECTIVE: Designate current Citywide standard core applications as:

1. Financial/HR Information System (SAP)
2. Networking (Novell Netware)
3. Desktop operating system (Windows 2000 or above)
4. Application server operating system (HP-UX)
5. Database engine (Oracle)
6. E-mail (Novell Groupwise)
7. Web browser (MS Internet Explorer)
8. Office productivity (MS Office)
9. Permitting (Accela Permits Plus)
10. GIS (ESRI ArcGIS)
11. Project management (MS Project)
12. Drawing (MS Visio)
13. Drafting (AutoDesk AutoCAD)
14. Palm computing (Palm OS/Intellisync)
15. Help desk software (Heat)
16. Network and Infrastructure Security (Symantec)

Any change to City application standards will require Information Technology Review Committee (ITRC) approval. Departments must take standards into consideration when planning technology projects. Every effort should be made to conform to City standards at the time of new development.

IV-24 OBJECTIVE: Add additional standard core applications:

1. Report writing (to be determined)
2. Forms (Adobe Acrobat)
3. Desktop publishing (to be determined)
4. Web development tools (to be determined)
5. Document management (to be determined)
6. Photo editing (to be determined)
7. Case Management (to be determined)

IV-25 OBJECTIVE: Require all system purchases and software development, whether conducted in-house or through outside services, to conform to the following requirements:

Open Architecture

Systems purchased or developed by the City should be based on standard, industry wide languages, formats, and protocols to allow for easy understanding, maintenance, interface with other applications, and future migrations. Common standards and open architecture will protect the City should vendors go out of business or individual technological components, such as the hardware or communication media, change.

- **Have compelling justification to purchase anything proprietary** – Possible reasons would include critical functionality that must be obtained now and is not available in an open architecture; government or funding mandate; transitional use only, perhaps required by interface to legacy system; or insurmountable cost restrictions.

- **Internet standards based** – The application can be easily published over the Internet.

Flexibility

- **Component based** – Functionality is provided in distinct components that can be purchased and implemented separately, allowing resources to be expended only on components that are needed.

- **Seamless data exchange with other applications** – The data is stored in a format that can be easily understood and used by other open systems.

- **Upgrade path** – The owner of the application intends to continuously improve and publish the software.

- **Web enabled** – Application can be accessed using a browser.

Scalability

The application should be designed and licensed in a way that hardware, users, and modules can be added or subtracted as needed.

Security

The application must offer innate protection against unauthorized access and/or corruption. Controls should be refined and able to operate at the lowest user defined levels. The application must also allow for fault tolerance and disaster recovery.

Vendor Track Record

Vendor must be experienced and possess a demonstrated history of product success and customer service. Company should be able to demonstrate both managerial and financial health.

F. Public Access

The City of Simi Valley has a desire to provide the best possible public service to the community. In today's environment, the public has come to expect a certain level of remote access to government services through an increased use of technology. Providing electronic government (e-government) services can be costly and presents a broad range of issues that must be addressed before any initiative is undertaken.

Issue: Citizens have come to expect greater access to local government services. Departments recognize the advantages of expanding their use of the Internet to communicate with citizens, vendors and customers, and other agencies, primarily through availability of forms and on-line filing.

Strategy: The City will provide expanded electronic access for the public to City information and services via the telephone and Internet.

IV-26 OBJECTIVE: Make standard City forms and Public Information available via the Internet.

IV-27 OBJECTIVE: Consider filing forms and paying fees via the Internet, where service delivery and staffing efficiencies can be improved.

IV-28 OBJECTIVE: Establish web publication standards for City web site.

IV-29 OBJECTIVE: Consider establishing in-house web site hosting capabilities, where service delivery and staffing efficiencies can be improved.

IV-30 OBJECTIVE: Consider providing telephone Interactive Voice Recognition (IVR) for access to Building and Safety, and Utility Billing information, where service delivery and staffing efficiencies can be improved.

IV-31 OBJECTIVE: Evaluate e-Government services to meet citizen where service delivery and staffing efficiencies can be improved.

IV-32 OBJECTIVE: Consider funding the in-house resources necessary to manage, upgrade, maintain and enhance public access to City information and services via the Internet.

V. Major Departmental Applications

Major Departmental applications are those computer systems whose use is not widespread enough to be counted as an Enterprise Application but who use is significant enough to the City that it needs to be part of the infrastructure planning process. Examples of major departmental applications include the Police Department's IPS, Public Works' SCADA and Public Works' Work Order systems.

Each major departmental application with its associated issues and strategies are described below.

A. The **Integrated Police System** Project is an integrated suite of projects that includes: Computer Aided Dispatch (CAD), Automated Vehicle Location (AVL), Geographic Information System (GIS), Mobile Work Stations (MWS), Records Management System (RMS), and Mobile Report Entry (MRE). This system will have over 170 users in the Police Department. In addition, staff members from other Departments have a need to access some of the information stored in this system. The Police Department wants to maximize its use and ensure data that is resident in the system can be easily retrieved for various needs throughout the City.

Issue: The Police Department is in the early stages of production on the Integrated Police System and wants to ensure that it receives the most benefit from the investment.

Strategy: Utilize the IPS System to full advantage by ensuring the system is used to its maximum potential by all users. This also includes implementing planned enhancements to the system in a timely manner.

V-1 OBJECTIVE: Develop and implement a plan to provide regular on-going training, including information on how users can best access the information they need in the system.

V-2 OBJECTIVE: Ensure the System Administrator for each module has sufficient training and knowledge to handle any and all issues that may arise in their area of expertise. Also, ensure accountability for each module, by cleaning up data and managing reporting relative to each function.

V-3 OBJECTIVE: Develop a team of super-users to help individuals within the Department on all shifts with problems relative to the IPS system.

V-4 OBJECTIVE: Develop a system for querying and reporting in the system. This may require the use of outside resources, data warehousing, front end search engines or similar technologies.

V-5 OBJECTIVE: Initiate a California Users Group for Versaterm, to leverage the City's enhancement requests to Versaterm Management.

V-6 OBJECTIVE: Identify sources of backup functional and technical support outside of the City and maintain a business relationship that ensures rapid response when required.

V-7 OBJECTIVE: Ensure a transfer of knowledge takes place in each functional area of the system to foster long-term success.

V-8 OBJECTIVE: Ensure security of the system, by completing a security audit at least once a year.

V-9 OBJECTIVE: Consider staffing arrangements necessary to match the twenty-four hours a day by seven days per week, 100% availability requirements of IPS.

B. The **Supervisory Control And Data Acquisition (SCADA)** system provides protection, monitoring, and control over the Sanitation and Water systems for the City. These systems consist of many sensors throughout the City, which constantly send status about equipment, water, and sewage. Fiber optic cabling and wireless networks transport definitive data back to City computers where it is monitored for compliance to regulations, analyzed for decision-making and controlled for optimal effectiveness. These systems are vital to supplying Simi Valley with quality water and sanitation services.

Issue: The Public Works Department has built, enhanced, and maintained the SCADA system for years and wants to ensure that it receives a prudent level of support necessary to continue its excellent record in safely delivering potable water and efficiently processing wastewater.

Strategy: Maintain the autonomous nature of the SCADA systems while providing the infrastructure to support enhancements in the monitoring, control, analysis or distribution of the systems and data.

V-10 OBJECTIVE: Implement the proposed security enhancements to the City network that protects the SCADA servers and sensors.

V-11 OBJECTIVE: Enhance existing network switches to make the switching redundant and less vulnerable to single points of failure.

V-12 OBJECTIVE: Ensure security of the system, by completing an annual security audit.

V-13 OBJECTIVE: Consider staffing arrangements necessary to match the twenty-four hours a day by seven days per week, 100% availability requirements of SCADA monitoring systems. Failure of SCADA monitoring systems beyond 2 hours results in fines from regulatory agencies.

C. The **Public Works Work Order** system will be a fully integrated Work Order, Preventive Maintenance, Inventory, and Call Center System to manage the assets of the Department. The Work Order system will enable the Department of Public Works to extend

the life, and improve the efficiency of assets through proactive maintenance practices and asset tracking. This system will help the City of Simi Valley meet Governmental Accounting Standards Board (GASB) statement 34 requirements. GASB requires all current and long-term assets and liabilities to be reported. This can be accomplished by providing clear details of the maintenance and operations of these assets. In addition, pending EPA Federal legislation requires that the Sanitation District execute a Capacity Management Operations Maintenance Program (CMOM).

Issue: The Public Works Department wants to ensure that its assets are managed efficiently and effectively, and that the Work Order system is used to its maximum potential. This includes implementing planned enhancements to the system in a timely manner.

Strategy: Implement a Work Order system that is capable of managing the assets of the Public Works Department, provides the requirements of GASB 34 and is compatible with a CMOM program.

V-14 OBJECTIVE: Implement the initial Waterworks and Sanitation modules of the Work Order system during FY 2004-05.

V-15 OBJECTIVE: Implement additional modules of the Work Order system during the FY 2005-06.

V-16 OBJECTIVE: Periodically review the usage and functionality of the system and enhance product or process deficiencies that are found.

VI. Emergency Operations Center

The Emergency Operations Center (EOC) is the centralized disaster coordination center for all of the City's departments and liaison agencies, such as the School District, Recreation and Parks District, Fire District, utility companies, the Red Cross and others. The facility is intended to be a self contained, comprehensive situational awareness resource for the City. The key to its effectiveness is the collocation of key officials from each responding agency/department. This produces unified actions that are based on input and information from each participant. Failure to achieve unified actions in disaster responses results in the misapplication of critical resources and possibly the compromise of life or property.

The EOC is not currently automated. This means that computers and the wide variety of software that is now common in the workplace, is not available in the facility. With full Citywide integration of a Geographic Information System (GIS), financial management, Internet connectivity, e-mail, and an advanced office suite, the EOC is now unequipped to support even the most basic information processing needs. In the City's after action debriefing following the October 2003 fire, the lack of automation in the EOC was identified as the most significant problem.

Issue: The EOC wants to ensure that, in a crisis, it has the capability to function effectively as a self contained, centralized, coordination center.

Strategy: Implement technology in the EOC that supports the organization and work required to function effectively during a crisis. Multiple sources of technology and funding for hardware and software should be explored.

VI-1 OBJECTIVE: Purchase and implement the server, printer and wireless network allocated in the FY 2004-05 budget. Connect the EOC network to the City's primary network.

VI-2 OBJECTIVE: Purchase and allocate laptop computers for the 12 critical EOC staff members for use during an emergency. Each laptop must be equipped with all software necessary to maximize staff effectiveness in an emergency. Laptops must also be equipped with physical and data security measures.

VI-3 OBJECTIVE: Purchase and staff a GIS workstation in the EOC for the immediate production of maps during an emergency.

VI-4 OBJECTIVE: Develop procedures to rapidly deploy technology in the EOC at the beginning of an emergency.

APPENDICES