

# THE DEVELOPMENT SERVICES DEPARTMENT PROJECT TRACKING SYSTEM

## ***SUMMARY***

In 1995, the San Diego City Council recognized the need for and began to implement a computer system for tracking and controlling information related to the development process. Initially this was called Process 2000; it has been renamed the Project Tracking System (PTS). The design and implementation of the system has not yet been completed. The 2002/2003 Grand Jury asked the County Auditor to conduct a risk assessment of this project. This Grand Jury asked the Auditor to make a more detailed audit. The auditor found that project costs had not been properly tracked, the effectiveness of the new system is not being measured, and there is no evidence to show that the Development Services Department (DSD) properly investigated the availability of commercial off-the-shelf software. The Auditor also found that failure to complete all parts of the system could expose the City to legal action if a DSD customer were to claim that funds collected had not been properly spent.

## ***PURPOSE OF THE STUDY***

The Grand Jury wished to gain a better understanding of the status of the Project Tracking System and of the effectiveness of DSD in managing this effort.

## ***PROCEDURES EMPLOYED***

- The San Diego County Auditor was asked to investigate the various risk areas that had been identified in the previous Risk Assessment report.
- The Grand Jury also observed a demonstration of the system and interviewed users of the system.
- Several DSD customers were interviewed concerning their opinions about the Project Tracking System.

Appendix A of this report contains the *Follow Up Audit of the City of San Diego's Project Tracking System* requested by this Grand Jury. The Grand Jury asked the auditor a number of questions after review of the audit that clarified several of the issues raised.

## ***DISCUSSION***

One of the first discussions of Process 2000 is found in the *Manager's Report 95-148* issued June 23, 1995 signed by Maureen Stapleton, Assistant City manager and Tina Christiansen, Development Services Department Manager. The Background section of the report provides a useful summary of the early days of the project.

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“To enhance economic development and streamline the existing permit processing system, the Mayor and City Council directed the City manager to begin a redesign of the existing land development process. A pilot program was initiated in March 1994, to improve the overall system by restructuring the review process around a project, rather than a permit, orientation. The citywide implementation of Process 2000, the transfer of the Development Services general fund budget to the enterprise fund and the conversion of certain deposit accounts to flat fees, are included as policy issues in the Fiscal Year 1996 Proposed Annual Budget. An evaluation of Process 2000, and the proposed System Improvement Charge to support its implementation are included in this report.”

In the document the System Improvement Charge was defined as follows, “To fund equipment and programming needed for project tracking and the automation of map and record data for the full implementation of Process 2000, a *temporary* 5% System Implementation Charge is proposed to be applied to all land development permits. This will include building permits, plan checks and inspection services, subdivision and grading permits, new construction inspection services, and deposit accounts for discretionary actions. This fee will *not* be charged on water and sewer capacity charges, Development Impact Fees (DIF), Facility Benefit Assessments (FBA), or for the Housing Trust Fund.” This fee was imposed on September 23, 1995 and ended when \$3.5 million had been collected.

The expected implementation of the project was explained as follows: “The approval of this charge will allow Process 2000 to be implemented by geographic expansion over the next two years, with revenue collected in years three and four used to reimburse funds advanced by the enterprise fund.” It seems quite clear that Process 2000 was expected to be completed in 1997 at a cost of \$3.5 million.

What happened? The San Diego Data Processing Corporation (SDDPC) is a City owned organization established to provide expert computer-related services to the City. SDDPC was engaged to manage the software implementation of Process 2000. On July 25, 1996 SDDPC hired a contractor to develop a computer-based mapping system as an important part of Project 2000. Eight months later, SDDPC became dissatisfied with the performance of the contractor and cancelled the contract for cause. There followed a complex arbitration process and a number of lawsuits<sup>1</sup> concerning the meaning and distribution of the arbitration award. As finally resolved on April 8, 1999, two years after the initially contemplated completion of the project, SDDPC paid \$1,435,361.58 to the contractor and received the work product that had been produced. The work product was estimated to be of little value.

The Grand Jury asked the auditor if there is evidence that DSD Management estimated that the \$3.5 million collected from customers was adequate to cover the cost of developing and implementing Project 2000. His answer was that the Office of Audits &

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<sup>1</sup> The court records fill five thick folders.

Advisory Services (OAAS) requested but did not receive evidence from DSD Management to confirm that the \$3.5 million collected from customers was adequate to cover the cost of developing and implementing Project 2000. This information was not available. In fact, the auditor found another estimate of Project 2000 costs, also developed in 1995 that showed One-Time costs to be \$13,285,512 and ongoing costs to be \$2,853,540.

As of February 2004 the County audit of the PTS noted that only 5 of 11 planned modules of the system had been fully implemented. No doubt, these 5 are the major components, but the remaining 6 modules are also important for a complete system. This brings the Jury to the conclusion that DSD has not planned and managed the Process 2000/PTS development in an efficient and proficient manner.

A major objective of Process 2000 was the reduction of permit processing time by 50%. The auditor reported that DSD did not keep records that are sufficient to show whether or not this goal has been met. Therefore, the Grand Jury offers the following anecdotal evidence that may provide insight into this issue. A professional permit runner (a person hired to shepherd a permit through the DSD bureaucracy) provided one particularly relevant observation during a Grand Jury effort to talk to DSD customers as they left the building. In the past, a runner could get about five permits processed in a day. Now they are fortunate to get one. This admittedly limited and, perhaps, unreliable evidence certainly suggests that the stated objective of reducing permit-processing time by 50% has not been reached.

On another occasion, two Jury members asked a plan checker the name of the individual who had checked a particular set of plans. This required him to use a part of the PTS system not familiar to him. After 55 minutes of effort, he gave up. Either he could not extract information from the system, or the information was not there, perhaps because the data input module was not designed to ensure that all required information was included in a project record. He made two comments. He had not been trained in this element of the PTS, and he felt that the system had many "rough edges". He stated that modules usually worked, but the interfaces between them needed to be improved.

The Grand Jury noted the auditor's observation that "most Development Service Department (DSD) employees have accepted the new software", but we have also heard dissent from some employees and customers.

## ***FACTS AND FINDINGS***

### ***Facts***

- There is no evidence that the Process 2000/Project Tracking System has reduced permit processing time by 50%.
- Process 2000/Project Tracking System has not been developed and implemented within the time frame initially contemplated.

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- Process 2000/Project Tracking System has not been developed and implemented within the budget originally proposed.
- Information is not available to enable the determination of the actual cost of developing and implementing the Process 2000/Project Tracking System.

### ***Findings***

- The Development Services Department has not planned, developed or accounted for the Process 2000/Project Tracking System effort in a proficient manner.

## ***RECOMMENDATIONS***

**The San Diego County Grand Jury recommends that the San Diego City Council:**

- 04-15-1** Require an evaluation of the Project 2000/Project Tracking System in order to determine the tangible improvements achieved, the efficiencies and effectiveness of what has been implemented and an overall evaluation of its impact on “customer service”.
- 04-15-2** Require a complete audit of the Project 2000/Project Tracking System that reveals all information related to the income from fees assessed and the expenditures of those fees.
- 04-15-3** Require a report that identifies those specific tasks remaining to be implemented for completion of the Project 2000/Project Tracking System.
- 04-15-4** Require a report that identifies the intended purposes, time lines and costs for the remaining tasks of the Project Tracking System.
- 04-15-5** Require the City Manager to implement policies to assure that future software development projects within the City of San Diego are carefully planned and implemented by experienced professionals who will assure that proper controls are in place so that the stated objectives of the project can be met, the project can be completed on time, and the costs of the project are budgeted and properly controlled.

## ***REQUIREMENTS AND INSTRUCTIONS***

The California Penal Code §933 (c) requires any public agency which the Grand Jury has reviewed, and about which it has issued a final report, to comment to the Presiding Judge of the Superior Court on the findings and recommendations pertaining to matters under the control of the agency. Such comment shall be made *no later than 90 days* after the Grand Jury publishes its report (filed with the Clerk of the Court); except that in the case of a report containing findings and recommendations pertaining to a department or agency headed by an elected County official (e.g. District Attorney, Sheriff, etc.), such

comment shall be made *within 60 days* to the Presiding Judge with an information copy sent to the Board of Supervisors.

Furthermore, California Penal Code §933.05(a), (b), (c), details, as follows, the manner in which such comment(s) are to be made:

- (a) As to each grand jury finding, the responding person or entity shall indicate one of the following:
  - (1) The respondent agrees with the finding.
  - (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.
- (b) As to each grand jury recommendation, the responding person or entity shall report one of the following actions:
  - (1) The recommendation has been implemented, with a summary regarding the implemented action.
  - (2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.
  - (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the grand jury report.
  - (4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.
- (c) If a finding or recommendation of the grand jury addresses budgetary or personnel matters of a county agency or department head and the Board of Supervisors shall respond if requested by the grand jury, but the response of the Board of Supervisors shall address only those budgetary or personnel matters over which it has some decision making authority. The response of the elected agency or department head shall address all aspects of the findings or recommendations affecting his or her agency or department.

Comments to the Presiding Judge of the Superior Court in compliance with the Penal Code §933.05 are required by the date indicated:

<b><u>RESPONDING AGENCY</u></b>	<b><u>RECOMMENDATIONS</u></b>	<b><u>DATE</u></b>
<b>San Diego City Council</b>	<b>04-15-1 through 04-15-5</b>	<b>09/27/04</b>

## **APPENDIX A**

### **FOLLOW UP AUDIT OF THE CITY OF SAN DIEGO'S PROJECT TRACKING SYSTEM**

#### **INTRODUCTION AND BACKGROUND**

At the request of the San Diego County Grand Jury (Grand Jury), the Auditor and Controller's Office of Audits & Advisory Services (OAAS) conducted a risk assessment of the City of San Diego's implementation of Process 2000, now called the Project Tracking System (PTS). PTS is a Microsoft Windows based database and was designed, in house, to change and improve the way the City of San Diego delivers services in the land development and review process, and it was developed in response to the City Council and Mayor's direction to the City Manager to reduce the permit processing time by 50%.

The emphasis of the review was to assess the implementation status of PTS and to review implementation-related expenditures and operating revenues. The report of this review was issued June 18, 2003. On August 28, 2003 the Grand Jury requested a follow up audit to determine the updated status and progress of PTS.

With the Grand Jury's approval, OAAS reviewed the five risk areas identified in the June 18, 2003 report. The short timeframe required by the Grand Jury, the complexity of PTS, and the vast number of records related to its implementation made it impossible for OAAS to perform standardized testing methods for auditing of specific risk areas. This report is intended only as a follow up audit of the specific risk areas identified in the risk assessment. The issues identified within this report include audit findings and recommendations.

#### **PROJECT SCOPE AND METHODOLOGY**

During the course of our June 2003 risk assessment and subsequent follow up, interviews were conducted with staff in the City of San Diego's Development Services Department (DSD). DSD is responsible for managing the majority of the construction and development project review services for the City. The Development Services Department functions include building inspection, engineering, fire, planning, zoning, and water/sewer specialties. The major functions of building plan check and inspection, development and environmental planning, and subdivision review have been centralized to provide greater coordination and management of the development process.

In addition, we reviewed key information including the Memorandum of Understanding (MOU) between the City of San Diego and San Diego Data Processing Corporation (SDDPC) and related documents, PTS planning documents and status reports, various

management reports, and a Management Review Report sponsored by the City Manager. The MOU with SDDPC is an agreement to provide quality Information Technology (IT) and telecommunication services and solutions to the City. This follow up report does not include opinions, findings, or recommendations related to SDDPC.

In our June 2003 report, we identified five risk areas related to the implementation of PTS. These risk areas were as follows: 1) The DSD had not fully implemented PTS; 2) The DSD had not adequately tracked the revenues and expenditures related to the implementation of PTS; 3) DSD may not have been measuring the system’s effectiveness; 4) DSD may not have fully researched alternative and commercially available software applications before it decided to develop the current system.

**OBSERVATIONS AND RECOMMENDATIONS**

**FINDING I: PROJECT TRACKING SYSTEM IS NOT FULLY IMPLEMENTED**

Background

The implementation of Process 2000 required significant restructuring of City departments and other key operational and technological changes. In 1994 the City successfully piloted Process 2000. As a result, the City planned to replace the pilot with a large system, now known as the Project Tracking System (PTS), which would be capable of serving all development review customers of the City within 2 years.

The Development Services Department (DSD) utilized a phased approach in implementing PTS. The first steps were to place almost all development review processes under one department, to change the focus from permit review to a coordinated project orientation, and to outline clear and simple goals for PTS. Specific measures were detailed by DSD in the “Process 2000 Transition Plan,” and included areas such as mapping automation, project tracking, a financial plan, and a timeline for complete implementation by 1997.

Current Status – Project Tracking System (PTS) Not Fully Implemented

As of February 9, 2004, the technology design component of PTS has not been fully implemented. DSD planned to implement eleven software modules related to the PTS, but six modules remain to be developed and/or fully implemented. Attachment (A) provides a detailed description of the PTS software modules. In short, the status of each of the modules is as follows:

MODULE #	STATUS	COMMENTS
Module 1	Implemented	Continuous maintenance and enhancements.
Module 2	Implemented	Continuous maintenance and enhancements.

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Module 3	Implemented	Continuous maintenance and enhancements.
Module 4	Implemented	Continuous maintenance and enhancements.
Module 5	Implemented	Continuous maintenance and enhancements.
Module 6	Not Implemented	Materially completed by January 31, 2004.
Module 7	Not Implemented	Not Started.
Module 8	Not Implemented	Not Started.
Module 9	Not Implemented	Not Started. Low Priority.
Module 10	In Process	In development and requirement definition stage. No forecasted completion date.
Module 11	Partially Implemented	Self-assess workstations installed. Security Implemented. Web interface on hold.

DSD has not indicated a forecasted completion date for modules 7, 8, 9, and 10. Module 11 has been partially implemented and is available for customer use. It is not entirely clear why PTS, as originally envisioned in early planning records, has not been fully implemented. However, both our reports identified the following likely contributing factors:

- The City council approved a temporary fee increase for development services and permits to generate \$3.5 million in revenues. These funds were earmarked for the development of the project tracking system and automation of mapping and record data. However, a portion of these funds was used to pay an arbitration settlement award to a subcontractor hired to automate the maps used to determine the number and type of permits required for each parcel.
- After a contract with the aforementioned subcontractor for the automation of the landbase was terminated in March 1997, DSD staff continued the development of the department's own project tracking and mapping software applications. However, the City did not have allocated adequate resources to complete the project within the originally estimated timeframe. According to planning documents, DSD expected to fully implement the new system by late 1999.
- Departmental needs for the PTS changed, requiring re-design or modification of the tracking system's features. According to the City's Information Systems Administrator, over 250 versions of the application have been developed based on debugging reports and improvement requests from Managers and staff.



As of February 9, 2004 some portions of the tracking system have yet to be developed and/or implemented. Note: The first six modules and the eleventh, encompassing the most important components of the services DSD provides to its customers, comprise approximately 85% of the total software package and are used by DSD staff a majority of the time. The four remaining modules (Numbers 7-10), although required to help provide DSD managers and staff essential information, do not affect DSD's ability to process and issue permits to its customers.

Failure to implement all of the proposed software modules for the PTS could hinder the City's ability to obtain the full functionality and effectiveness of the new system, and consequently, its ability to determine if the original goal to reduce the permit processing time by 50% can be achieved. In addition, delays in the complete implementation of the PTS could result in diminished acceptance within DSD and morale problems (refer to risk areas 3 and 5 for more details). Finally, failure to implement the PTS as originally intended could expose the City to legal action by developers who supported the project and contributed to its implementation through increases in fees for services they received from the department.

The auditors noted that DSD has a continuous improvement and enhancement policy regarding the PTS. Also, there are sure to be small changes and minor bugs to fix due to staff or customer requests or problems that may arise with software development for some time to come. No single job or permit issuance input into PTS is the same and no system is perfect, but with this type of policy in place and with the dedicated staff employed by the City of San Diego in the DSD, the PTS could very well become the leading software package for City issued building permits, development and building inspection services, and bring DSD to the forefront of truly a 'one-stop-shop' for customers and developers.

### **Recommendations**

1. DSD should develop firm deadlines for the final implementation of the remaining modules as well as determining those who are responsible for each module.
2. DSD should consider outsourcing the completion of the remaining modules so that the current in-house IT development team can focus on modifications and enhancements to the modules already completed.

**FINDING II: PROCESS 2000 (PROJECT TRACKING SYSTEM)  
IMPLEMENTATION COSTS NOT PROPERLY  
TRACKED**

Background

Our June 2003 report noted that the City had not adequately tracked the costs associated with implementing Process 2000. As a result, it has not been possible to determine the total implementation cost and whether the project can be completed within budget. Although the City tracked FY 1995 and 1996 Process 2000 related revenues and expenditures, it has not tracked revenues and expenditures since then. The "Process 2000 Transition Plan" indicates that there would be a one-time cost of \$13.3 million in 1997, and \$2.8 million per year in maintenance of the system. Our concern is that the actual costs of implementation cannot be determined because the City did not maintain detailed project implementation accounting records.

DSD (formerly known as the Building Inspection Department) created an enterprise fund in 1985. The enterprise fund is used to record and account for revenue from fees, operating expenditures, and net revenue after expenses. This activity was previously accounted for in the general fund. During fiscal year 1996, DSD proposed to convert its General Fund component to the enterprise fund. The proposal, an effort to consolidate development-related services into one department, was part of Process 2000. The change to an enterprise fund was expected to save the general fund as much as \$1.5 million because the enterprise fund would be self-funded. By 1998 all development and building inspection related activities, except for fire plan check and inspections, were accounted for in the enterprise fund. However, DSD stopped accounting for Process 2000 implementation costs separately.

Current Status

Per our follow-up audit of the implementation costs, OAAS determined that for the Fiscal Years 1996-2003, the total expense of all IT in the DSD was \$33,674,216. This amount includes all expenses relating to Process 2000, PTS, software development, computer hardware, etc., but does not include personnel expenses (i.e. Salaries & Wages, and Fringe Benefits). DSD accounts for all operational expenses, but still does not maintain separate accounts to determine the total actual costs for each component of IT expense.

Currently, DSD uses a semi-manual payroll system, which requires DSD employees to fill out timecards with hours and job order numbers and submit them to payroll staff, who input labor hours into the City Auditor's Computer Automated Payroll Process System (CAPPS). The City

Auditor has the payroll information on microfiche and hard copy of the reports. DSD has the ability to download the database information and uses this information to run ad hoc labor hours reports as needed. CAPPS is not set up to provide DSD management labor hours reports relating to PTS. Labor hours of all SDDPC PTS development staff are

tracked on the SDDPC labor data report but DSD staff labor hours relating to PTS are not. Per DSD management, there is no stand-alone PTS budget for each Fiscal Year.

### **Recommendations**

3. DSD should develop an annual budget for PTS expenses including personnel, development, maintenance, software, and hardware expenses.
4. DSD should set up a job order for DSD staff involved in the development and maintenance of PTS. This job order number could track all labor hours relating to PTS as well as future software and hardware costs.
5. DSD should track the cost each individual module of PTS as well as other components of DSD's IT expense so that management can determine if costs will fall within budget for any given fiscal year. DSD should revise its accounting methods as needed to efficiently and effectively track these expenses and should include salaries, wages, and benefits relating to those expenses.

### **FINDING III: Effectiveness of the New Project Tracking System is not Being Measured**

#### **Current Status**

System effectiveness is not being measured. The City has not developed a specific way to measure efficiency and effectiveness on the PTS. Consequently, the City might not be able to determine if the new system will enable it to achieve the original goal of reducing the permitting process time by 50%, or other performance targets. Module 10 - Management Reports has not been implemented, but when completed should have the ability to provide management project data, status of jobs, and performance measures.

Due to the lack of established performance measures for the different types and variety of permits issued, and the variety and size of projects managed by DSD, OAAS could not effectively determine or measure timing issues of PTS, nor could we audit the effectiveness of PTS accurately within the guidelines set forth by Government Auditing Standards (GAS).

OAAS noted that customer's complaints related to the PTS usually stemmed from the increased front load time. With this new PTS, basic project and site information must be entered into the PTS database before a project can be assigned to DSD staff, and before any permits necessary for a project can be processed and issued. This characteristic is known as 'front load time'. For the PTS and the entire process of project management to be effective and efficient, additional time with the customer is required to provide PTS with the correct information first and foremost.

Per customer opinion, OAAS noted the amount of 'front load time' spent with the customer(s) to start a project, and input the required information for DSD to proceed with

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project assignment, has significantly increased. However, PTS requires customers to provide basic project and site information only once at the beginning of the process. Under the old system, customers were required to provide the same information multiple times, depending on the number of permits required for a project, and the number of divisions issuing those permits.

If performance measures were established and Module 10 was implemented, DSD would not only be able to determine if the new system is meeting performance goals, but also, DSD would be able to effectively address customer satisfaction issues related to the increased front load time required.

### **Recommendation**

6. In addition to implementing all modules and delivering target dates, as recommended in Finding I, DSD management should use information obtained through Module 10 - Management Reports and Module 11 - Customer Self-Access to improve customer satisfaction by providing customers with data on average time saved using PTS for each project category.

## **FINDING IV: LACK OF EVIDENCE TO SUPPORT SELECTION OF A CUSTOM BUILT PROJECT TRACKING SYSTEM VERSUS A COMMERCIAL OFF-THE-SHELF SOFTWARE**

### **Current Status**

DSD might not have adequately researched all available technology options before choosing to develop PTS in house. OAAS staff was not able to obtain sufficient documentation to prove DSD had researched other possible software packages. In our risk assessment report dated June 18, 2003, we found no evidence to support DSD claims of due diligence, or any related requirements study, or similar documentation that would indicate the basis for the City's decision to develop its own project tracking program.

Per this follow-up audit, OAAS obtained limited information and documentation to suggest DSD personnel and the Automation Task Force (ATF) conducted some degree of research, but that information was not adequate to provide a comprehensive review or to evaluate the adequacy of the technology options researched. DSD created the ATF, which was involved with the review of Off-the-Shelf (OTS) software applications. DSD staff indicated that software available at the time was inadequate for the City's unique needs. However, it is undetermined whether the City was diligent in its research of alternative OTS software applications for its tracking system. The ATF continues to be involved with the development and implementation of PTS as well as play a role as an oversight committee.

**Recommendations**

7. DSD management should revisit and amend its record retention policies as necessary to ensure that records related to specific projects are retained for a specific period of time after the completion of the project.
  
8. DSD management should obtain all relevant information regarding the planning of PTS, research, and due diligence completed relating to decisions to support the development of a software program in-house.

**COMMENDATION**

The Office of Audits & Advisory Services commends and sincerely appreciates the courtesies and cooperation extended by the City of San Diego's Development Services Department for their assistance during this follow-up audit of the risk assessment.

**AUDIT TEAM**

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