**Council Meeting Date: January 20, 2004** **Agenda Item: 6(b)**

# CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

| | |
|---|---|
| **AGENDA TITLE:** | Update on the City's 2001-2003 Information Technology (IT) Strategic Plan and present the new 2004-2006 IT Strategic Plan. |
| **DEPARTMENT:** | Finance |
| **PRESENTED BY:** | Debbie Tarry, Finance Director<br>Tho Dao, Information Technology Manager |

**PROBLEM/ISSUE STATEMENT:**

The purpose of this presentation is to (1) provide an update on the City's current (2001-2003) IT Strategic Plan and (2) present the City's 2004-2006 IT Strategic Plan.

The last update of the City's IT Strategic Plan occurred in 2001, at which time Council approved the current plan (2001-2003). The new plan (2004-2006) will cover technology projects to be undertaken by the City for the next three years.

The 2001-2003 plan's sixteen projects were designed to finish building the City's basic operational systems (i.e. financial, recreation management, etc.) and develop the appropriate technical infrastructure for these systems to operate. The new plan, with the exception of a few projects, will bring focus on new services, new methods of delivering services, and turning data from current systems into useful information to support business operations and decision making processes.

The City has been successful in governing technology acquisition and technology implementation to date. This success is attributed to a number of factors, including the following: strong leadership in technology oversight; sound practice and methodology in deploying information technology applications; and most of all, having a clear and detailed road map (strategic plan) outlining where to go and what to do when it comes to technology investments.

**FINANCIAL IMPACT:** The proposed plan's budget is $950,000 for the next three years ($350K for 2004, $300K for 2005 and $300K for 2006).

## RECOMMENDATION

This item is for informational purposes only. No formal action is required. The updated strategic plan will provide staff with clear direction to proceed with the technology "blueprint" for the years 2004-2006

Approved By: City Manager _____ City Attorney N/A

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## INTRODUCTION

The City's IT Strategic Plan focuses on technology projects, their budgets and timelines. It also provides the opportunity for senior managers and key decision makers to review all IT investments and their expected benefits. In 1997, the City developed the first IT Strategic Plan which was a five year plan. In 2001, staff provided an updated plan which covered the period from 2001 through 2003. The proposed plan will guide the City's technology investments for the next three years (2004-2006). These plans serve as blueprints for building information systems and review mechanisms to ensure that technology investments and activities closely match business needs.

During the first six years, the City built an information systems infrastructure that provides a reliable and stable platform for staff to provide services to our City customers. These systems include financial, customer services, permitting, asset inventory and recreation management. For the next three years, a strong focus will be placed on integration of the information stored in these systems in order to make strategic and tactical business decisions.

## BACKGROUND

In 1997, the City hired Moss Adams Advisory Services, a management and information technology consulting company, to assist staff with the development of the Information Systems Strategic Plan. That plan had twenty-nine projects and a five-year budget of $4.28 million. The 2001-2003 Updated Plan had sixteen projects and a budget of $2.05 million. The new plan has sixteen projects and a budget of $ 950,000.

The City continues to use Moss Adams to assist with the important task of technology planning for two main reasons: 1) to provide a proven methodology of long-range technology planning that matches closely with business needs and 2) to provide an objective assessment of past performance, industry/peer reviews and an external audit of information technology implementation to date. Furthermore, having the same experts who are very familiar with City operations, processes and methods, saves money since the review proceeds more quickly and is more insightful.

The method deployed by Moss Adams in developing a new IT Strategic Plan consists of interviewing management and staff; surveying IT customer satisfaction; assessing IT capacity; facilitating the City's IT Steering Committee retreat; and documenting the final plan with project lists, project budgets and milestones. The process typically takes approximately four to six months from beginning to end.

## THE CURRENT PLAN (2001-2003)

The current plan was approved in 2001. There were sixteen projects with a majority of the projects aimed at continuing to build the City's information infrastructure - the same theme as the 1997 plan - (financial system, customer response, permits tracking, maintenance management systems, records management, etc.)

Included in the 2001-2003 plan the following projects were either completed or are scheduled for completion by the end of this year:

- Leveraging Financial System Capabilities: completed in 2002.
- Enhance Customer Response Capability: completed in 2003.
- Implementation of Payroll/HR Systems: The City successfully installed the Bi-Tech Payroll and Human Resource modules in 2002 with the go live date of January 2003.
- Recreation Management Application: completed in 2003.
- Network Security Assessment: completed in 2001.
- Technology Standards: Two projects, network operating system and email, were converted in 2002 to Microsoft from Novell.

The following projects were completed but had their original scopes amended/expanded and are included in the new plan:

- Permit Tracking/Receipting/Billing: major portion completed in 2001 – expanded scope to include the revision of the interface to the online permitting and other e-government initiatives.
- Records Management System: Phase 1 scheduled for completion December 2003, which focused on the City's official records. Other phases include internal documents, email, building plans and others.
- Maintenance Management System: Several sub-projects finished in 2002 and 2003, such as: an accident tracking module and facility maintenance management module planned later this year.

Two projects, that have modified project descriptions and goals, will be carried forward from the 2001-2003 Plan to the 2004-2006 Plan. Both of these projects are aimed at establishing methods to turn current systems data into information to support business decision processes:

- Enhance E-Government Functionality
- Integrate Existing Systems

Some projects represent basic tenets of a strategic plan, and therefore will be carried forward to the new plan:

- Strengthen Technology Oversight
- Establish Technology Standards
- Strengthen IT Staff

## THE PROPOSED PLAN (2004-2006)

The 2004-2006 IT Strategic Plan is comprised of sixteen projects. These projects can be grouped into the following categories: 1) Review the City's infrastructure and customer response management application (Hansen); 2) Integration of existing system information; 3) Improve employee and citizen interfaces to e-government initiatives; and 4) Improve technical and project management skills for City employees.

The following list represents the sixteen projects in the 2004-2006 IT Strategic Plan:

1) Conduct Hansen Gap Analysis
2) Implement Hansen Dynamic Portal for Customer Service
3) Implement Hansen Online Permitting, Receipting and Billing Functions
4) Continue Implementing Maintenance Management System Capabilities
5) Continue Development of the Document Management Infrastructure
6) Establish Technology Standards
7) Enhance System Security
8) Strengthen Technology Oversight
9) Strengthen IT Staff Skills
10) Enhance E-Government Functionality Through Website
11) Integrate Existing Systems For Business Intelligence
12) Implement Portal Technology for Serving Business Intelligence Needs
13) Enhance Wireless Connectivity Around the City
14) Enhance Project Management Capabilities
15) Develop a Request for Proposal (RFP) for a New Telephone System
16) Develop a Disaster Recovery and Business Continuity Plan

These projects build on the projects contained in the last plan, with an emphasis on leveraging data that has been collected in the City's existing information systems to help make better decisions, measure productivity and give the ability to forecast, detect trends and estimate work load.

The 2004-2006 Technology Plan is constrained by both budget allocation and human resources to implement technology improvements. Not only will these projects require the expertise and time of the Information Technology Staff, but that of personnel within operating departments. This is especially true as the City moves from system implementation to system integration projects. The City will continue to use a combination of internal staff and consultant support. At the current time staff believes that we have the appropriate level of internal staff to proceed with the 2004-2006 technology plan.

Detailed descriptions of each project, project deliverables, and expected benefits with estimated budgets are listed in the consultant's report (Attachment A).

**SUMMARY**

With the help of Moss Adams, the City went through a thorough review of its technology investments, its business needs and its plan for the future. These plans served as the blueprint for building the City's information systems. The 2004-2006 Technology Plan moves the City from system implementation to system and information integration. This phase of the City's technology development should result in information being readily available to all levels of decision-makers and more assessable to City customers. The 2004-2006 Technology Plan totals $950,000 with sixteen projects.

## RECOMMENDATION

This item is for informational purposes only. No formal action is required. The updated strategic plan will provide staff with clear direction to proceed with the technology "blueprint" for the years 2004-2006

## ATTACHMENTS

**Proposed 2004-2006 IT Strategic Plan – Attachment A**


# City of Shoreline

2004 – 2006 Strategic Technology Plan
August 2003


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# I. Executive Summary

In March 2003, the City of Shoreline engaged Moss Adams to assist with updating its strategic technology plan for the next three years. From a historical perspective, this report represents the second update since the first strategic technology plan was developed in 1997. This plan has been developed as a continual driver for improvement and enhancement of the technology environment at the City.

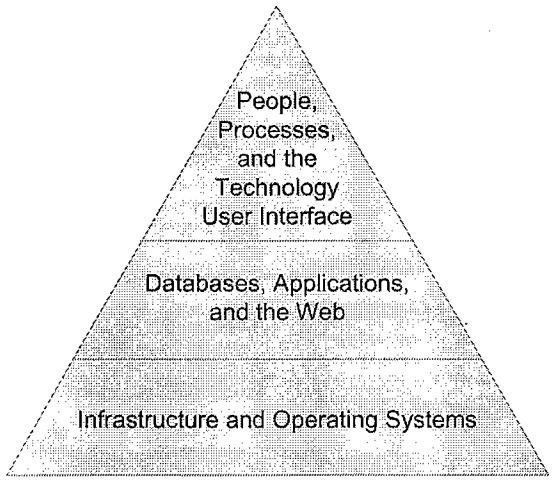
As with the prior plans, the objective of this planning process was to develop a realistic and practical strategy that captures the business drivers behind future technology implementations while not exceeding the annual special projects budgets. Although the task to select and prioritize the resulting projects was challenging, the IT Steering Committee met during a one-day retreat in August 2003 to discuss the merits of each proposed project and was ultimately successful at charting the technology roadmap for the City for the next three years.

As a precursor to the IT Steering Committee retreat, several steps were taken as part of the information gathering and analysis stages. These steps included:

- Identifying major information requirements,
- Assessing capabilities of existing systems and capacity of staff,
- Comparing needs against available resources and determining the gap between the two, as well as
- Determining how to address the identified gap by defining and budgeting for projects and the resources to embark upon those projects.

The City's technology environment continues to evolve. The evolution of technology implementation and usage within the City can best be understood by the business intelligence pyramid represented below.

Business Intelligence Pyramid




Historically, the City's technology priorities have been maturing as technology projects on the lower tiers of this pyramid have been completed. Those plans focused on developing the City's infrastructure, operating systems, databases, applications, and establishing the City's presence on

the web. The 1997 strategic technology plan laid the foundation for reliable and stable network infrastructure, whereas the 2000 plan helped establish citywide applications and streamlining systems. The resulting projects from those plans included upgrading the servers to Windows NT, establishing consistency of the network operating system, enhancing the telecommunications infrastructure, implementing recreation management applications, implementing a permits tracking system and enhancing website functionality.

For the next phase of the City's technology environment, the focus will be on the people, processes, and user interface. This concept is exemplified as the top level in the business intelligence pyramid. It is in this phase where further refinement and leveraging of the City's existing systems will take place as a strategic theme for the next several years. Concepts such as business intelligence, systems integration, and improved reporting were seen as key drivers behind the 2004 plan. As another major theme for the 2004 plan, enhancing e-government capabilities was seen as a way to improve customer service and communication to not only citizens, but all the City's stakeholders including employees, vendors, and other public agencies.

At the core of the 2004 planning effort are sixteen projects that reflect the concepts at the pinnacle of the pyramid. These projects are listed below and are explained in more detail in the Project Descriptions section of this report.

1. Conduct a Hansen Gap Analysis
2. Implement Hansen DynamicPORTAL Module
3. Implement Hansen Online Permitting, Receipting, and Billing Functions
4. Continue Implementing Maintenance Management System Capabilities
5. Develop Records Management Infrastructure
6. Establish Technology Standards
7. Enhance System Security
8. Strengthen Technology Oversight
9. Strengthen IT Staff Skills
10. Enhance E-Government Functionality Through Website
11. Integrate Existing Systems for Business Intelligence
12. Implement Portal Technology for Serving Business Intelligence Needs
13. Enhance Wireless Connectivity Around the City
14. Enhance Project Management Capabilities
15. Develop a Request for Proposal (RFP) Document for a New Telephone System
16. Develop a Disaster Recovery and Business Continuity Plan

While some of these projects are carried over from the 2000 plan, there are several new projects in the mix. To summarize these new projects, the main focus areas were to (1) leverage the capabilities of the City's infrastructure management application (Hansen), (2) enhance existing processes and reporting through integrating existing systems and implementing portal technology, (3) improve employee and citizen interfaces through e-government initiatives, and (4) improve the technical and project management skills of City employees.

Although the strategic technology plan provides a roadmap going forward, the City must continue to monitor and modify its implementation as business processes change and new technology solutions are introduced into the technology environment. Given the budget constraints for special projects, the City will need to provide continual management and a degree of flexibility to ensure that projects stay within scope, budget and schedule.

## II. Project Descriptions

The IT Steering Committee discussed the top list of projects at a day-long workshop and developed priorities based on current business drivers and decision criteria. The following factors were used to assess the City's priorities. Projects were assessed for:

- Mission criticality
- Quantifiable payback
- Capital outlay
- Degree of difficulty in implementation
- City staff availability
- City cultural or morale-driven concerns
- Management support
- Link to City business plans
- Enhanced customer service
- Enhanced citizens' connection

The group prioritized the projects into high, medium, or low categories. The category receiving the highest number of votes set the priority level for the project. Following each project listing is an overall objective assigned to the project along with a high-level description. An estimated budget for the technology related components (software, hardware, contracted assistance) is included. The budget figures given are based on order of magnitude estimates. The budget numbers may vary based on actual proposals received through the RFP process. In addition, a listing of resulting deliverables directly associated with the project is given along with perceived benefits. A ($) beside the perceived benefit indicates a potential financial payback to the City. The time frame indicates the year in which the project cost is realized in the City's special IT projects budget.

1. **Conduct a Hansen Gap Analysis**

| | |
|---|---|
| **Priority:** | High |
| **Budget:** | $25,000 - $50,000 |

**Objective:** Identify usage gaps in the Hansen system and determine if current or additional modules need to be implemented or if another system needs to be evaluated.

**Description:** It is unclear whether the City is getting the most it can out of the Hansen system. Although the system appears to have many features and capabilities, there is frustration over whether or not the City is utilizing all the functionality of the system to meet the business needs of some departments. The benefits of a Hansen gap analysis are threefold. A gap analysis can help (1) encourage an enhanced use of existing system capabilities at no increase in cost, (2) focus on more productive areas of the system, and (3) determine where Hansen should not be used. For functionality that remains missing after the gap analysis is performed, the City may consider a customized approach.

Once the gap analysis is performed, a similar process should be conducted with users of the system. The City needs to train heavy users of the system to fully utilize all modules that were purchased. Expanding Hansen users' skill sets and exposing them to the more advanced functionality of the system could possibly meet many of the data reporting needs of several departments. The City may consider addressing this need through a "train the trainer" approach where a Hansen consultant/trainer can instruct power users of the system to train other employees.

| Deliverables | Benefits |
|---|---|
| • Identification of Hansen system usage among departments<br>• Listing of missing functionality of the system<br>• Inventory of available modules and their capabilities<br>• Engagement of an external Hansen consultant to train users<br>• Hansen skills gap analysis<br>• Department-specific Hansen training curriculum and schedule | • Precise determination of Hansen utilization<br>• Leveraging of existing technology ($)<br>• Improved system utilization ($)<br>• More knowledgeable staff ($) |

**Time Frame:** 2004

2. **Implement Hansen DynamicPORTAL Module**

| | |
|---|---|
| **Priority:** | Medium |
| **Budget:** | $25,000 |

**Objective:** Enhance service capabilities of the City's systems to track and report on public needs.

**Description:** The City's Customer Response Team (CRT) has been working to improve service and response to citizen service calls and e-mails submitted through the website. Five field laptops have been purchased for building inspectors, project managers, and other field workers who are now able to access the network remotely for real-time data. To improve customer contact, Hansen's online problem reporting module (DynamicPORTAL) needs to be implemented. DynamicPORTAL directly links the City's website to the Hansen database using custom problem codes. Customers could receive automatic e-mail updates regarding their problem inquiry without any intervention from a customer service representative. The implementation of the online reporting module eliminates the redundant data entry that is the current practice and could improve communication with customers through continual updates. Some customization to the module and the system will need to occur to acclimate this function to the City's workflow.

While CRT has been useful for Public Works in tracking customer service requests, other departments have not employed Hansen's service request tracking capabilities in the same manner. The City will need to take steps to address wider utilization by other City employees beyond the CRT team.

| Deliverables | Benefits |
|---|---|
| • Implementation of Dynamic PORTAL<br>• User guidelines for the system<br>• CRT team training on new features<br>• Customer-friendly system capabilities | • Expanded use of the system<br>• Streamlined data entry process ($)<br>• Improved tracking of service requests for all departments across the City ($)<br>• Integrated operational systems with a focus on customer needs tracking<br>• Enhanced service reputation among citizens |

**Time Frame:** 2004

3. **Implement Hansen Online Permitting, Receipting, and Billing Functions**

| | |
|---|---|
| **Priority:** | Medium |
| **Budget:** | 2 to 3 @ $15,000/ea |

**Objective:** Expand permitting functionality to increase efficiency and system capabilities.

**Description:** Utilization of Hansen's online permitting module would streamline the permit issuing process by allowing citizens to apply for permits online. Although the functionality is built into the Hansen system and laptops have been purchased for online permitting and real-time inspection data access while out in the field, much process improvement work would need to be done in order to bring this project to fruition. The permitting process would need to be revised and streamlined with less human interaction in order for permits to be issued online. Currently, several steps are required from the time a citizen submits project plans to the City before a permit is issued. The current need for human intervention along the process may make online permitting infeasible. In addition, the costs associated with the extensive customization required for modifying each type of permit for online capabilities may be cost prohibitive. It was reported that the cost to modify each of the City's existing 28 different permits would be approximately $15,000 per permit, although there will only be several permit types that would be suitable for online transactions. Further cost/benefit analysis for this project could be warranted.

| Deliverables | Benefits |
|---|---|
| • New, streamlined processes<br>• Documentation of new systems and processes<br>• New module implementation<br>• Customized permits for online use | • New, streamlined processes ($)<br>• Improved and more cost effective interface for citizens<br>• Expanded system functionality |

**Time Frame:** 2004

4. **Continue Implementing Maintenance Management System Capabilities**

| Priority: | High |
|---|---|
| Budget: | $50,000 - $100,000 |

**Objective:** Enhance the City's capability to manage and report on infrastructure components such as roads, storm sewers, park land, and wetlands (surface water inventories).

**Description:** This project needs continued evolution. The basic components have been deployed and the Hansen system appears to be well-suited for managing the City's infrastructure assets. However, knowledge of its capabilities is not uniform across the City. This gap has led to inconsistent or incomplete data entry into Hansen, thereby limiting its usefulness. Managers would like to obtain hands-on mapping capabilities from GIS to track and monitor the condition of City assets, however, Hansen has not integrated well with ESRI software products (ESRI-Environmental Systems Research Institute the manufacturer of mapping software). This project would allow for improved tracking and monitoring of City lights, manhole covers, street signs, etc.

| Deliverables | Benefits |
|---|---|
| • Comprehensive and standard inventory definitions<br>• Updated inventory of the City's assets<br>• Institutionalized data entry process<br>• Useable inventory tracking with a reporting capability.<br>• Integration of Hansen and GIS | • Improved tracking and monitoring of City assets ($)<br>• Expanded use of GIS data ($)<br>• Consistent and uniform data entry process ($)<br>• Leveraging of existing technology ($) |

**Time Frame:** 2005

5. **Develop Records Management Infrastructure**

| Priority: | High |
|---|---|
| Budget: | $115,000 - $150,000 |

**Objective:** Strengthen the document storage, tracking, and retrieval functions to increase utilization of the City's information assets.

**Description:** Developing a records management infrastructure primarily involves acquiring and implementing document management software. Document management enables the electronic storage of virtually any type of document medium including faxes, e-mail, hard-copy contracts, maps, etc. These documents can be categorized and classified for easy storage and retrieval resulting in less paper clutter, enhanced document sharing, and improved document security.

The Plumtree Corporate Portal application has been acquired for a document management and team portal platform. The first phase of implementation is

proceeding and remains focused on records storage and management. This phase is scheduled to be completed in the fall of 2003. The second phase, which is scheduled for winter 2004, will involve storage and management of building and project plans, GIS maps, and other documents.

The City adopted a large number of building plans from King County that were never properly classified and archived. The lack of an archiving and document management system has resulted in the inability to categorize plans for as-built properties and capital improvement projects. Integration with GIS is a critical feature for this system.

| Deliverables | Benefits |
|---|---|
| • Document management system<br>• Document classification scheme<br>• Fully trained end users of the system<br>• Classification of older plans obtained from King County in system | • Improved document storage and management ($)<br>• Easier access to archived documents ($)<br>• Capability to use more information interdepartmentally ($)<br>• Increased access and security for documents shared across department boundaries<br>• Enhanced document sharing ($)<br>• Improved disaster recovery and business continuity response time<br>• Reduced paper storage ($) |

**Time Frame:** 2004

6. **Establish Technology Standards**

| | |
|---|---|
| **Priority:** | High |
| **Budget:** | $20,000 - $25,000 |

**Objective:** Streamline systems management through the deployment of universal technologies.

**Description:** Technology standards will allow the City to make the most efficient use of its technical resources, the staff required to support systems, and the software and hardware that comprise the City's infrastructure. The City has moved toward standardization on the server and desktop platforms with the deployment of Microsoft Windows 2000 and the Microsoft Office suite. The City has also adopted a best of breed approach to selecting industry leading software for major systems (e.g. Plumtree). However, database platforms are mixed with the use of Oracle, SQL Server, and Informix.

As part of establishing technology standards, the City will need to decide if continuing with Oracle as the database platform for Hansen is the best business decision. While stable and reliable, Oracle has been known to be cumbersome, expensive, and challenging to support and administer. As the City explores upgrading Hansen at some point, it may be restricted by the

fact that newer versions of Hansen do not support the older Oracle v8.05 version the City runs. The City will need to either (1) upgrade the Oracle database from v8.05 to v9i just to accommodate the Hansen upgrade, or (2) explore other database alternatives, such as Microsoft's SQL Server, as a viable option. The cost of upgrading both the database and the Hansen software will be considerable should the City remain with Oracle. The evaluation of other inexpensive alternatives may be more practical for the City from a fiscal, as well as administrative, perspective over the long term.

Additionally, computing hardware standards have not been formalized. The City can continue to establish technology standards on their own or engage a third party to define, research, compare, and recommend technology standards for the City going forward. Regardless of how the City chooses to define its technology standards, establishing and updating them should be a continual process as the City's technology direction changes and major shifts in the vendor marketplace occur.

| Deliverables | Benefits |
|---|---|
| • Documented technology standards<br>• Ongoing review of industry trends and technologies<br>• System selection study detailing the pros and cons of different database and hardware platforms<br>• Determination of what applications can leverage the database platform | • Improved technology management<br>• Better integration with current systems ($)<br>• Easier technology administration and deployment ($)<br>• Ability to upgrade to more current versions of core systems<br>• Potentially less expensive database architecture ($) |

**Time Frame:** 2004

7. **Enhance System Security**

| | |
|---|---|
| **Priority:** | High |
| **Budget:** | $15,000-$30,000 |

**Objective:** Help ensure that City systems and information are adequately protected against unauthorized access and destruction.

**Description:** As the City moves toward more web applications to improve citizen and employee access to information, security of the City's critical systems will become more of a concern because of the increased exposure to the Internet. Although the City had vulnerability assessment performed in 2001, it was focused primarily on the network perimeter and lacked practical recommendations. As such, not much has been implemented to enhance network security since 2001.

Now is the time to look toward fortifying the network as it enters its next stage of evolution – web services. The City should conduct a comprehensive security assessment that evaluates security from inside as well as outside the

network. A comprehensive security assessment would provide useful and applicable recommendations for fortifying the network including scanning the network perimeter for vulnerabilities, server security hardening for e-commerce, assessing security operations and procedures, assessing physical security, and disaster recovery planning. A security assessment should be performed on an annual basis or shortly after there are major changes to the network configuration such as the implementation of web servers.

Once completed, the City should work to enhance system security by implementing those recommendations that are practical and reasonable.

| Deliverables | Benefits |
|---|---|
| • Documented security issues and opportunities for improvement<br>• Review of the City's security posture<br>• Practical recommendations for improving information security<br>• Increased security mechanisms<br>• Ongoing security risk assessment | • Improved protection of City's information assets<br>• Enhanced information systems security operations<br>• Increased awareness among IT staff on how to improve security ($)<br>• Decreased susceptibility to the effects of unauthorized intrusion attempts and attacks ($) |

**Time Frame:** Ongoing

8. **Strengthen Technology Oversight**

| | |
|---|---|
| **Priority:** | Medium |
| **Budget:** | N/A |

**Objective:** Ensure that technology efforts are managed and implemented in a way that meets the greatest and most pressing needs of the City.

**Description:** The Steering Committee provides guidance to the technology function of the City by offering a business perspective on how technology is used within a given department. The Steering Committee includes members of the management team, and provides a forum for IT to communicate its latest efforts and issues concerning the City's computing environment. Regular Steering Committee meetings provide the opportunity for IT to hear from managers about the business drivers for technology use within the City. Although the Steering Committee has been established, protocol and member responsibilities need to be clearly defined to ensure that they are effective in its purpose.

| Deliverables | Benefits |
|---|---|
| • Standard agenda format<br>• A commitment by the Steering Committee to meet four times per fiscal year<br>• Updated quarterly status reports<br>• Revised/updated annual IT plan<br>• Active monitoring of technology activities | • Assurance that the IT plan is aligned with the City's strategic business plan ($)<br>• Improved partnership between the City's technology function and business units ($)<br>• Better utilization of City's technology budget ($)<br>• Increased visibility of business units' technology needs |

**Time Frame:** Ongoing

9. **Strengthen IT Staff Skills**

| | |
|---|---|
| **Priority:** | High |
| **Budget:** | $25,000 - $50,000 annually |

**Objective:** Ensure that IT staff have the skill sets required to meet the needs of the City, and that there is adequate backup expertise within the department.

**Description:** A well trained IT staff provides the foundation for a problem-free technology environment. While the current IT staff appears to be technically strong, as the City explores the latest networking technology or application software, training costs will need to be budgeted as part of the project implementation to help ensure a smooth deployment. There are areas in the current technology environment where training is needed including Active Directory administration, firewall administration, GIS training, Solaris administration, database administration, and report writing.

Another major area where skills are needed in the IT Department is business analysis. Employees who acquire this skill will be keenly aware of the functional capabilities of the Hansen and IFAS systems and how the departments are best served by these capabilities, which include data extraction, reporting, project management, and budget tracking. In addition, the individual serving in the capacity of a business analyst will understand and serve as a liaison between the IT Department and others to define the data requirements and definitions for the City as a whole to leverage more from the existing systems.

Backup expertise appears to be strong in some areas while insufficient in other areas. The GIS Specialist has the skills and background necessary to supplement the report writing skills of the Database Administrator, however, further skill refinement is needed. The GIS Specialist also has the Unix background to assist the current Unix Network Specialist. Windows 2000 administration appears to be shared between the Network Administrator and the two Network Specialists. However, exposure to server administration has been limited to just the Network Administrator, resulting in a skills gap and

insufficient backup. Furthermore, database administration responsibilities and report writing have been limited to one individual.

| Deliverables | Benefits |
|---|---|
| • Gap analysis and assessment of current staff skill sets<br>• Evaluation of the need for a business analyst<br>• Staff training plan and schedule | • IT staff better equipped to meet the needs of their customers<br>• More efficient technical staff ($)<br>• Improved turnaround for service requests ($)<br>• Strengthened decision making based on solid technical foundation<br>• Optimized use of City's systems ($)<br>• Increased return on technology investment ($)<br>• Improved staff backup in all technical areas of the network<br>• Less reliance on external contractors ($)<br>• Enhanced morale among IT staff |

**Time Frame:** Ongoing

10. **Enhance E-Government Functionality Through Website**

| | |
|---|---|
| **Priority:** | Medium |
| **Budget:** | $50,000 - $100,000 annually |

**Objective:** Improve City stakeholder access to useful information and key business data to facilitate decision-making and improved citizen communications through the use of user-friendly web applications via the City's website.

**Description:** The City's website needs to enter the next phase of development by incorporating more e-government functionality and dynamic content to serve internal and external stakeholders. Although thoughtfully designed, the City's website could be improved upon and leveraged as a medium for information dissemination, collaboration between departments and other public agencies, and ultimately, productivity enhancement. The website could be used for more business to business communication between bidding vendors, service providers, and the City. Furthermore, the website can serve the City employees as a portal to internal applications and information resources. This approach to e-government can also extend to the City's intranet to facilitate decision-making that has a strategic impact on a department or the City as a whole.

For citizens, e-government entails the use of web-based modules to connect with City resources. However, the City is not capitalizing on the web capabilities of the Hansen and Class systems. Each system has functionality

that will enable citizens to contact City departments through the web and help streamline and reduce the per-incident cost of some business operations. Within the Hansen system, there is the capability to apply for permits, submit payments, report problems, and apply for licenses through a web interface. Within the Class system, citizens could register for City programs, reserve facilities, schedule sporting events, and submit payments utilizing the web.

Furthermore, the website can be enhanced through the use of dynamic content rather that the static informational web pages that exist today. Dynamic content includes information posted on the website that is updated regularly such as status of public projects or recent job postings. Some departments are moving toward leveraging the capabilities of their system while others remain in the planning phase.

GIS is another area where the website can be used as a channel for information. By integrating GIS to the web, citizens and public agencies would be better served with easy access to parcel information, zoning information, demographic data and population statistics through the City's website. Currently, citizens are deferred to King County for this type of information.

| **Deliverables** | **Benefits** |
|---|---|
| • Continuously improved web capabilities<br>• Tool enabling better communication with City stakeholders<br>• Listing of requested functionality<br>• Determination of static versus dynamic content<br>• Evaluation of system modules for online capabilities | • Expanded use of the City's website ($)<br>• Improved interaction with citizens<br>• More efficient information dissemination to all City stakeholders ($)<br>• Increased productivity among staff who utilize the website for data retrieval and communication ($)<br>• Increased service offerings to citizens ($)<br>• More data accessibility<br>• Decreased reliance on King County to provide GIS information to citizens<br>• Technology progression |

**Time Frame:** 2004

## 11. Integrate Existing Systems For Business Intelligence

| | |
|---|---|
| **Priority:** | High - Medium |
| **Budget:** | $100,000 - $300,000 |

**Objective:** Enhance the decision making process by improving critical data acquisition and presentation through integration of the City's key systems.

**Description:** The City needs to leverage more useful data out of its core systems. Currently, the City's main systems, which include Hansen, IFAS, and Class, do not integrate with each other to produce comprehensive reports and critical business information. By integrating the data from these systems, the City's business units will be able to derive performance metrics, analyze business trends, and gain improved access to real-time data for making sound business decisions.

The aim is to deliver up-to-the-minute business reports for all City departments with a web-friendly, scalable reporting and analysis tool. Rather than relying on the current monthly schedule for Citywide report creation, managers would be able to design their own ad hoc reports from within a web-based report builder that hides the details of the business data.

The components for this project consist of a data warehouse, middleware, OLAP-style reporting, and a customized interface ("digital dashboard") for each department. The data warehouse will serve as the central repository for critical pieces of data from the City's various business systems and will help maintain consistency in the data from which reports are derived. Middleware is the programming layer that enables access between the system database and the data warehouse. OLAP, or online analytical processing, is computer processing that will enable a manager to view data from different systems to obtain performance figures. As a separate project, the dashboard is implemented as the web interface that serves to present the business intelligence data in graphical, chart, or table format.

| Deliverables | Benefits |
|---|---|
| • Integrated applications<br>• Accurate and consistent data that can be shared between departments<br>• On-demand reporting capabilities for all City business units<br>• User-friendly web interface for viewing data<br>• Data warehouse<br>• Customized digital (web) dashboards for each department | • Efficient use of systems ($)<br>• Leveraging of existing technology ($)<br>• Up-to-the-minute reporting ($)<br>• Improved decision making based on reliable data ($)<br>• Real-time report writing ($)<br>• Consistent and reliable data ($)<br>• Reduced time between report creation ($)<br>• Instantaneous access to critical information specific to one's department ($) |

**Time Frame:** 2004

## 12. Implement Portal Technology for Serving Business Intelligence Needs

| Priority: | Medium |
|---|---|
| Budget: | $100,000 - $200,000 |

**Objective:** Develop and implement a portal to provide access to management data used to monitor performance and ultimately make decisions.

**Description:** The City is exploring portal and digital dashboard technology over a web interface to present real-time performance metrics to department managers who need immediate access to information without having to interpret a report. A portal is a customized website that is primarily accessed from inside the network that can be tailored for each department, business unit or the entire City. The portal can display specific reports, documents, dynamic content, project information, and team collaboration from a single web interface. While the portal page is what users will see, in the background information is being gathered from different sources, such as databases, file folders, and the Internet, to populate the portal site. The technology behind this is typically a web interface, databases, and middleware to integrate all the data sources. A prototype will need to be designed and tested thoroughly prior to deployment.

A significant driver for implementing portal technology is the need for departments to have access to real-time performance metrics. Currently, performance metrics are being developed for each City department. The goal is to have a standard set of performance metrics in use by 2007. Some metrics that would be used universally include monthly expenditures for each department, year-to-date expenditures, time and materials cost of each project, major milestones achieved, and capitalization of equipment. The web interface will provide a medium for this information to be accessed from virtually anywhere. Digital dashboards will allow each department to customize the interface for viewing performance metrics by utilizing web modules or snap-in components. Rather than having to interpret long and cumbersome reports, the portal benefits decision makers by improving access to data and making it more manageable. This project would also support the City's performance measurement initiative.

| Deliverables | Benefits |
|---|---|
| • Evaluation of portal technology available in the marketplace<br>• Integrated digital dashboard front-end for disparate database back-end systems and file servers<br>• Customized dashboard site for each department | • Efficient use of systems ($)<br>• Leveraging of existing technology ($)<br>• Up-to-the-minute reporting ($)<br>• Improved decision making based on reliable data ($)<br>• Real-time report writing ($)<br>• Consistent and reliable data ($)<br>• Reduced time between report creation ($)<br>• Instantaneous access to critical information specific to one's department ($)<br>• Aligned with City's performance measurement initiative |

**Time Frame:** 2004

13. **Enhance Wireless Connectivity Around the City**

| | |
|---|---|
| **Priority:** | High |
| **Budget:** | $30,000 |

**Objective:** Improve data communications and printing capabilities for field workers by providing expanded wireless coverage and mobile printers.

**Description:** Building inspectors and project managers who primarily work outside City offices need better connectivity to the network while at project sites. Currently, wireless modems are used, however, there are numerous dead spots around the City that result in terminated sessions. The City could explore coverage with an alternate wireless service provider or implement strategically positioned wireless local area network (WLAN) hotspots to augment the current network. Wireless hotspots would allow for authenticated access to the City's network from designated areas around the City where a wireless access point can be strategically positioned.

With the deployment of any wireless technology, considerable planning and engineering is required to ensure a secure means of data transmission. The City will need to examine the best means of securing data whether through encryption, filtering, virtual private networking, implementing a separate authentication device or a combination of security technologies.

As a second part to this project, some departments have requested the capability to print from City vehicles. Mobile printers can help streamline the customer service process by equipping City workers with the ability to print permits, reports, and forms from mobile workstations connected to the City's network via wireless technology. These printers are typically more durable, smaller, and lighter than desktop models and are built to withstand use in vehicles.

| Deliverables | Benefits |
|---|---|
| • Contract with alternative cellular data communications provider that provides the wireless coverage the City needs<br>• Strategically positioned wireless access points around the City utilizing 802.11b or g standards<br>• Secure means of transmitting wireless communications<br>• Design map of hotspot positions in and around City<br>• Specification requirements for mobile printers<br>• An approximate number of mobile printers needed per department<br>• Mobile printers | • Enhanced network connectivity for field employees ($)<br>• More efficient field workforce ($)<br>• More reliable areas for connectivity<br>• Reduced session terminations<br>• Elimination of recurring monthly service costs with hotspot solution ($)<br>• Instant hard copies of permit, report, and forms documentation to field ($)<br>• Improved customer service |

**Time Frame:** 2004

14. **Enhance Project Management Capabilities**

| **Priority:** | High |
|---|---|
| **Budget:** | $5,000/std. class or $10,000/customized class<br>$50,000 for PM software |

**Objective:** Improve management of public projects to ensure that they stay within scope, budget, and schedule with minimal adverse impact to the public.

**Description:** Project management is a skill area that may be lacking among City staff tasked with managing capital projects. With project management training, project managers and project engineers will be able to more effectively and efficiently manage projects through their completion. In addition, improved project tracking and scheduling is needed through the use of a master project schedule. However, effective project tracking and scheduling may not be possible without adequate project management software.

Whenever possible, a standard project management tool should be used throughout the City. Hansen has not been widely accepted at the City as a project management tool. Microsoft Project is being used currently for most projects, but not in a client-server configuration. Standardization on one project management software could help enhance project scoping, scheduling, budgeting, and forecasting.

| Deliverables | Benefits |
|---|---|
| • A master schedule of projects in progress and in the future<br>• Training for City project managers on project management principles and software<br>• New project management standard<br>• Standardized choice of software for project management<br>• Communication to contractors of the City's standard | • Staff better equipped to manage projects to a successful completion ($)<br>• Improved oversight of public projects ($)<br>• Enhanced project scheduling<br>• Reduced time and resource constraints due to project overlap ($)<br>• Reduced project cost overruns ($)<br>• Familiarity with a single application for project management |

**Time Frame:** 2006

15. **Develop a Request for Proposal (RFP) Document for a New Telephone System**

| | |
|---|---|
| **Priority:** | High |
| **Budget:** | N/A |

**Objective:** Document the City's telephone system requirements in order to obtain project bids from telephony equipment vendors.

**Description:** The City has been besieged by phone problems that have gotten worse over time. Some of the problems experienced include dropped calls, inoperable phones, non-ringing phones, and delayed voicemail. Furthermore, additional needed features have been missing such as caller ID, call history log, and phone number programming. A cost/benefit analysis for system repair or replacement was conducted internally to determine the return on investment for each alternative. To address the City's phone issues, a conversion to an IP telephony system was seen by technology management as the most viable solution.

IP telephony, also known as Voice over IP (VoIP), is a communications technology that utilizes the data network infrastructure to transmit voice signals rather than utilizing traditional private branch exchange (PBX) equipment. VoIP calls tend to be less expensive and utilize less bandwidth than circuit-based calls over a PBX. VoIP is also easier to administer and more portable from building to building. If installed in the current City Hall and later moved to the new facility, the VoIP servers do not need to be reconfigured as long as the same IP addressing scheme is used at the new facility resulting in faster installation time.

As an additional consideration for future functionality, the City may want to leverage its e-mail system to utilize the VoIP system for unified messaging. Unified messaging is the aggregation of different formats of electronic communication into one common interface. Rather than relying on different electronic devices as repositories for receiving communications, unified messaging provides a one-stop repository for e-mail, voice mail, facsimile,

and other communication. A unified messaging system could help enhance employee productivity by minimizing the number of devices used to retrieve various forms of business communications. City employees will be able to access and manage all communication mediums through a common interface such as the Microsoft Outlook application. The City will need to utilize the functionality within the Exchange e-mail system to help integrate voicemail and fax communications over the VoIP network. Separate electronic fax software may be needed.

Based on the internal cost/benefit study, it is more practical to evaluate replacement telephony systems rather than troubleshooting the current system. With heavy involvement from the IT Manager, the City will need to issue an RFP in 2004 for a new IP telephony system that will meet the needs of the new City Hall in 2005.

| Deliverables | Benefits |
|---|---|
| • Replacement lifecycle for phone units<br>• Listing of all department phone requirements to assist in the system selection process<br>• System selection study for VoIP systems and capabilities<br>• RFP for new telephony system<br>• VoIP system<br>• VoIP phones<br>• A fully cabled City Hall<br>• Integration of unified messaging software with e-mail system<br>• Trained employees | • More reliable phone system ($)<br>• Improved communications capabilities<br>• Reduced frustration among employees<br>• Potentially less expensive architecture over the long term ($)<br>• Easier administration ($)<br>• Integration with data network<br>• Lower administration costs ($)<br>• Single interface for all employee communications ($)<br>• Tight integration between e-mail, voicemail, and fax servers<br>• Improved storage and management of all messages<br>• Enhanced utilization of e-mail system<br>• More efficient workforce ($) |

**Time Frame:** 2004

16. **Develop a Disaster Recovery and Business Continuity Plan**

| Priority: | High |
|---|---|
| Budget: | $15,000-$50,000 |

**Objective:** Ensure that the City can successfully recover its information systems and critical business operations in the aftermath of a disastrous event.

**Description:** A disaster recovery and business continuity plan will provide the framework for managing the recovery effort following a disastrous occurrence. It is a tool that prepares staff for disasters, lowers the risk of the City by having a

plan in place, and ultimately, positions the City to better serve its citizens in the event of a disaster. Disaster recovery planning is used to address data and systems recovery and involves system rebuilding or salvaging, re-establishing connectivity, and restoring data. Business continuity planning addresses the broader spectrum of operations, including such items as continuation of employee payroll and benefits, maintaining Public Works operations, reestablishing the finance and accounting function, etc. Covering more than just the information systems, the plan helps identify those business functions that are critical to the City's citizens and prepares the City to ensure a timely recovery of critical components.

| Deliverables | Benefits |
|---|---|
| • Business impact analysis<br>• Disaster Recovery/Business Continuity Plan<br>• Method of updating and testing the plan annually<br>• Schedule for annual testing and refinement of plan | • Improved preparation to manage through the recovery effort<br>• Reduced decision-making needed during the recovery effort<br>• Quick recovery of City's critical systems ($)<br>• Reduced impact to citizens in the event of an emergency ($)<br>• Identified areas of deficient planning |

**Time Frame:** 2004

## III. 2000 IT Strategic Plan Accomplishments Update Matrix

At the onset of the strategic planning process, each of the items in the 2000 plan was assessed for its (1) current status, (2) date, or expected date of completion, (3) the current impact or payback the project will bring to the City, (4) whether or not the project warrants continued effort, and (5) its 2003 impact/payback on the City on a scale of Low (currently meets the City's needs) to High (a critical area in need of attention). This table gives an indication of the accomplishments that have been achieved over the past three years, as well as how current priorities compare to those in the past. Many of the items from the 2000 plan are substantially complete; a high priority rating for those items in 2000 indicates the importance of completing the work underway. Some projects are ongoing in nature and do not have a forecasted date of completion. These are indicated with an "ongoing" note in the New Plan Forecast Date.

| 2000 Action Item | 2000 Priority | Status | Date | | Impact/ Payback | Recommended to Continue?* |
|---|---|---|---|---|---|---|
| | | | Completed | New Plan Forecast Date | | |
| 1. **Leverage Financial System Capabilities (IFAS)** | High | Implemented 9 of 10 available modules. Payroll system installed. Fixed asset system installed. | 100% | 2004 | High | No |
| 2. **Enhance Customer Response Capabilities** | High | Five field laptops purchased. Real-time updates now possible. Citizen access via Hansen problem reporting still needed. | 100% | 2004 | High | No |
| 3. **Implement Permits Tracking System (Hansen)** | High | Laptops for building and code inspectors were acquired. The need for human intervention restricts online permit processing. | 100% | 2001 | High | No |
| 4. **Implement Permitting, Receipting, and Billing Functions** | High | System is built to allow for online permitting and real-time inspection data in the field. Laptops have been provided for this capability. Process for permitting limits web option. | 65% | 2005 | High | Yes |
| 5. **Select and Implement Recreation Management Application** | High | Class system implemented. The e-commerce component still needs to be implemented. | 90% | 2003 | High | No |
| 6. **Continue Building Maintenance Management System** | Medium | Basic components have been deployed. Business process and requirements need further validation with automated components. | 10%-20% | 2005 | Medium | Yes |

*As determined by IT management during the summer of 2003.

| 2000 Action Item | 2000 Priority | Status | Date | | Impact/ Payback | Recommended to Continue?* |
|---|---|---|---|---|---|---|
| | | | Completed | New Plan Forecast Date | | |
| **7. Develop Records Management Infrastructure** | Low | Software acquired. Implementation proceeding. First phase for records management to be completed in fall 2003. Second phase for plans, maps, and other document management scheduled for winter 2004. | 40% | Ongoing | Medium | Yes |
| **8. Acquire/Implement Payroll/Human Resources** | High | Acquired IFAS HR module. Payroll can be obtained through system. Just starting to enter HR data. Reports are already designed for HR. | 98% | 2003 | Medium | No |
| **9. Establish Technology Standards** | High | Converted to Microsoft software exclusively for desktop and server. | 75% | 2004 | High | Yes |
| **10. Conduct Security Assessment** | High | Assessment completed by Sprint E-Solutions in 2001. No resources on staff. Will be a required component for future computing environment | 100% | Ongoing | Medium | Yes |
| **11. Strengthen Technology Oversight** | High | Steering Committee established. Committee protocol needs to be established. | 80% | Ongoing | High | Yes |
| **12. Develop MIS Plan Budget** | Medium | Ongoing. Not a separate project. | 100% | 2003 | Medium | No |
| **13. Strengthen IS Staff** | Medium | Technical training is ongoing. Cross training is limited due to constrained resources. | 65% | Ongoing | Medium | Yes |
| **14. Enhance E-Government Functionality** | Medium | The next stage in the evolution of technology for the City. Plans underway to building an underlying framework for utilizing the web to collaborate, disseminate, and enhance productivity including improving communications with citizens. | 10% | 2006 | Medium | Yes |

| 2000 Action Item | 2000 Priority | Status | Date | | Impact/ Payback | Recommended to Continue?* |
|---|---|---|---|---|---|---|
| | | | Completed | New Plan Forecast Date | | |
| **15. Integrate Existing Systems** | High | Ongoing. High-level work plan is being developed to connect systems for possible aggregation of information to improve access to performance metrics, reports, trend analysis figures, and capacity planning data for sound decision making. | 20% | 2006 | High | Yes |
| **16. Develop Skill Sets in Reengineering, GIS, and Business Analysis** | Low | Despite some effort to improve in these areas, the City turnover rate has been a challenge to fully implementing this project. A business analysis resource or function is needed. | 10% | 2006 | High | Yes |

# IV. User Requirements – Interviews and Survey

The following boxes illustrate the specific needs of each department and the potential projects to address those needs. Needs were derived from interviews with department managers and directors in addition to the end user technology survey. Within the interview process, participants were asked to discuss the information needs that are not currently being met with their department system. Participants were also asked to comment about the changing business environment of their department and perceived future technology direction. An aggregation of needs derived from the survey are shown in the End Users section. Potential projects are listed referencing the project number for further description.

**Finance Department**

**Needs**

1. Leverage capabilities of existing systems
2. Implement web features of systems
3. Improve the City's ability to respond in the event of an emergency or disaster
4. Develop more integration between the City's systems
5. Use technology for monitoring real-time performance metrics

**Potential Projects**

- Conduct a Hansen Gap Analysis (1)
- Implement Hansen DynamicPORTAL Module (2)
- Enhance E-Government Functionality Through Website (10)
- Integrate Existing Systems for Business Intelligence (11)
- Develop a Disaster Recovery and Business Continuity Plan (16)
- Implement Portal Technology for Serving Business Intelligence Needs (12)

**Public Works**

**Needs**

1. Remote access to the network from remote locations for inspectors
2. Enhanced utilization of Hansen capabilities
3. Business analyst who understands the City's systems and department needs
4. Project cost accounting
5. Project management tools
6. Streamlined work order process
7. Problem-free telephone system
8. Single interface for all stored communications

**Potential Projects**

- Conduct a Hansen Gap Analysis (1)
- Implement Hansen DynamicPORTAL Module (2)
- Strengthen IT Staff Skills (9)
- Enhance E-Government Functionality Through Website (10)
- Enhance Wireless Connectivity Around City (13)
- Enhance Project Management Capabilities (14)
- Develop a Request for Proposal (RFP) Document for a New Telephone System (15)

**Public Works Operations**

**Needs**

1. Better utilization of Hansen capabilities
2. Remote access to the network from remote locations for inspectors
3. Use technology for monitoring real-time performance metrics
4. Improved management and tracking of City assets
5. Traffic modeling and planning software
6. Additional training on the Hansen system

**Potential Projects**

- Conduct a Hansen Gap Analysis (1)
- Continue Implementing Maintenance Management System Capabilities (4)
- Enhance Wireless Connectivity Around City (13)
- Implement Portal Technology for Serving Business Intelligence Needs (12)

### City Engineering

**Needs**
1. Mobile printers for field team
2. GIS archiving system that interfaces with ESRI ArcView
3. Project management software in client-server configuration
4. Project based accounting system
5. Project management training for staff project managers
6. Remote access to the network from remote locations for project managers

**Potential Projects**
- Enhance Wireless Connectivity Around City (13)
- Develop Records Management Infrastructure (5)
- Enhance Project Management Capabilities (14)

### Planning and Development Services

**Needs**
1. Leverage capabilities of existing systems
2. Training on existing systems
3. More useful reporting from systems
4. Problem-free telephone system
5. Enhanced website
6. Better interaction with customer service function

**Potential Projects**
- Conduct a Hansen Gap Analysis (1)
- Implement Hansen DynamicPORTAL Module (2)
- Enhance E-Government Functionality Through Website (10)
- Develop a Request for Proposal (RFP) Document for a New Telephone System (15)

### Parks, Recreation, and Cultural Services

**Needs**
1. Better interaction with customer service function
2. More useful reporting from systems
3. Improved cost management system
4. Enhanced website
5. Implementation of Class system web modules

**Potential Projects**
- Implement Hansen DynamicPORTAL Module (2)
- Enhance E-Government Functionality Through Website (10)

### Information Systems

**Needs**
1. Integration of GIS capabilities to website
2. Training on Windows 2000, Solaris, GIS, and security
3. Technology standards
4. Consolidation of database platforms
5. Master project list
6. Improved security
7. Understanding of business drivers for technology
8. Better preparation for disastrous events

**Potential Projects**
- Establish Technology Standards (6)
- Enhance System Security (7)
- Strengthen IS Staff Skills (9)
- Enhance E-Government Functionality Through Website (10)
- Enhance Project Management Capabilities (14)
- Strengthen Technology Oversight (8)
- Develop a Disaster Recovery and Business Continuity Plan (16)

## End Users

**Needs**

1. Improved response and closure on service requests
2. Problem-free telephone system
3. More timely report creation
4. Improved project management
5. Better use of Hansen to track street assets
6. Document management system
7. More training to utilize existing systems more efficiently
8. Wireless access for field workers
9. Dynamic web content
10. Online permitting

**Potential Projects**

- Continue Implementing Maintenance Management System Capabilities (4)
- Implement Hansen Online Permitting, Receipting, and Billing Functions (3)
- Strengthen IT Staff Skills (9)
- Enhance E-Government Functionality Through Website (10)
- Enhance Wireless Connectivity Around the City (13)
- Enhance Project Management Capabilities (14)
- Develop a Request for Proposal (RFP) Document for a New Telephone System (15)

## V. Budget

| Project/Task | Responsibilities | | | FY 2004 | | | | FY 2005 | | | | FY 2006 | | | | Budget | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Internal Project Lead | Internal Project Team | External Assistance | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | 2004 | 2005 | 2006 | |
| | | | | | | | | | | | | | | | | $ 350,000.00 | $ 300,000.00 | $ 300,000.00 | $ 950,000.00 |
| **1. Conduct a Hansen Gap Analysis** | Tho Dao | CRT Rep(s), PW Reps, P&DS Reps, Park Maint Rep | Consultant | | | | | | | | | | | | | $ 50,000.00 | | | $ 50,000.00 |
| A. Determine and document existing Hansen capabilities | | | | | | | | | | | | | | | | | | | |
| B. Identify Hansen system usage among City departments | | | | | | | | | | | | | | | | | | | |
| C. Document areas of system that are not used | | | | | | | | | | | | | | | | | | | |
| D. List missing functionality of the system | | | | | | | | | | | | | | | | | | | |
| E. Develop user skills gap matrix | | | | | | | | | | | | | | | | | | | |
| F. Determine method of training | | | | | | | | | | | | | | | | | | | |
| G. Engage Hansen consultant/specialist to train the trainer(s) | | | | | | | | | | | | | | | | | | | |
| H. Develop department specific Hansen training curriculum and schedule | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **2. Implement Hansen DynamicPORTAL Module** | Tho Dao | LaDonna Smith, Joanne Dillon, Bob Blyzka | Hansen PM | | | | | | | | | | | | | Not Allocated in Budget | | | |
| A. Develop a detailed project plan for installation onto Hansen system | | | | | | | | | | | | | | | | | | | |
| B. Install software module | | | | | | | | | | | | | | | | | | | |
| C. Configure software | | | | | | | | | | | | | | | | | | | |
| D. Customize web interface as needed | | | | | | | | | | | | | | | | | | | |
| E. Test functionality through web | | | | | | | | | | | | | | | | | | | |
| F. Train customer service representatives on new functionality | | | | | | | | | | | | | | | | | | | |
| G. Develop citizen instructions for posting on website | | | | | | | | | | | | | | | | | | | |
| H. Go live with the new module | | | | | | | | | | | | | | | | | | | |
| I. Support as needed | | | | | | | | | | | | | | | | | | | |
| J. Develop reports from new functionality | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **3. Implement Hansen Online Permitting, Receipting, and Billing Functions** | Tho Dao | P&DS Reps and Mgt, Finance Staff, IT Staff | Hansen PM | | | | | | | | | | | | | $ 30,000.00 | $ 30,000.00 | $ 30,000.00 | $ 90,000.00 |
| A. Define requirements | | | | | | | | | | | | | | | | | | | |
| B. Determine order of permits to make available through web interface | | | | | | | | | | | | | | | | | | | |
| C. Acquire Hansen online permitting, receipting, and billing module | | | | | | | | | | | | | | | | | | | |
| D. Develop a detailed project plan for implementation | | | | | | | | | | | | | | | | | | | |
| E. Assess process changes | | | | | | | | | | | | | | | | | | | |
| F. Develop new procedures | | | | | | | | | | | | | | | | | | | |
| G. Install new software | | | | | | | | | | | | | | | | | | | |
| H. Configure software | | | | | | | | | | | | | | | | | | | |
| I. Customize web interface as needed | | | | | | | | | | | | | | | | | | | |
| J. Test process flow through system | | | | | | | | | | | | | | | | | | | |
| K. Train City staff on new functionality | | | | | | | | | | | | | | | | | | | |
| L. Develop citizen instructions for posting on website | | | | | | | | | | | | | | | | | | | |
| M. Go live with the new modules | | | | | | | | | | | | | | | | | | | |
| N. Support as needed | | | | | | | | | | | | | | | | | | | |
| O. Develop reports from new functionality | | | | | | | | | | | | | | | | | | | |

| Project/Task | Responsibilities | | | FY 2004 | | | | FY 2005 | | | | FY 2006 | | | | Budget | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Internal Project Lead | Internal Project Team | External Assistance | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | 2004 | 2005 | 2006 | Total |
| **4. Continue Implementing Maintenance Management System Capabilities** | Paul Haines | PW Mgt/Staff, CMO Rep(s), IT Staff (DBA/GIS) | Vendor and Consultant | | | | | | | | | | | | | Not Allocated in Budget | | | |
| A. Identify the cause of incompatibility issues between Hansen and GIS | | | | | | | | | | | | | | | | | | | |
| B. Determine if the issues can be handled in-house | | | | | | | | | | | | | | | | | | | |
| C. Engage a Hansen and/or ESRI engineer to assist with the integration issues, if needed | | | | | | | | | | | | | | | | | | | |
| D. Test mapping capabilities | | | | | | | | | | | | | | | | | | | |
| E. Develop user documentation | | | | | | | | | | | | | | | | | | | |
| F. Roll out to departments | | | | | | | | | | | | | | | | | | | |
| G. Develop reports from new functionality | | | | | | | | | | | | | | | | | | | |
| **5. Develop Records Management Infrastructure** | Tho Dao | City Department Reps - Business Experts | Vendor | | | | | | | | | | | | | $ 35,000.00 | $ 65,000.00 | $ 50,000.00 | $ 150,000.00 |
| A. Determine capacity of Plumtree system for document management | | | | | | | | | | | | | | | | | | | |
| B. Identify documents/records that can be stored in the system | | | | | | | | | | | | | | | | | | | |
| C. Develop classification scheme for each type of document | | | | | | | | | | | | | | | | | | | |
| D. Update document tracking mechanisms (e.g. indices) | | | | | | | | | | | | | | | | | | | |
| E. Integrate other means of input into system (e.g. facsimile, scanner, etc.) | | | | | | | | | | | | | | | | | | | |
| F. Test document management and searching capabilities | | | | | | | | | | | | | | | | | | | |
| G. Train department users | | | | | | | | | | | | | | | | | | | |
| H. Develop user documentation for the system | | | | | | | | | | | | | | | | | | | |
| I. Roll out to departments | | | | | | | | | | | | | | | | | | | |
| J. Identify and implement additional systems, as needed | | | | | | | | | | | | | | | | | | | |
| **6. Establish Technology Standards** | Tho Dao | City Department Staff | Outside Technology Consultants | | | | | | | | | | | | | $ 25,000.00 | | | $ 25,000.00 |
| A. Identify potential alternative standards for each relevant technology | | | | | | | | | | | | | | | | | | | |
| B. Evaluate technologies' advantages, disadvantages, risks, budget, and time frames | | | | | | | | | | | | | | | | | | | |
| C. Conduct an alternatives analysis for database technology | | | | | | | | | | | | | | | | | | | |
| D. Review against City business goals | | | | | | | | | | | | | | | | | | | |
| E. Discuss and select | | | | | | | | | | | | | | | | | | | |
| F. Implement standards | | | | | | | | | | | | | | | | | | | |
| G. Re-evaluate standards on an ongoing basis | | | | | | | | | | | | | | | | | | | |
| **7. Enhance System Security** | Tho Dao | IT Staff | Outside IT Security Consultants | | | | | | | | | | | | | $ 30,000.00 | | | $ 30,000.00 |
| A. Determine if security assessment should be conducted internally or through a consultant | | | | | | | | | | | | | | | | | | | |
| B. Acquire assistance, if needed | | | | | | | | | | | | | | | | | | | |
| C. Develop outline of requirements for the security assessment | | | | | | | | | | | | | | | | | | | |
| D. Conduct security assessment | | | | | | | | | | | | | | | | | | | |
| E. Discuss security findings and recommendations | | | | | | | | | | | | | | | | | | | |
| F. Determine whether security recommendations are aligned with City business plan | | | | | | | | | | | | | | | | | | | |
| G. Address immediate security concerns | | | | | | | | | | | | | | | | | | | |
| H. Develop a plan to address remaining security issues | | | | | | | | | | | | | | | | | | | |
| I. Plan for annual security report card and regular penetration testing | | | | | | | | | | | | | | | | | | | |

| Project/Task | Responsibilities | | | FY 2004 | | | | FY 2005 | | | | FY 2006 | | | | Budget | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Internal Project Lead | Internal Project Team | External Assistance | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | 2004 | 2005 | 2006 | |
| **8. Strengthen Technology Oversight** | Tho Dao | IT Steering Committee | None | | | | | | | | | | | | | Not Allocated in Budget | | | |
| A. Develop IT Steering Committee meeting schedule | | | | | | | | | | | | | | | | | | | |
| B. Create a standard agenda of running topics (e.g. strategic plan progress updates) | | | | | | | | | | | | | | | | | | | |
| C. Discuss ongoing technology projects that have strategic impact | | | | | | | | | | | | | | | | | | | |
| D. Develop project status reporting tools for use at quarterly meetings | | | | | | | | | | | | | | | | | | | |
| E. Assign a moderator for meetings | | | | | | | | | | | | | | | | | | | |
| **9. Strengthen IT Staff Skills** | Tho Dao | IT Staff | None | | | | | | | | | | | | | $ 30,000.00 | $ 30,000.00 | $ 30,000.00 | $ 90,000.00 |
| A. Define needs | | | | | | | | | | | | | | | | | | | |
| B. Inventory existing skill sets | | | | | | | | | | | | | | | | | | | |
| C. Evaluate skill "gap" | | | | | | | | | | | | | | | | | | | |
| D. Determine need for targeted training/coaching | | | | | | | | | | | | | | | | | | | |
| E. Identify training vendor(s) | | | | | | | | | | | | | | | | | | | |
| F. Obtain/deliver training | | | | | | | | | | | | | | | | | | | |
| G. Obtain/deliver coaching, as necessary | | | | | | | | | | | | | | | | | | | |
| **10. Enhance E-Government Functionality Through Website** | Tho Dao | City Departments | Vendor and Consultant | | | | | | | | | | | | | $ 40,000.00 | $ 55,000.00 | $ 80,000.00 | $ 175,000.00 |
| A. Identify potential e-government Web functions | | | | | | | | | | | | | | | | | | | |
| B. Rate e-government alternatives | | | | | | | | | | | | | | | | | | | |
| C. Develop priority listing of e-government projects | | | | | | | | | | | | | | | | | | | |
| D. Select additional required software | | | | | | | | | | | | | | | | | | | |
| E. Implement e-government software applications | | | | | | | | | | | | | | | | | | | |
| F. Train City users on new applications | | | | | | | | | | | | | | | | | | | |
| G. Publicize new Web applications to public | | | | | | | | | | | | | | | | | | | |
| H. Maintain systems | | | | | | | | | | | | | | | | | | | |
| **11. Integrate Existing Systems for Business Intelligence** | Tho Dao | City Departments | Consultant | | | | | | | | | | | | | $ 30,000.00 | $ 120,000.00 | $ 110,000.00 | $ 260,000.00 |
| A. Identify specific data integration needed for the City | | | | | | | | | | | | | | | | | | | |
| B. Determine integration strategy (e.g., data warehouse) | | | | | | | | | | | | | | | | | | | |
| C. Develop hardware and software requirements for integration | | | | | | | | | | | | | | | | | | | |
| D. Determine areas of required external assistance | | | | | | | | | | | | | | | | | | | |
| E. Prioritize integration needs | | | | | | | | | | | | | | | | | | | |
| F. Develop project plan for data integration | | | | | | | | | | | | | | | | | | | |
| G. Implement integrations | | | | | | | | | | | | | | | | | | | |
| H. Regularly report on project status | | | | | | | | | | | | | | | | | | | |
| **12. Implement Portal Technology for Serving Business Intelligence Needs** | Tho Dao | City Departments | Consultant | | | | | | | | | | | | | Budget Amount Combined with #11. | | | |
| A. Utilize existing portal technology in pilot projects | | | | | | | | | | | | | | | | | | | |
| B. Configure and define dashboard reporting mechanism | | | | | | | | | | | | | | | | | | | |
| C. Create interfaces for new data integrations | | | | | | | | | | | | | | | | | | | |
| D. Manage and maintain dashboard | | | | | | | | | | | | | | | | | | | |

| Project/Task | Responsibilities | | | FY 2004 | | | | FY 2005 | | | | FY 2006 | | | | Budget | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Internal Project Lead | Internal Project Team | External Assistance | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | 2004 | 2005 | 2006 | |
| **13. Enhance Wireless Connectivity Around the City** | Tho Dao | Public Work/P&DS | Vendor | | | | | | | | | | | | | $ 30,000.00 | | | $ 30,000.00 |
| A. Identify specific needs for hotspots | | | | | | | | | | | | | | | | | | | |
| B. Review service from alternate WLAN providers | | | | | | | | | | | | | | | | | | | |
| C. Develop list of acceptable hotspot locations | | | | | | | | | | | | | | | | | | | |
| D. Conduct cost/benefit analysis of hotspot and WLAN technology | | | | | | | | | | | | | | | | | | | |
| E. Implement solution | | | | | | | | | | | | | | | | | | | |
| F. Train users and modify client hardware, as needed | | | | | | | | | | | | | | | | | | | |
| G. Manage system and track performance | | | | | | | | | | | | | | | | | | | |
| **14. Enhance Project Management Capabilities** | Jill Marilley | City Departments | Vendor | | | | | | | | | | | | | Not Allocated in Budget | | | |
| A. Develop standard project management methodology | | | | | | | | | | | | | | | | | | | |
| B. Define basic requirements for project managers | | | | | | | | | | | | | | | | | | | |
| C. Select software standard | | | | | | | | | | | | | | | | | | | |
| D. Train project managers on standards and software | | | | | | | | | | | | | | | | | | | |
| E. Deploy new project management framework | | | | | | | | | | | | | | | | | | | |
| **15. Develop a Request for Proposal (RFP) Document for a New Telephone System** | Tho Dao | City Departments | Outside Telecommunications Experts | | | | | | | | | | | | | Not Allocated in Budget | | | $ 50,000.00 * |
| A. Develop functional requirements and standards for all City satellite locations with provisions for videoconferencing | | | | | | | | | | | | | | | | | | | |
| B. Define procurement guidelines | | | | | | | | | | | | | | | | | | | |
| C. Establish vendor selection criteria and scoring | | | | | | | | | | | | | | | | | | | |
| D. Develop RFP | | | | | | | | | | | | | | | | | | | |
| E. Distribute RFP and review responses | | | | | | | | | | | | | | | | | | | |
| F. Determine finalists | | | | | | | | | | | | | | | | | | | |
| G. Coordinate vendor demonstrations | | | | | | | | | | | | | | | | | | | |
| H. Apply scoring model for vendor selection | | | | | | | | | | | | | | | | | | | |
| I. Conduct site visits | | | | | | | | | | | | | | | | | | | |
| J. Determine potential costs | | | | | | | | | | | | | | | | | | | |
| K. Review vendor contract | | | | | | | | | | | | | | | | | | | |
| L. Conduct list of outstanding contract provisions as negotiation framework | | | | | | | | | | | | | | | | | | | |
| M. Conduct negotiations | | | | | | | | | | | | | | | | | | | |
| N. Accept and implement system | | | | | | | | | | | | | | | | | | | |
| O. Provide ongoing support | | | | | | | | | | | | | | | | | | | |
| **16. Develop Disaster Recovery and Business Continuity Plan** | Debbie Tarry | City Departments/ Shoreline Police Department | Consultant | | | | | | | | | | | | | $ 50,000.00 | | | $ 50,000.00 |
| A. Define mission-critical applications | | | | | | | | | | | | | | | | | | | |
| B. Determine minimum levels of service | | | | | | | | | | | | | | | | | | | |
| C. Identify potential preparedness options | | | | | | | | | | | | | | | | | | | |
| D. Review current status of business continuity | | | | | | | | | | | | | | | | | | | |
| E. Develop disaster recovery and business continuity plan with budget | | | | | | | | | | | | | | | | | | | |
| F. Gain approval | | | | | | | | | | | | | | | | | | | |
| G. Implement plan | | | | | | | | | | | | | | | | | | | |
| H. Test (ongoing) | | | | | | | | | | | | | | | | | | | |

* Allocated from C.I.P.