Information Technology

INFORMATION TECHNOLOGY SERVICES

IN SAN FRANCISCO GOVERNMENT

Prepared by

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INTRODUCTION

Located just 40 miles north of Silicon Valley, the City and County of San Francisco is well positioned to take full advantage of the information age. However, the City and County, in pursuit of conducting the business of government, has been unable to achieve many of its objectives in the area of information technology. These deficiencies are due to the following factors: lack of political leadership; ineffective planning; poor inter-departmental communication; short-term budgeting; inadequate personnel management; and inter-departmental competition for precious technology resources. The rapid pace of change in information technology, coupled with the problems identified above, require a rethinking of how San Francisco manages its information technology infrastructure.

The 1995-96 San Francisco Civil Grand Jury embarked on an ambitious investigation into the utilization and management of information technology services within city government. The Civil Grand Jury arrived at 15 findings and 14 recommendations pertaining to this topic. The report is divided into the following sections: Citywide Issues, City Controller, Training, Information Services Division (ISD), Department of Human Resources (DHR), and Public Access Issues. In addition, two appendices provide additional data that guided the work of the Civil Grand Jury.

CITYWIDE ISSUES

Summary

There is an absolute necessity for a comprehensive Strategic Plan coupled with a Business Plan recognizing fundamental needs in the area of information technology in San Francisco. These plans are needed at both citywide and department levels and are essential to the growth of our City into the 21st Century. Formulating of multi-year budgets, setting of technical personnel standards, enabling enhanced procurement time consistent with the fast-paced nature of this field, coordinating and linking programs, multi-departmental development and training -- all point to having a central city department and a department head with sufficient authority and leadership to direct San Francisco's critical technology agenda, as well as serving in an advocacy role to the Mayor, the Board of Supervisors and the citizenry.

The current dispersion of functions among the Chief Administrative Officer (CAO), the Controller, the Electronic Information Processing Steering Committee (EIPSC), the Information Services Division (ISD), and the Department of Electricity and Telecommunications (DET), is an invitation to mediocrity, at best, but most likely

devolves into a communications Tower of Babel. It is a situation wherein the City is attempting to create and maintain a vast technology with no one effectively in charge.

A common feature of modern municipal government, less so in private enterprise, are bureaucratic impediments that stymie timely and effective action. Although this "fact of life" can be accommodated in most administrative endeavors, the rapid advance of information technology threatens to far outpace our efforts.

Background

Interviews with City Officials, Department Heads and Information Services personnel, as well as attendance at focus groups conducted by KPMG-Peat Marwick, reveal that there is a definite need for direction at the highest level regarding the entire range of information technology.

EIPSC and ISD, formerly under the Chief Administrative Officer (CAO), are now both placed under the City Controller, while DET remains under the CAO -- an office which will no longer exist after June 1996. The duties, responsibilities, authority and scope of EIPSC and ISD have been muddled since their inception. Their interface and division of responsibility for planning with DET are loosely defined. San Francisco has reacted to the rapid onslaught of new technology in much the same manner as most, if not all, governmental bodies -- with incrementalism and devolution of authority.

The Civil Grand Jury's Survey (see Appendix A) documents inequality in the availability of technology resources within city departments -- from a highly sophisticated new Main Library, to a near total absence of technology in most smaller departments. This is grossly apparent in budgets, hardware and software inventories, trained personnel, access to training programs, and informed leadership.

Findings

- • There is a grievous lack of interface and coordination within groups of departments which must function collectively. [1] Sharing of technological resources among affinity departments should be coordinated from a central authority.
- DET is responsible for the teleconnectivity of our government buildings. However DET does not have responsibility for data transmission hardware and software which must be accommodated by this infrastructure. DET has only minimal coordination with EIPSC and ISD. The separation of voice and data communication is inexcusable in today's networked environment.
- EIPSC has failed in its mission to craft a citywide master plan for information technology; failed to provide leadership to advance a citywide agenda for technology; and failed to adequately address the needs of smaller city departments. The weaknesses of EIPSC have likewise been identified in the KPGM-Peat Marwick "Strategic Plan for Information Technology" (1996), a consultant's report crafting a roadmap for future direction of the city's information technology systems and services.

Recommendations

1. A new position of Chief Information Officer (CIO) should be created to provide strategic planning and leadership for information technology as it pertains to conducting the city's business. This executive level position should be appointed by the Mayor and confirmed by a majority vote of the Board of Supervisors. A candidate for this position

must possess relevant training and expertise. The CIO should serve at the pleasure of the Mayor.

2. The CIO should serve as the Department Head of a new Department of Information Technology (DIT). Those functions now assigned to the Department of Electricity and Telecommunications (DET), the Electronic Information Processing Steering Committee (EIPSC), and the Information Services Division (ISD) would be transferred to DIT.

3. As an initial project, DIT should have an information management audit conducted of all city departments to determine needs for citywide planning and budgeting as related to information technology goals.

CITY CONTROLLER

Summary

In order to assess the next direction for technology in city government, better accounting and inventory must be prepared for strategic decision making. The City Controller, as the city's chief fiscal officer and auditor, does not currently maintain adequate records or budget information concerning city computer assets. Historically, the City Controller has relied on EIPSC's three- year master plan documents to serve as a register of departmental ownership of computer equipment and software. However, this component of the master plans has not been maintained, nor required, for several years. The inability of the city to collect an inventory of what computer assets it owns is a serious problem. Without such an inventory, the city cannot know if theft occurs or how to plan for upgrading equipment.

The city's annual budget request process does not adequately address how much is spent on computer technology. The City Controller is unable to determine how much of the General Fund is appropriated to computer technology due to inadequate accounting procedures.

Background

Certainly the first step in understanding what San Francisco needs is to fully understand what the city already owns. When asked by the Civil Grand Jury, "How many PCs are owned by the City and County?" no city official could answer this basic query. Considering that any item requisitioned by a city employee is assigned a property inventory control number, and must be drawn from a specified city fund, it is logical to assume that a master inventory should exist.

Total city spending on information technology, likewise, is a mystery. During the mid-1980s, a study prepared for the Mayor's Fiscal Advisory Committee indicated that $60-90 million was spent on technology annually. Interviews with key city officials revealed estimates that this amount is now closer to $120 million. This information is in agreement with the Civil Grand Jury's Survey (see Appendix A) which estimated city spending at about $100 million per year. When asked by the Civil Grand Jury, the Controller was unable to provide an estimate of technology expenditures stating that departments do not follow standard budget accounting when it comes to purchasing computer equipment or services.

The lack of accounting controls and inventory of city-owned and leased computer equipment is very disturbing. A citywide system of uniform nomenclature for computer procurement and a register of assets is needed.

Findings

- Neither EIPSC, ISD nor the Controller knows how many computers are owned by the City. Relying on the three-year master plans for departmental inventories has failed to result in a citywide inventory of computer assets.
- There is no uniform vocabulary and there are no unified accounting methods to track the acquisition of computer equipment and services within the budget process.

Recommendations

4. The Controller should develop an inventory of all city-owned and leased computer assets. This inventory, once created, should be annually updated and incorporated as part of the annual budget request process.

5. The Controller should standardize the nomenclature of computer assets and develop better accounting practices for citywide technology expenditures.

TRAINING

Summary

Technology and training have become vitally linked in today's competitive workplace. Rapid change in technology demands that city information technology personnel have access to state-of- the-art training. City funds for computer training are scarce and in decline; yet demands for more training grow with new advances in emerging technology. Creative solutions to fund training must be sought.

Background

The rapid pace of technological change brings training to the forefront. The Civil Grand Jury's Survey (see Appendix A) paints an uneven portrait of the "state of training" within city departments. According to our survey, for example, 36% reported no formal training opportunities for their computer staff. This bleak assessment stems from the low priority placed on technology training by departments and from the vulnerability of training funds during the Mayor's budget review process. In essence, training is seen as a "luxury" item during tough budget negotiations.

ISD offers an impressive catalog of technology training opportunities. However, smaller departments cannot afford to send their staff to even city subsidized training events offered by ISD. Thus, some smaller departments receive no training unless the employee is willing to absorb the cost without reimbursement. The ISD Training Center is unable to recover the costs of providing these services without charge-back fees. Even if money were not an issue, ISD does not have sufficient in-house trainers to meet the city's actual demand for computer learning.

Findings

- Funds for computer training opportunities are meager and vulnerable to budget cuts.
- According to the Civil Grand Jury Survey (See Appendix A), vendors are already supplying training equal to ISD-sponsored training opportunities.

Recommendation

6. The City Purchaser, in cooperation with EIPSC, should require a training set-aside component as part of the computer procurement bidding process.

INFORMATION SERVICES DIVISION (ISD)

Summary

ISD is a relatively strong performing department. However, the Civil Grand Jury's investigation did reveal specific operational weaknesses. Interviews with city officials, our questionnaire results from city Management Information Systems (MIS) departments, site visits to the Data Center, documents gathered from ISD, and our research comparing other California cities and counties (see Appendix B) pointed us to the following areas of needed improvement: ISD, as a charge- back enterprise, does not support all city departments equally. Rather, ISD provides fee-for- service support for city departments with resources, often neglecting smaller departments. ISD needs to develop a wider vision and to look ahead. Exciting improvements in data networking permit the creation of a citywide relational database, commonly referred to as "data warehousing." ISD should take the leadership in advancing a shared citywide network.

Background

ISD serves as the major provider of data processing and information services for the City and County. The Division consists of 180 information technology professionals and has an annual budget of $20 million. ISD is funded by charging back city departments for information technology services, and it currently reports to the City Controller.

ISD tries to be very customer-service driven. To accomplish this, ISD assigns staff to be liaisons to city departments, convenes annual department-head level meetings, offers popular training programs, and provides consulting services for a reasonable fee. In all these informal activities, ISD is very eager to ascertain overall satisfaction. However, in terms of formal service agreements, ISD is less eager. It is essential that ISD develop more formal channels when fulfilling the data processing needs of city departments. This would involve service-level agreements signed by both ISD and their clients. With such service-level agreements, city departments would be assured of reduced risk and greater satisfaction with ISD products and services.

Quality Assurance (QA) is crucial to the professional functioning of information technology. By definition, QA involves policies, procedures and controls to ensure error-free data processing. ISD, as the leading city technology department, has been slow to adopt standard QA guidelines for its mainframe operations. This is very disturbing and demands swift attention.

ISD has been unable to serve the needs of smaller departments effectively. Smaller departments are unable to afford ISD services. This situation has created a dichotomy in city government. Smaller city departments, largely dependent on the General Fund, are technology-poor, while larger city departments, less dependent on the General Fund, are technology-affluent. ISD gravitates toward serving the needs of departments that can pay for their services. Thus, smaller city departments are often left to fend for themselves.

The need for creating a data warehouse for city government is becoming imperative. The inter- departmental sharing of information is critical among cross-functional departments. The networking of various city departments will ease the sharing of data

and reduce the necessity of multiple points of data collection. For example, the Fire Department needs to know from the Assessor who owns a particular property in the event of an emergency. ISD should consider creating a team to study the feasibility of establishing a data warehouse. The data warehouse concept would pull a variety of city-owned data from defined sources and integrate the data so that the information is no longer simply operational but strategic information.

Findings

- The Civil Grand Jury Survey (see Appendix A) found that 73% of respondents had not used service-level agreements in their dealings with ISD.
- The Civil Grand Jury Survey (see Appendix A) revealed the following: Only half of the respondents used some kind of Quality Assurance process. ISD has adequately documented the Change Control Management Process describing how changes are introduced to the computer production environment.The Source Material Migration Process (ISD Quality Assurance documentation) was found to be incomplete as of March 1996. The Job Control Language Migration Procedures and Control Card Migrations were missing from the city's mainframe operations manual.
- ISD has been ineffective in transferring technology to smaller city departments. Comments solicited by the Civil Grand Jury Survey document the woes confronting smaller city departments that must operate without new technology and without the expertise of ISD due to budgetary constraints.

Recommendations

7. ISD should operate, using standard service-level agreements, so as to ensure customer satisfaction and better accountability.

8. ISD, whose role it is to advance information technology, should make one of its main priorities the promotion of improved Quality Assurance standards, both within ISD operations and citywide.

9. ISD should develop better strategies to assist smaller city departments in their acquisition and use of appropriate technology. In order to achieve this objective, ISD should conduct a needs assessment within these smaller city departments to determine their budgetary and personnel issues pertaining to technology.

DEPARTMENT OF HUMAN RESOURCES

Summary

During July 1996, the Department of Human Resources is scheduled to implement a new pilot classification structure for information systems (IS) personnel. It is important that this reclassification project's first-year implementation have oversight. Additionally, there is a need to account for personnel time devoted to information technology projects and a need for new procedures to share IS positions among smaller city departments. Anything less will perpetuate a flawed personnel system that does not serve the technology needs of San Francisco government.

The current civil service pay structure for IS positions exists in an environment of departmental parochialism. It is common practice for departments to focus on their perceived uniqueness in terms of staffing, rather than on the greater needs of the city. The concept of a "citywide employee" does not seem to exist in the organizational

practices of city managers. Departments with alternative sources of revenue expand autonomously while smaller departments, dependent on the General Fund, are left with minimal resources with which to update their IS capabilities.

Background

The proposed reclassification system for information systems (IS) personnel is based on a protracted study that has been in progress for at least six years. According to the Civil Grand Jury Survey, this delay has directly affected over 625 FTE (full-time equivalent) employees accounting for $35 million in annual payroll.

Traditionally, class and pay have been perceived as indicators of the degree to which an employee is valued. Fortunately, the new IS reclassification scheme puts into practice a compensation plan that is internally equitable and competitive in the marketplace for computer expertise in the Bay Area.

Although there is no Business Plan for the City and County, nor are there such plans for individual city departments, the reclassification project is based on what is considered validated data. Additionally, the reclassification project must negotiate through the collective bargaining environment. It is envisioned that the new classifications for IS employees will achieve the objective of reducing the number of classes by a third, bringing greater flexibility and advancement to the workforce. Implementation is scheduled for July 1996. The Department of Human Resources intends to use this reclassification project as a prototype for future contract negotiations for other classes and as part of a wider effort in civil service reform.

The allocation of IS personnel within various city departments is largely dependent on administrative discretion over funding sources. Smaller city departments are most likely to have limited staffing authority and less likely to have IS positions. There is no effective advocacy for bringing much needed technology resources to smaller departments.

Findings

- The proposed reclassification of IS personnel is a novel, pilot project. The success or failure of this personnel management effort will determine the future reclassification of other city personnel contracts.
- The Civil Grand Jury survey (see Appendix A) reveals a few disturbing results: - 35% reported no specific written job classifications;

- 48% reported no job performance criteria;

- 40% reported no specific written job descriptions;

- 57% reported no tracking of hours spent on IS projects.

- Many smaller city departments, particularly those totally dependent on the General Fund, have no information technology personnel on staff. The Civil Grand Jury Survey (see Appendix A) collected comments from smaller city departments that indicate an imperative need for rethinking how the city allocates computer staffing.

Recommendations

10. The Department of Human Resources should monitor the first-year implementation of the new information systems reclassification series and report to the Mayor and Board of Supervisors on its progress by October 1, 1997.

11. The Department of Human Resources should develop a citywide tracking and accounting system for personnel hours spent on projects by classified information systems personnel.

12. The Department of Human Resources should develop procedures for the sharing of classified information systems personnel among smaller city departments.

PUBLIC ACCESS ISSUES

Summary

The City and County is moving incrementally towards building a "virtual city government". However, this effort will not succeed without more attention being given to wider access to electronic mail (e-mail) and the Internet by the entire city workforce. For example, the Mayor's Office and the Board of Supervisors do not have access to either of these basic technological tools. ISD should expand the city's World Wide Website to include more useful and complete city information. The city's website should also be improved to allow for greater citizen involvement by adding interactive features that support and encourage participation.

Demands for electronic city-owned data by commercial ventures should not be ignored. City policies should be crafted balancing the Sunshine Ordinance with the possible commercialization of city-owned data, as appropriate. Revenue raised by marketing value-added city-owned data can supplement the General Fund.

Background

For decades, information technology has not received high priority attention in the City and County. San Francisco, for example, operates without a current citywide master plan for information technology, despite such a mandate required of EIPSC. Cumbersome decision- making processes and lack of vision, not to mention a lack of resources, have kept the City and County from implementing technological solutions which could save millions of public dollars, substantially increase levels of service, and open access to City Hall. The City and County has no central database to identify the resources that it provides. Accordingly, City and County employees often do not know where to send a constituent in need of service. Delivery of service and information would be improved if San Francisco were to work towards a "single point" customer service philosophy. With accurate, centralized, automated information, both city employees and the citizenry would benefit.

The trend toward computerized local government information creates new challenges and opportunities. Electronic public access can be provided at multiple access levels, both free basic service, and supplementary or enhanced services that are paid for by user fees.

Bringing city government as close to the people as possible is now within reach. Emerging new technologies, such as electronic mail (e-mail) and the Internet (World Wide Web), open new channels for citizen contact with City Hall. San Franciscans can

now point and click on a personal computer to find city information or send a message to an elected official.

The San Francisco City Homepage on the World Wide Web (WWW), conceived and managed by ISD, is a good beginning. However, ISD needs to create a city homepage that provides more useful and complete information enhanced with interactive capabilities. The city's website is still in its infancy. However, the website does not provide the most basic information such as a directory of city services. Likewise, the city's official website cannot connect a citizen to essential offices such as the Board of Supervisors or the Mayor's Office. ISD should set as a goal to create a "virtual City Hall" complete with a comprehensive guide to city services and the ability for transmitting messages from citizens to appropriate city officials. Such enhancements to the San Francisco official website will both empower city employees to solve public problems with greater efficiency and create new avenues for citizen involvement in municipal affairs. For example, an interactive website would allow San Franciscans the opportunity to forward ideas or suggestions on how to reduce costs and increase efficiency in our city government. Likewise, the Civil Grand Jury could solicit suggestions and complaints for potential investigation.

San Francisco has not kept pace with commercial demands for city-owned data and data access. As more and more local information becomes computerized, the costs of providing access to automated data escalate. Various business enterprises are eager to obtain electronic local information for commercial purposes. At present, the City and County does not operate with a clear policy regarding city information as a commodity. Balancing the public's access to tax- supported information against commercial demands for the same information is mired in controversy. City officials should consider crafting a reasonable pricing policy for the delivery of value-added information products and services. Enhanced data are developed explicitly for market use and can be sold at fair market value bringing revenue to the city.

New York City, for example, is currently investigating the appraisal and marketing of data which reside in its electronic databases. During January 1996, New York City issued a "Request for Information" to solicit a private sector partner to help market enhanced city data at market rates. Local governments from around the country will be carefully monitoring New York's experiment in data commercialization. To reduce information technology cost and risk, San Francisco should collaborate with appropriate private sector information industries to identify opportunities for joint development and use. Revenue raised from the retailing of city-owned data could supplement the General Fund or be earmarked for technology reinvestment.

Findings

- City departments do not have adequate access to electronic mail or the Internet.

According to the Civil Grand Jury Survey (see Appendix A): - 28% reported no access to e-mail;

- 36% reported no access to the Internet.

- The City does not have in place a policy for the commercialization of city-owned data.

The current Administrative Code does accommodate the selling of market enhanced city data. While taking into consideration all aspects of the San Francisco Sunshine

Ordinance, the city can explore the formation of commercial ventures in marketing its electronic information. Escalating costs and demands for city-owned data will be problematic until these issues are addressed.

Recommendations

13. The City and County should make optimal use of e-mail and the Internet to foster interactive communications between the citizens and their government.

14. The City and County, in consultation with the San Francisco Sunshine Ordinance Task Force, should investigate the retailing of city-owned data products and services in support of the General Fund.

Responses Required

Mayor

Board of Supervisors

Chief Administrative Officer

Controller

Electronic Information Processing Steering Committee

Information Services Division

Department of Electricity and Telecommunications

Department of Human Resources

Notes:

[1]
Emergency Services [Police, Fire, Office of Emergency Services, Paramedics], Revenue [Controller, Assessor, Recorder, Planning], Education [Board of Education, Library, CCSF, Fine Arts Museums], Public Health Department and Department of Social Services, Law Enforcement [District Attorney, Public Defender, Police, Sheriff, Juvenile Probation, Courts], etc.