City of Hayward

Two-Year Technology Work Plan

Fiscal Years 2001-02 and 2002-03

Section I: Introduction

The City's current Technology Master Plan, which was developed in 1997, has served as the basis for the City's technology development efforts for the past several years. To continue these efforts over the next two years, a new Technology Work Plan has been developed and included in the proposed budget for FY 2001-02 and 2002-03.

This new work plan has two broad objectives. The first is to maximize the efficiency and effectiveness of internal operations and improve customer service where possible. The second is to use our advances in technology to extend existing services more directly to users outside of City Hall, and to add additional services where needed and feasible.

To this end, three primary goals have been established:

1. Upgrade existing "mission critical" public safety systems that are suffering from aging hardware and/or obsolete technology.

2. Complete the consolidation of all internal networks into a single, City-wide network.

3. Develop new systems and applications where there is an efficient and cost effective opportunity to increase productivity, to improve service to City residents and businesses, and to participate as a full player in the Information Age.

With above in mind, eight sub-goals have been established to guide the technical development of the Work Plan:

1. Reduce the number of technologies and software applications utilized so that we can maximize the efficiency of the network staff and minimize the cost of end-user training.

2. Adopt contemporary industry standards and design the City's network to promote cross-departmental compatibility and standardization of hardware and software.

3. Purchase "commercial-off-the-shelf" vendor software solutions rather than pursuing in-house software development.

4. Implement proven technologies rather than technologies still under development.

5. Replace network and desktop hardware on a regular basis to avoid the operational dysfunction and to minimize the resource drain associated with maintaining obsolete equipment.

6. Assure the adoption of adequate security and reliability standards particularly as it relates to internal network access and external Internet connections.

7. Develop a strong emphasis on regular training for end users and technical staff.

8. Promote City-wide sharing of data base and other network information.

Section II. Work Plan Objectives

Based on the foregoing, this proposed Two-Year Technology Work Plan contains eight specific objectives. These are shown below in priority order and each are discussed in more detail later in this report. Attachment A to this report contains a funding summary for the eight objectives along with proposed implementation schedules.

1. Upgrade the Police and Fire Computer Aided Dispatch System.
2. Replace the Fire Records Management System.
3. Create a single, consolidated, wide-area network for all City departments.
4. Develop a City-wide Geographical Information System.
5. Provide remote field access for the Building Permit System.
6. Expand the scope and functionality of the City's Web Site.
7. Expand the City's Document Imaging Program.
8. Develop a transition strategy and begin replacement of the City's Financial Management System.

Objectives 1, and 2 are considered mission critical especially as they relate to the preservation of property and life. Objective 3 is critical to the efficiency and effectiveness of City operations in general and is particularly critical as it relates to the reliability of public safety operations. The final five objectives (Objectives 4 through 8) represent either the expansion of an existing service or the addition of a new service. They relate to improving the efficiency of internal operations or providing improved service to internal and external parties.

The following is a more detailed description for each of the above program objectives along with an estimate of the cost and a preliminary implementation schedule.

Objective 1: Upgrade the Police and Fire Computer Aided Dispatch System.

The Computer Aided Dispatch System (CAD) is a system used by the Public Safety Dispatch Center. Its function is to assist in receiving calls for service and dispatching them directly to police vehicles in the field and to the City's nine fire stations. All 911 calls are handled through this system. In addition, the system monitors the current assignments and status of units in the field and assists in the optimal allocation of calls for service as those calls are received.

While the existing system continues to serve the minimum needs of our Public Safety operations, the two CAD servers and associated software are ten years old, obsolete, and are no longer fully supported by the manufacturer. In addition, it is difficult to make rapid repairs at times when the system goes down. To address the above deficiencies, it is recommended that the two servers be replaced with a more modern system that provides better reliability and more functionality. In addition, the replacement system will provide simpler and faster wireless access between the internal network at the Police Department Facility and the laptop computers in the field. Finally, the replacement system will also provide a standard network protocol, which will be more compatible with the upgraded City-wide Network that is discussed in Objective 3 below.

Cost

The one-time cost of this upgrade is estimated to be $365,000.

Timeline

It is anticipated that this upgrade would start immediately and be completed by March 2002.

Objective 2: Replace the Fire Records Management System

The Fire Records Management System is a system that has the responsibility to compile, store, and manage all written reports of fire incidents. It also is intended to provide for the search and retrieval of fire incident data, and to automatically generate the reports that are mandated by county, state and federal agencies.

The existing Fire Records Management System is about 10 years old, and is only minimally functional. Currently, it is not able to generate and store fire incident reports in a manner required by the County or the State. Much of the report generation is now done manually by fire fighters.

Cost

The one-time cost of this upgrade is estimated to be $300,000.

Timeline

The upgrade to the Fire Record Management System would be completed by December 2002. It would begin when the upgrade to the Computer Aided Dispatch System discussed in Objective 1 is completed.

Objective 3: Create a Single Wide Area Network for All City Departments

Currently, the City's computer communications and applications network is not configured as a single, consolidated City-wide network. The purpose of creating a single network is to provide all departments and employees with the ability to:

1. Send and receive e-mail to each other, and to individuals outside of the City network.

2. Share digital documents such as those that might be created in a word processing or spreadsheet program.

3. Query common databases, such as those associated with the newly installed Permit System or the proposed Geographic Information System discussed later in this report as Objective 4.

4. Share network resources, such as high-speed connections to the Internet or immediate access to documents that have been optically scanned and digitally filed by other departments.

5. Create interdepartmental virtual workspaces, such as intranet web pages where groups of employees, regardless of their physical location, can collaborate simultaneously on joint projects.

6. Execute workflow transactions from remote field locations using laptop computers such as updating a real property file with the latest status on a permit inspection.

7. Use hardware and software interchangeably across departments.

As shown in the chart in Attachment B, the City has two principal wide area networks – one for Public Safety and one for General City services. The network for Public Safety, located at Police Department facility on Winton Avenue, provides network connections within that building. It also serves as the hub for wireless connection for computers in

police patrol cars and in fire engines. In addition, it provides network connections, through telephone lines, to the City's nine fire stations for incident dispatch and incident reporting. Finally, it also provides a slow speed telephone network connection to the Animal Shelter.

While this network does provide for some very limited basic e-mail service within the Fire Department, it does not provide other typical network services, such as the ability to create documents, the ability to share files and/or data, or the ability to manage calendars. In addition, under this arrangement, the Fire Management and Fire Prevention divisions located at City Hall and served by the City Hall network have only a very limited e-mail network connection with individual fire stations. Finally, the only connection between the Police Facility and City Hall is provided through three personal computers using a small stand-alone network.

The second wide area network is for General City services, and its principal hub is located at City Hall. Through a combination of fiber optic cable, high-speed telephone lines, and slow speed dial-up telephone lines, this network connects City Hall with the Main Library, the Weekes Branch Library, the Corporation Yard, the Animal Control Facility, the Airport, the Water Pollution Control Facility, Fire Station 1, and Centennial Hall. There is no connection between this network and the Public Safety network.

While there is a fiber optic cable in place to connect the two networks, this has not been done because each network uses different types of hardware, software, protocols, and user applications. For example, each network uses a different operating system, a different e-mail system, and a different calendar system. City Hall uses Novell Netware 4.11 as its operating system, and GroupWise as its email and calendar program. The Police Facility uses Microsoft Windows NT 4 for its operating system, and Microsoft Exchange for its e-mail and calendar program. In addition, each uses differing protocols for hardware and software communications. While there are ways to interface these differing configurations, that is not being recommended because the result will be less than satisfactory from the perspective of network operation, and less than satisfactory from the perspective of the network users.

Attachment C to this report is a chart showing a schematic diagram for the proposed, consolidated City-wide network.

In order to create this single, consolidated network for the entire City, staff is recommending the following:

1. **Build out the remaining Public Safety network segments so that individual fire stations have full connectivity with the rest of the City including staff in Fire Management and Fire Prevention at City Hall.** This build out requires not only establishing upgraded network connections between all the facilities, but also involves the installation of personal computers and associated hardware in each of the fire stations. These computers will replace the dumb terminals that are currently used for incident

dispatch and incident records management. Also included will be the installation of a fiber optic cable connection between the Animal Control Facility and City Hall rather than relying on the existing slow-speed telephone connection to the Police Department.

2. **Activate the fiber optic cable connection between City Hall and the Police Facility to create a single, consolidated City-wide network.** This connection will create a single link between City Hall, the Police Facility, the Animal Control Facility, the Corporation Yard, the Main Library and the Weekes Branch Library, the Water Pollution Control Facility, the Airport, the Fire Stations, and Centennial Hall.

3. **Upgrade the hardware (servers, routers, hubs, cables, etc.) of the newly consolidated City-wide network to a uniform, contemporary standard, so that all network hardware is fully compatible and interchangeable.** This upgrade will significantly reduce the maintenance requirements of the new network since it will minimize the training and knowledge needed by the Information Technology staff to support the new network and its users. It will also reduce the amount of user training and knowledge required of new City employees and of employees promoted and/or transferred between departments.

4. **Standardize the City-wide network on a single operating system, a single set of communication protocols, a single email system, a single calendar system, and a single set of user applications.** The software foundation for this standardized and consolidated system would be the Windows 2000 operating system, SQL server, Microsoft Exchange Server, Microsoft Outlook, and Microsoft Office. This standardization will have the same advantages described above.

5. **Replace existing desktop hardware, which is currently incompatible with the planned network reconfiguration.** In order for the new network to operate properly, it will be necessary to replace and/or upgrade existing PC's that are under powered and cannot run the new software applications. This will include replacing 144 or 24% of the City's 597 desktop computers, which are over five years old and do not have sufficient speed or capacity to operate on the new network. Even as a part of the existing network, these computers are beginning to fail, have limited functionality, and should be replaced. For the most part this will mean replacing every PC that has a microprocessor slower than 233 megahertz. In addition to replacing the obsolete PC's, the memory on another 190 PC's will be upgraded in order to extend the useful life of these machines another two years.

6. **Continue the effort to link all City facilities with fiber optic cable to maximize bandwidth and reliability and to minimize long run cost.** As a part of this, and future years, Capital Improvement Budgets, staff will be making recommendations for replacing leased high speed telephone lines with City-owned fiber optic cable. This replacement will not only provide better bandwidth and more reliable service, but also will build a looped system for the City's fiber optic cable network to provide redundancy, in the event there is a hardware failure. This is similar to the looped redundancy that is built into water distribution systems.

7. **Increase staffing in the Technology Services Division to provide adequate capacity to operate and maintain the new consolidated network.** In order to provide the technical and management support for the above initiatives as well as the ones that follow, it is recommended that two Network Specialist positions be added to the Technology Services Division. Given the magnitude and vision of this work plan, it is believed that this is the barest minimum of additional staff support that is required. As described in the conclusion to this report, existing budget allocations have been shifted in order to fund these two new positions and no new dollars are required.

Cost

As shown below, the total one time cost of creating a single network for all City departments as envisioned above is estimated to be $1,338,000:

General City Services Network	$ 758,000	(Including purchase of 102 Desktop Computers)
Fire Department Network	230,000	(Including purchase of 32 Desktop Computers)
Police Department Network	275,000	(Including purchase of 23 Desktop Computers)
Library network	75,000	(Including purchase of 17 Desktop Computers)
	$1,338,000	

Timeline

The above network upgrades are to be phased over an eighteen month period and completed by December 2002 as indicated below:

City Hall Network……..…..July 2001 – June 2002

Library Network…… …January 2002 – March 2002

Fire Department Network……April 2002 - June 2002

Police Department Network…….July 2002 - December 2002

Objective 4: Develop a City-wide Geographical Information System.

A geographical information system (GIS) is a computerized mapping system, which is typically made up of layers of information. These layers could contain data such as the location of all City streets, aerial pictures of all the land within the City, zoning and land use information, the location, shape and size of all real property parcels, the building improvements on all parcels, the location of water and sewer lines, the location of police and fire incidents, the location of building inspections, etc. The principal advantage of a GIS system is that it allows a user to combine these layers in a graphic or tabular form in an almost infinite number of ways for the purpose of operations analysis.

Ideally, a city would have only one GIS system shared by all departments using a single set of software applications and a single database. The reason for this is that once a layer is updated, as would occur with the widening of a street or the installation of a water line, the GIS system would automatically update the shared database and all departments would be using exactly the same data at any given point in time. This provides real-time access to the shared data so that departments can share both data and analysis of that data.

The City of Hayward does not have a single, City-wide GIS system. Rather, as indicated below, four of the City's departments are independently engaged in differing types of GIS efforts, each idiosyncratic to their individual departmental responsibilities:

1. The Public Works Department has created a set of digitized base maps and is in the process of plotting the location of all water and sewer infrastructure.

2. The Community and Economic Development Department has used those digitized base maps to develop a parcel map with separate layers for land use and zoning designations. In addition, the City has purchased commercially available parcel data such as ownership and valuation, and merged that data with City sales tax collections and business license receipts to provide a tool for analyzing the impact of proposed development projects.

3. The Police Department has obtained a State grant to take aerial photographs of Hayward and to create an orthographic or aerial GIS layer which it is using for crime analysis by mapping police incidents.

4. The Fire Department has created fire district maps to assist in responding to calls for service. These maps include locations of lock boxes as well as building layouts.

However, as mentioned above, even though there is some sharing of spatial data among departments, the work of these four departments has been pursued more or less independently. For example, the software used by Public Works Department and the Fire Department is AutoCAD, while the software used by Community and Economic Development and Police Department is ArcView.

Based on recent discussions with GIS consultants, the following general work plan for creating a single, city-wide geographical information system is being recommended:

1. Issue a Request for Proposals and engage a consultant that specializes in GIS planning to:

   a) Work with City staff to perform a needs assessment to identify the broad design parameters for the new system based on cost and desired functionality.
   b) Assess the City's existing GIS applications in terms of their potential for being incorporated into the new system.
   c) Assess the City's data readiness and/or data deficiencies related to embarking on the new system.
   d) Design operational work flows and data management procedures for the new system.
   e) Develop bid specifications for the required hardware and software.
   f) Develop a detailed multi-year implementation budget and work plan.
   g) Provide continuing assistance during project implementation.

   It is estimated that the cost for the above consulting services will be in the range of $125,000. This assumes approximately six months of full-time work spread over an eighteen month period.

2. Update the City's parcel map design so it will be compatible with current GIS standards. This will most likely require us to update the design of the survey coordinate base map by switching from the 1927 California Coordinate System standard to the 1983 standard which uses global positioning satellite observation. The estimated cost to outsource this task to a third party vendor specializing in this type of work is $50,000.

3. Cleanup and standardize on an organization-wide basis the City's three principal base layers: the street centerline layer, the parcel layer, and the aerial photography layer. This would also include the development of an ongoing, coordinated procedure for keeping these layers current. It is anticipated that this task would also be outsourced to a third party vendor at an estimated cost of $75,000.

4. Purchase the necessary hardware and software to run the new GIS system. This is estimated at $75,000.

5. Develop and implement the initial application packages for the system which will provide user functionality customized to Hayward's specific needs. This would include, for example, preprogrammed instructions for manipulating and analyzing data, graphical interfaces for non- technical users, and web interfaces for publishing data on the City's web site. The cost of this last phase is estimated at $75,000.

Cost

The cost estimates for the above total to $400,000. These estimates are very rough based on the experience of other cities, discussions with experts in the GIS field, and without the benefit of the results of the first item in the above work plan. It is anticipated that the budget may need to be revisited after the first work plan item is being completed.

Timeline

Utilizing in-house staff for project management, it is anticipated that it will take approximately three months to solicit proposals and engage a consultant, another three to six months to develop a detailed work plan, and twelve to eighteen months for program implementation.

Objective 5: Provide Remote Field Access to Building Permit System.

A key initiative of the current two-year budget is the replacement of the City's permit processing and tracking system. This replacement is underway and will be operational by July 1, 2001.

As a second phase to this project, it is being recommended that wireless access via laptop computers be provided for the City's Fire and Building inspectors. This will provide remote on-line, real-time access to the system, and will allow inspectors to view, verify, and update inspection records directly from the inspection site.

Cost

It is estimated that the one-time cost of providing remote access for 20 inspectors is about $100,000. Of this amount, $70,000 is for the purchase of laptop computers and associated wireless hardware; the remaining amount is for software and programming services.

Timeline

This upgrade is planned to be provided in calendar year 2002. This timing will provide users with six months to become familiar with the new core system and sort out workflow issues prior to operationalizing remote access capability.

Objective 6: Expand the Scope and Functionality of the City's Web Site

Over the last several years, the City has significantly expanded the information and services it offers on its Internet Web Site. This includes, for example, general information about the City, publication of City Council and Planning Commission agendas and staff reports, information about Centennial Hall along with an on-line reservation system, a purchasing page which vendors can use to view and respond to City requests for bids, a General Plan information center, a General Plan community forum bulletin board, a job opportunities page with employment applications, and a community calendar that is searchable for several months in the future.

With the growth of Internet activity, the increasing public appetite for doing business on the Web, and the proposed upgrades to the City's network operating structure, the City's Web Site has the potential to significantly expand its offerings. Included would be such things as current updates on major City projects, information on neighborhood programs, schedules for street maintenance and capital projects, interactive street maps, copies of the quarterly resident newsletter, copies of the City Charter and Municipal Code, current crime information, emergency information related to water and sewer, street sweeping schedules, the ability to apply for and track the status of building permits, and information on economic development opportunities.

Cost

Based on the experience of the last twelve months, it is estimated that the one-time, two-year cost for expanding the Web Site will be approximately $100,000 plus the staffing costs discussed below.

Staffing

In order to proceed expeditiously with expansion of the Web Site, it is recommended that the City hire its own Web Specialist to accomplish the goals set forth above rather than relying entirely on consultants to develop and maintain web applications. This staff member would be the primary resource for all City-wide web activity such as for the development and maintenance of the City's web page, for development and maintenance of the City's emerging intranet, and for development of e-service initiatives. The annual cost of this position is estimated at $80,000 including benefits. As described in the

conclusion to this report, existing budget allocations have been shifted in order to fund this position and no new dollars are required.

Timeline

Various activities presented above will be provided over the next two fiscal years.

Objective 7: Expand the City's Document Imaging Program.

"Document imaging" refers to the process of converting paper documents into digital images and archiving them for on-line storage and retrieval. It saves paper, it saves space, and it obviates the need for the organization to file multiple copies of same documents in different places. It also provides for the instantaneous and simultaneous retrieval of documents from anywhere within the organization, as well as the ability to publish City documents on the Web for external access. Over the last several years, the City Clerk's office has been leading the implementation of the City's document imaging program. As a result, that department, as well as the City in general, has benefited from significant improvements in operational efficiency and the ability to publish and distribute official City documents, such as City Council Agenda packets, in an expedient and timely manner.

The software used by this system is called LaserFiche. While staff has been pleased with the implementation of this technology, and is generally pleased with the LaserFiche software, there exist some questions as to whether the Laserfiche software is best suited to Hayward's needs. Therefore, before expanding the system to other departments, it is recommended that we reconfirm that LaserFiche is the right software. It is proposed that the reconfirmation be conducted during the first twelve months of this work plan, and then, depending on the conclusion, expand the technology to other departments using either LaserFiche or another imaging system that meets our needs.

In addition to expanding the technology to other departments, it is also recommended that the functionality of the system be expanded to improve security and provide an efficient way to publish archived documents on the City's internal and external web sites:

1. *Purchase and install software that will precisely monitor system usage:*

   Some of the City's databases, such as personnel records, are highly confidential and need to remain secure. By purchasing software that provides high level security and allows for tracking system activity, we would have the ability to restrict access to specified individuals, monitor who has viewed a particular document, and ascertain when it was viewed and what actions were performed on it.

2. *Purchase and install software to "web enable" the system:*

Once document imaging is expanded to other departments, there will be many opportunities and significant benefit to publishing archived documents on the City's Intranet for internal organizational use, and on the City's Web Site for public use. For example, the City Clerk's office gets frequent requests for information that already exists in our imaging system. Web enabling software will make it relatively easy to publish documents, such as the entire Municipal Code, in a format that can be easily viewed and searched. While we currently do have the ability to publish the Municipal Code on our Web Site, we can only do so in a "PDF" format which only permits linear as opposed to random access, and does not provide the ability to search on key words or subject matter.

Cost

If the conclusion is to remain with LaserFiche, the one-time cost of expanding the imaging system, as discussed above, is estimated at $100,000. This represents $38,000 for software, $50,000 for hardware, and $12,000 in consulting services. If an alternate imaging system is selected, the cost estimate would need to be reassessed.

Timeline

It is proposed that the reconfirmation of the software be conducted over the next twelve months and that the expansion be completed during Fiscal Year 2002-03.

Objective 8: Develop a Transition Strategy and Begin Replacement of the City's Financial Management System.

The City's current Financial Management Information System operates on a Unisys mainframe computer and consists of several sub systems including the City's general ledger, financial reporting, budget, utility billing, payroll and business license applications. These systems have been developed in-house over the last 13 years and represent a significant investment by the City. While this system has served the City well into the present, it does rely on a twenty year old technology that does not provide the features or flexibility of the more contemporary systems. In addition, and perhaps more importantly, the system will not easily support the demands of the emerging "e-government" environment.

For these reasons, the City has been considering replacing the existing system. The decision to replace it would depend the answers to the following questions:

1. Does the current system meet basic user needs such as accurate, timely, and useful reports?

2. Is it sufficiently flexible in responding to unanticipated special reporting needs?

3. Can the existing software be modified in a cost effective manner as the need arises?

4. Will maintenance and development support for the current hardware and software continue to be available?

5. Does the current system position the City strategically relative to the emerging demands of e-government?

6. Does the replacement cost justify the anticipated benefits?

The answer to questions one through four is "Yes;" and based on this alone there does not appear to be a compelling need to replace the system. The current system does meet our basic business needs. It is reliable, timely, accurate, efficient, and has the flexibility to be modified and/or produce most special reports as needed. In addition, the current software and hardware do receive continued support from the manufacturing vendor and this should continue into the foreseeable future.

The answer to Question 5, however, is: "No." The current system does *not* place Hayward in an advantageous position relative to the emerging demands of e-government. The current system will not easily or cost effectively support the development of e-commerce or the provision of e-services; and it does not provide a foundation from which the City can participate as a full player in the Internet Age.

The answer to Question 6 is: "It depends on what is considered the relevant period of analysis." In the near term, the answer is that the replacement costs probably outweigh the benefits that will be received. The three-year contract for the current system, as recently approved by the City Council, costs the City approximately $188,000 per year. As discussed in more detail below, the one-time cost to replacing the system with a more modern technology will be in the range of $1 to $3 million depending on the features and configuration of the system the City wishes to purchase. The ongoing cost would be in the range of $100,000 to $300,000 per year. The principal factors in reaching the conclusion that the near term costs probably outweigh the near-term benefits is that the City is still benefiting from the thirteen year investment in application development, the current maintenance costs are relatively small, and the current system does meet our basic business needs.

In the long term, however, as advancing technology and the development of the Internet exert more influence over the external business environment, our basic business needs will become more closely associated with the emergence of e-government. As already indicated, our current financial system is not structured to support e-government applications. It cannot effectively engage in web-based "back office" operations that is required for Internet transactions.

A recent survey of 45 federal, state and local governments indicates that the provision of e-government services over the last several years has almost doubled especially in areas such as bill payment, permit issuance, business licensing, and the dissemination of general public information. Clearly, this trend will continue as "virtual government" becomes more pervasive.

However, the state of the art, particularly for local government, is still in its development stage and it will be several years before uniform software and transactions standards for e-government are developed. In a sense, the delivery of e-services for local government is still in its "beta stage" with relatively few cities participating in any meaningful way. It would probably be in Hayward's best interest to wait until the new technologies have been tested.

The key questions then becomes not *if* the City should replace its current system with a more modern one, but *when* should the move occur and *which* system would be best suited to the City's needs.

From the perspective of e-government, there may be an advantage to let the emerging technology develop to the point that it becomes more tried and proven. This would also have the additional advantage of providing adequate time for the City to assess its needs it terms of the new e-service opportunities as well as its internal expectations for the new finance system.

Cost is critical to both these issues. In preparation for the upcoming two-year budget cycle, staff has issued Requests for Information and received responses from several major financial management system vendors asking for them to provide us with a configuration and cost of a replacement finance system. The scope of the request was fairly broad and essentially asked the vendors to respond based on the vendor's interpretation of contemporary industry standards and what it thought a City of Hayward's size should have given what is currently available.

The Requests for Information were not intended to provide a basis for recommending a new financial management system but, rather, to provide staff with vendor and product knowledge and to begin to asses the range of possibilities. Based on the responses, as stated above, it appears that the cost of a new system will be in the range of $1 to $3 million depending on the scope and features of the system desired. The product options appear to be varied and extensive representing different technologies, different hardware, different software, and a wide range of functionality.

To move forward with a replacement system, it will be necessary to:

1. Define precisely what the new system is intended to do. This will involve the entire organization as the financial system affects every department's operations. This will be especially true as we try to anticipate our e-government needs and the manner in which it will effect each department's service delivery. (4-6 months)

2. Prepare bid specifications for the new system that are broad enough to be used among multiple vendors with different product offerings, yet specific enough to insure that bid results compare like for like. (2-3 months)

3. Advertise, analyze, and award a bid. (4-5 months)

4. Prepare and embark upon an implementation plan. (3 months)

It is staff's recommendation that this project be managed internally. The Finance Department would provide the leadership and coordination and be responsible for developing the final recommendations and managing the project implementation. Interdepartmental sub-committees and teams will be formed to assure that the entire City needs are taken into consideration.

Cost

As indicated, this project will be managed internally with no cost other than normally budgeted staff time and resources.

Timeline

Staff is recommending that this 13 to 17 month project begin in the Fall of 2001, after the City's books are closed, and be completed in the Spring of 2003 in time for funding during the FY 2003-05 budget cycle.

Conclusion and Recommendation

The foregoing represents the proposed Technology Work Plan for the next two years. As presented, the total one-time cost is $2.7 million. It is recommended that this be funded from the $3 million reserve that was tentatively set aside for this purpose during the City Council's recent Mid-Year Budget Workshop.

In addition to the one-time costs, the proposed Technology Work Plan also includes recommendations that represent on-going costs. However, as described below, the recommendation is to fund these on-going costs by reprogramming existing budget allocations and not by increasing the overall level of funding. For example, it is recommended that the funding for the proposed Web Specialist (Objective 6) be provided by using the funding that currently exists for engaging outside consultants to develop and upgrade our Web Site. The annual salary cost for this position has been established at $60,000 plus benefits. This amount is the same as what is currently budgeted for consulting services.

Likewise, it is recommended that the funding for the two new Network Specialist positions (Objective 3) would also be provided by reprogramming existing funding. This funding would come from the amount previously budgeted for debt service for the three-year computer equipment financing program that the City entered into in 1998. The final payment for this financing will be made in September 2001. Since the need for new computer equipment over the next several years is already addressed as a part of the proposed Technology Work Plan, there will be no need to reissue this financing; thus, these funds become available for the two new positions. The annual salary cost for each of these two positions is estimated at $65,000 plus benefits which represents about two-thirds of the available funds.

In addition, it is proposed that most of the remaining one-third of these available funds be used to increase the training that will be provided to employees over the next two years. The increased training will be important because of the extensive conversion in hardware and software that will occur. Currently, using an outside training vendor, the City provides an average of two hours of training per year to each of its 600 computer users. It is recommended that this amount be doubled to an average of four hours per year for each user, and that additional training also be provided to the Technology Services staff who will be responsible for the hardware and software conversions. The current two-year training budget administered by the Technology Services Division will be expanded from $50,000 to $140,000.