



Memorandum

TO: Public Safety, Finance and
Strategic Support Committee

FROM: Randall Murphy
Chief Information Officer

**SUBJECT: WIRELESS INTERNET (WiFi)
STATUS UPDATE**

DATE: June 7, 2007

Approved

Kay Winer

Date

6/12/07

RECOMMENDATION

It is recommended that the Public Safety, Finance and Strategic Support Committee accept this status report on Wireless Internet (WiFi).

STATUS UPDATE

On December 5, 2006, Council was provided with an Information Memo updating the status of Citywide WiFi. The report included a complete review of prior work, as well as current and future planned activities.

Since the last report, project activity has focused on continuing to fulfill the items reported in December. The most critical item was the preparation of the Request for Proposals to engage a consultant in the development of the City of San José Business Requirements and Strategic Plan for implementation of WiFi citywide. The RFP was released on April 4, 2007 and closed on May 7, 2007. The Scope of Work included:

- Stakeholder Requirements: Preparation of a document that identifies, organizes and analyzes municipal broadband requirements within the City to capture a comprehensive perspective of wireless broadband across the organization.
- Broadband Services and Service Model Considerations: Preparation of a document that identifies and analyzes risks and exposures to the City with respect to the financial foundation of the service provider(s) and demand placed by the public for municipal broadband wireless services.
- Strategic Framework: Preparation of a strategic planning document that provides a framework so that anticipated issues are addressed, and flexibility is provided in the future to allow the system to continue to focus on delivering services that meet business needs.

The project timeline, departmental participation and scope/cost factors are in review by the Evaluation Committee and will be incorporated into the staff recommendations for action. It is expected that an award of contract will be complete by the end of July, 2007.

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This project will require significant participation by City staff in reviewing the experiences of other jurisdictions, alternative business and governance models, and technical architecture information related to nature and level of service for WiFi technology. The Consultant will facilitate and educate staff from several City departments to determine the appropriate recommendations for the WiFi Communication Strategy for the City of San José.

The next WiFi update will be submitted to the Public Safety, Finance and Strategic Support Committee in October, 2007. If you have any questions, please contact me at 595-3560.

A handwritten signature in black ink that reads "Randall Murphy". The signature is written in a cursive style with a large, sweeping initial "R".

Randall Murphy
Chief Information Officer



Memorandum

TO: Public Safety, Finance and
Strategic Support Committee

FROM: Randall Murphy
Chief Information Officer

SUBJECT: Citywide Technology Needs

DATE: June 7, 2007

Approved

Ray Winer

Date

6/7/07

RECOMMENDATION

It is recommended that the Public Safety, Finance and Strategic Support Committee accept this report on Citywide Information Technology Needs.

BACKGROUND

On April 20, 2006, the Information Technology Department (ITD) presented a list of critical technology needs to the Making Government Work Better Committee following an assessment by the Chief Information Officer at the direction of the City Manager. In summary, the assessment highlighted the need for ITD to refocus the department's role and responsibilities in City operations, and identified the following key areas of immediate need:

- Increase staff training
- Extend cabling services to Public Safety and Central Service Yard
- Validate and improve current policies and practices for Information Security and Network Architecture
- Address lack of 24/7 support
- Conduct a Citywide requirements analysis of enterprise-wide Electronic Content Management system

In order to address critical needs identified in the Chief Information Officer's assessment, the following actions were taken to bring focus and accountability to the role of the Information Technology Department:

- Worked with the City Manager (with Council's approval) to establish a Technology Reserve

- Committed \$4,000,000 to a network and infrastructure upgrade for the Police Communications Campus
- Began expansion of network services to the Central Service Yard for backup and redundancy for key voice and data systems
- Reorganized and refocused the IT Department
- Improved technical product and service specifications in the procurement process
- Required interdepartmental coordination for all IT projects
- Transitioned and relocated Customer Contact Center to ITD
- Migrated project management of the Integrated Billing System (IBS) to ITD

ANALYSIS

As a result of the additional resources provided through the technology reserve and the actions taken to refocus the IT Department, great strides have been made toward improving technical impacts, both current and future. Additionally, expanded areas of critical need have been identified and future actions are planned.

Major Technical Impacts

Current Environment

Strengthening the network supporting all City resources and the identification of ongoing funding for this support is a primary objective for ITD. The City employs approximately 6500 workstations, 300 network servers, 20 application servers, 10 database servers, 30 network interfaces with external government agencies and 10 network interfaces with external business organizations. We process more than 1,000,000 email transactions per day. The present network includes 11 separate email servers, multiple external connections to the network and critical operations supported by separate technical personnel.

Identified Issues and Actions

The present technology infrastructure in the City is inefficiently supported by several departments. Applications, desktops and server technologies are duplicated in departments and do not afford the City the opportunity to leverage the systems or talent of employees across the organization. For example:

- a) Several different email servers are located within departments throughout the City, in addition to the primary email server supported by ITD. Each of these servers requires maintenance, support, staff time and expertise that are more effectively utilized when central.
- b) Internet and intranet services have lacked resources to coordinate the provision of timely and complete City information to the public, business partners, public sector peers and to our employees. Analysis of "hits" to the City's website indicates that staff is spending a

great deal of time supporting web pages that are rarely visited. Much of the hardware and software related to supporting these websites are also managed in a fragmented service delivery model.

- c) Related to web services, several departments have independently explored the use of document imaging, a variety of technologies for workflow, to improve their respective departmental operations. This variety adversely affects employee cross-training and resource obligations for support.

The fragmented support approach fails to realize the benefits of a Citywide approach, which reduces redundancy and allows for leveraging, establishes consistent practices and standards, and provides the department and employees a common set of tools which have cross-departmental resource support. Initiatives and the realignment of ITD resources are currently in progress to improve Citywide services and support for critical content management technologies such as web, document management and Geographic Information Systems (GIS):

- Realignment of existing staff with clear definitions of duties and responsibilities. This will enable the City to continue to invest in the existing workforce and build skills necessary to maintain the systems with a high degree of response, regardless of which department is utilizing the technology, as the tools would be common and standard rather than unique and distinct among offices.
- Release of RFP and vendor selection is currently in progress to select a consultant to conduct a Citywide Business Requirements Analysis for software bid specifications and identification of pilot projects to move in a coordinated direction with shared technologies (particularly Electronic Content Management).
- Expansion of Technical HelpDesk work order system to all IT Staff for reporting and monitoring services requests.

Future Needs and Actions

The City has a great deal of aging equipment that far exceeds recommended best practices for replacement, is costly to support and maintain, and limits the interconnectivity among business applications. In the absence of a replacement policy, equipment to support the City's vast network is currently purchased based upon funding availability, urgent need and department-specific requirements. In efforts to address this critical need, a portion of the allocated Technology Reserve for fiscal year 2007-2008 will be used to upgrade the oldest or most vulnerable equipment that places the stability of the City network or employee productivity at greatest risk. The results of the upcoming Security Information Audit and Network Architecture Audit will more clearly identify system vulnerabilities to ensure that age along is not the primary factor in determining equipment replacement and upgrade.

Further, a cohesive Communications Strategy for wired and wireless connectivity must be developed. Current production support requires immediate inter-building fiber and in-building cable for connectivity with the Central Service Yard and the Public Safety Campus. Central Service will be the next expansion of Voice over Internet Protocol (VoIP) service as well as the City's voice system redundancy site. The Public Safety Campus requires an upgrade to

adequately support the load of business applications targeted for this business group. \$4,000,000 has been budgeted for this upcoming activity to address critical current and future needs.

Major Project Impacts

Current Environment

We currently have several major application projects in progress which represent an aggregate, cumulative cost in excess of \$40 million. The ongoing staff necessary for these expanded services is approximately 25% less than 3 years ago, and new projects underfunded the resources necessary to support these major initiatives. This places ITD in the position of redirecting priorities away from strategic issues such as Technology Master Planning, Enterprise Communication Strategies, Enterprise Data Architecture to operational changes such as Call Center, system improvements for billing, and project management.

Identified Issues and Actions

While operating in this environment, several fundamental issues in the existing organizational structure and the way in which ITD provided services to various City departments were identified. An important example and area that required immediate attention was the new Integrated Billing System, activated in production on July 1, 2006. This business application was a coordinated effort of several departments including Finance, Environmental Services, Information Technology and the City Manager's Office and represented a significant change in the way we do business. With this concerted effort, critical issues became apparent soon after "go-live":

- a) The combined City Manager and Recycle Plus Call Centers' staff were not provided with sufficient training, procedures, and staffing to handle the volume of customer calls.
- b) The project implementation, while completed on time and on budget, did not have sufficient staff resources to conduct business process re-engineering, and adequately prepare City staff to provide ongoing system support.

Based upon these issues, several changes were immediately taken to change ITD's role and responsibility in IBS and future major technology projects and initiatives:

- Management responsibility for the combined Customer Call Center was transferred to the CIO
 - Detailed operations reviews produced improvement in resource allocation, training programs, quality control processes and call escalation procedures
 - Opportunities were identified for system improvement and additional use of technologies such as Integrated Voice Response (IVR)
- ITD acted on technical support for the network and computing systems supporting departmental and Citywide operations

- Assessment of cable and network improvement requirements for the Public Safety Campus and Central Service Yard were conducted, resulting in the identification of facility improvements at the Central Service Yard and a cable replacement project at the Public Safety Campus
- Upgrade and expansion of HelpDesk software was expanded to all ITD technical staff
- ITD engaged functional departmental representatives in all aspects of project and operational support
 - Specific representation by Directors, Managers, subject matter experts, and operational staff from IT and Departments is required for all major technical project implementations
 - New ITD Program Managers will be accountable for coordination of all technical project master plans, projects, priorities and resource allocations with Executive Steering Committees

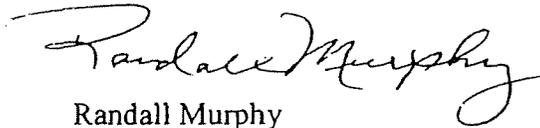
Future Needs and Actions

Still needed is the continuation of skills augmentation for current IT staff in order to develop and maintain a consistent, robust technological foundation. Funds have been appropriated to expand voice and data capabilities, support upgraded technologies from the conversion of older applications, and enhance web development and Geographic Information Systems. Staff reliance on Nortel Services was reduced in excess of \$400,000 for Fiscal Year 2007-2008 as a result of skills transfer and staff training.

An Information Security Audit Request for Proposal (RFP) for the purpose of ensuring the confidentiality, integrity and availability of City data was released this month. This Audit will assess our current environment, critical exposure areas of risk and provide recommendations for improvement. Within the next three months, we plan to release another RFP to audit the City's Network Architecture. A Network Architecture Audit is critical to the performance of network resources, as well as our ability to protect the availability and security of network services. The audit will identify inconsistent and obsolete hardware and software interfaces that will need to be isolated or replaced in order to limit system downtime, and will provide cost estimates to resolve Level One risks.

Further, we will be enabling Business Application Groups with strengthened Project Management and Business Engineering skillsets. City staff, both Information Technology and its functional partners, is accountable for and have the most knowledge of the way in which their business is conducted. While we engage staff in more productive and efficient use of technology, we must ensure that the tools support the business processes, procedures and policies of the organization.

This memorandum is intended to provide the Public Safety, Finance and Strategic Support Committee informed of the most current activities and needs with respect to Citywide Information Technology. The next status report will be presented to the Committee in August, 2007 and will include a review of the Technical Infrastructure improvements and the status of Business Application planning efforts. If you have any questions, please contact me at 535-3560.



Randall Murphy
Chief Information Officer