



Program Evaluation and Audit

***PIMS System
Implementation Review***

May 24, 2010

INTRODUCTION

Background

Metro Transit contracted with Law Enforcement Technology Group, LLC (LETG) to implement a Police Information Management System (PIMS). The contract included three major parts:

1. Computer Aided Dispatch (CAD) which is at the Transit Control Center (TCC).
2. Records Management System (RMS) which is used to record and transmit incident data.
3. Mobile System which is system to allow mobile access to commonly used data such as Minnesota Statutes, local ordinances and codes, department manual, roll call data and limited access to the internet. The system also is required to allow both external and internal searches of data as well as electronic field reporting.

Purpose

This review was done to ensure that the objectives of implementing PIMS have been met and are aligned to meet the needs of the Metropolitan Council. In addition, the review was designed to identify potential risks and weakness in controls as well as finding solutions to mitigate risks and strengthen controls.

Scope

The review covered the PIMS system development life cycle from request for bid in 2007 through system implementation in 2008.

Methodology

Data Collection

Interviews were conducted with:

- Project administrators
- Transit Control Center staff
- Police officers
- IS staff

The following information was reviewed:

- Original RFP
- Contracts with LETG
- Payments to LETG
- Implementation and ongoing cost documentation
- Documentation of achievement of milestones
- Acceptance testing data
- Ongoing issues documentation
- Service level agreements
- Control process documentation
- System access control and security
- Audit trails
- System performance data
- Business continuity plan

Data Analysis

- Analysis of the ongoing and implementation costs of PIMS
- Analysis of organizational efficiencies achieved as a result of PIMS

Assurances

This audit was conducted in accordance with the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing* and the U. S. Government Accountability Office's *Government Auditing Standards*.

OBSERVATIONS

The PIMS system has been effectively implemented, but project management for PIMS was not in alignment with industry best practices.

The Metro Transit Police Department (MTPD) worked for several years, starting in 2000, to have an automated information management system. Initially the Department asked the Council's Information Services (IS) Department for assistance in developing specifications, creating an RFP and ultimately implementing a system. At that time, the IS Department was unable to offer assistance with the project. MTPD then hired a consultant to help them develop system requirements. Based on their work with the consultant, a request for proposal was put out for bid. There were three responsible bidders and after evaluation of the proposals, the Law Enforcement Technology Group, L.L.C. (LETG) was selected to implement their PIMS system for the Transit Police.

A Captain from MTPD acted as the PIMS project manager. The implementation of the CAD portion of the system was managed by an Assistant Manager for Operations at the TCC. Neither of these operational managers was trained in IS project management. Although not trained or experienced in information system implementation, both worked diligently and were successful in implementing the system to an operational status.

Both project managers maintained records for various parts of the implementation where they felt such records were necessary. The accepted industry best practice is to maintain a written record of proceedings from project inception to shutdown. These records are necessary to keep track of the details related to the project during its lifetime and beyond. The types of records that should be maintained are:

- Project plans - Initial plans as well as the records used to track task scheduling and completion.
- Project changes - Proposed and approved (as well as rejected) changes to the project schedule, deliverables, budget and so on, need to be recorded to track implementation status and any deviations from the plan and schedule, whether planned or unplanned.
- Meeting agendas and minutes - Issues, decisions, and other matters encountered and discussed from week to week may need to be revisited as the project progresses.
- Resource consumption - Purchase orders, invoices, and receipts for equipment, supplies, and services document the actual costs of the project as compared to its budget.
- Task information - Details associated with the performance and/or completion of project tasks.

The area of resource consumption is the one area that has been thoroughly documented. There is some documentation for each of the other areas, but it is insufficient to create a complete picture of what occurred during the implementation phase. Examples of information not available include user acceptance testing (UAT) data, as well as training

data. With the implementation of any software system, UAT data should always be maintained. Documentation of who provided what training should be maintained to ensure that users assigned to the system have received appropriate training.

Ticket-writer is not being utilized.

One part of the PIMS system that is currently not in use although installed, tested and operational, is a citation issuing system referred to as Ticket-writer. Initially, this was installed in a limited number of squad cars. Some officers were trained how to use it, and at the beginning of the implementation, it was tested and used to a degree. It is currently installed in all squad cars. The Ticket-writer allows the officers to electronically enter citation information, print the citation as Minneapolis, Saint Paul, or Bloomington citations by communicating the information to the appropriate police department's systems and issuing the appropriate document for the department needed.

Interviews with a group of officers indicated that Ticket-writer, although available, is not being used. Some officers said they had not been trained on how to use it. Some said that the printers that print out the tickets didn't work well. Presently, there is no directive to the officers to use the Ticket-writer system, so they have the choice to write their tickets or enter them electronically; those interviewed said they are still issuing handwritten tickets.

If the system is not being used, there is no way to know if the related equipment has operational issues. There is speculation that with budget cuts affecting the court systems, all citation information will have to be electronically reported in the near future. Given that, it is increasingly important that this part of the system be put into practice by MTPD officers so that any problems can be identified and resolved before the end of the contract with LETG.

The mechanisms for communicating problems or concerns with mobile issues are unclear to officers, who then believe that their concerns are not being addressed.

Interviews conducted with officers found that they have a number of concerns about the mobile units. Some of these may be legitimate system problems, some may be the result of a lack of training, others may not be a system issue at all. When the officers were asked what they do when they have a problem with the system, the answers ranged from calling the IS person who works with them, to talking with other officers, to emailing the administrative lieutenant, to doing nothing. In general, the officers felt there was a lack of response to their concerns.

Audit looked into some of the users' complaints and found that their concerns were not reaching the people who could address them. The core problem was not the system itself, but faulty communication.

Currently, the officers are supposed to report system issues to their duty lieutenant. It would simplify the structure to have system issues reported to one person who in turn would record the issue and then work with IS or LETG to address and resolve the issue

utilizing available resources. Failure to track and address issues that have been identified will result in inefficient utilization of the mobile system and potentially system or device failures.

System access security appears adequate.

Audit found that access to the PIMS system is extremely limited. All mobile units are encrypted in accordance with Council policy. There are three logins that officers must enter to gain access to the mobile system. The PIMS system does not require password changes to be made, and currently there is no way for the system administrator to determine if the original password that is set up for a new user is ever changed. However, given the limited access and 24 bit encryption, the system's security is still adequate to restrict access and protect data. All activity on the system is logged and creates audit trails, so that any suspicious activity in the system can be identified and tracked to the individual user.

System permissions exist for user IDs that no longer require them.

In reviewing permissions granted to users, there were two instances where permissions should have been changed. The first involved a user who retired from TCC and the second was a group of users created during initial training. The training group creates the biggest risk because the permissions were the equivalent of administrator rights. The activity logs that are maintained help mitigate the risk of users using the system inappropriately. However, preventing potential problems by restricting system access is more effective and efficient than having to correct a problem that is detected later on.

System administration is handled by two employees: one from the MTPD and another from the TCC. Both employees have system administration of PIMS as one of their primary job responsibilities. Although trained by LETG, the MTPD system administrator was unaware that the permissions created for training users should be deleted after training.

New CAD is being tested and final interface is being developed.

LETG had originally subcontracted the CAD system to another vendor. The subcontractor was not always as responsive to system issues as LETG wanted them to be. So, LETG is now offering the Council a new CAD system that they have developed. The system is currently being tested. The original functional requirements are being used by the Council to determine if the CAD will be acceptable. LETG is offering this part of the package at no additional cost to the Council.

LETG is also developing an interface between systems. There is also no additional cost for this interface.

The MTPD lacks the expertise to manage or support a major systems project and has not had a clear or consistent relationship with IS to assist with project development or support.

Review of the implementation of the PIMS system demonstrates the separation between the MTPD and most other Council functions. As a public safety organization, the MTPD has a supporting but different mission from Metro Transit and the rest of the Council. Although Metro Transit's business liaison is intended to represent the MTPD as well as the rest of Transit, operationally, the liaison traditionally has not had extensive involvement with MTPD operations. As a result, the MTPD has been separate from the IS governance structure and went out on its own to select and begin the implementation of PIMS. IS provided some assistance when the MTPD identified issues with implementation, but IS did not manage the project or structure a system of support for it. As a result, the system doesn't have an identifiable, consistent support system that would allow users to get their questions answered and handle any day to day functionality problems. Neither IS nor the MTPD currently have the resources to create such that support.

Audit surveyed six departments in the metro area that had a similar number of full time officers, although none of them has the large number of part time officers that MTPD has, about the IS support they receive. In one city, there was one full time equivalent assigned to the police department. The rest of the departments said they relied on their cities' IT staff for support and in some instances were member of Local Government Information Systems (LOGIS), which is a consortium of local government units whose purpose is to facilitate public sector technology solutions.

Currently, the administrative lieutenant is responsible for PIMS and new IS projects within the MTPD. Without the proper IS background and the necessary time to address system development and system issues, there is a significant risk that the administrative lieutenant will not be able to ensure that MTPD is ensuring system functionality or maximizing its IS investments.

CONCLUSIONS

The PIMS system has been successfully implemented. With the implementation the Council has gone from a manual, non-integrated dispatch system to an automated, integrated dispatch and police records management system. The system was also implemented within the established budget. This review of the implementation has resulted in the identification of a need for more IS support for the MTPD.

RECOMMENDATIONS

Program Evaluation and Audit recommendations are categorized according to the level of risk they pose for the Council. The categories are:

- **Essential** – Steps must be taken to avoid the emergence of critical risks to the Council or to add great value to the Council and its programs. Essential recommendations are tracked through the Audit Database and status is reported twice annually to the Council’s Audit Committee.
- **Significant** – Adds value to programs or initiatives of the Council, but is not necessary to avoid major control risks or other critical risk exposures. Significant recommendations are also tracked with status reports to the Council’s Audit Committee.
- **Considerations** – Recommendation would be beneficial, but may be subject to being set aside in favor of higher priority activities for the Council, or may require collaboration with another program area or division. Considerations are not tracked or reported. Their implementation is solely at the hands of management.

- 1. MTPD administration should determine, prior to the expiration of the contract, if Ticket-writer will be used. If it is to be used, the use should be consistent (i.e., required of all or none) and officers should be retrained in its use. (Essential)**

Ticket-writer is an integral part of the mobile system. An investment has been made in equipment to utilize it. If there are any issues with the performance of this system, they should be identified. Then a determination can be made about how to address the issues while the contractor is still available to the MTPD to assist. Meanwhile, most officers have little or no experience with the system and will require training to utilize it effectively.

***Management Response:** MTPD has been working with the Information Services Department to implement the Ticket-writers in the squads, and has developed a solution to ensure that the ticket-writers are working and functional. The squad computers/ticket writers must be removed from the squad cars and plugged into a network connection; then the system profiles must be updated. Once this is done, the Ticket-writers will be fully functional. Following that step, MTPD will create a training plan and implement the use of the Ticket-writers on a consistent basis. MTPD has identified an officer to coordinate and implement the departmental training of officers on the Ticket-writer system.*

Staff Responsible: Jim Franklin

Timetable: December 2010

2. A log of user problems and complaints should be created and maintained, and a single individual designated to be the liaison with the vendor and IS to ensure resolution of the identified issues (Significant).

The officers need to identify issues they are having with the mobile system to ensure that the system is being utilized to the fullest extent. A process needs to be developed to ensure that issues are communicated and documented. The communication needs to be two-way; if an officer identifies an issue the officer should be provided with a response.

***Management Response:** The MTPD will direct all police officers that all computer and network-related issues will be communicated to the IS Service Desk @ phone ext.1498 during their normal business hours of 7:00am – 4:00pm. All issues that occur outside of IS Service Desk hours of operation will continue to be routed through the same ext.1498 phone number to the designated IS on-call support person for assistance.*

The routing of issues through the IS Service Desk ensures proper recording of detail and interactions, investigation and resolution of issues, and reporting functions are in place for proper closure of all issues.

***Staff Responsible:** Pancho Henderson*

***Timetable:** July 2010*

3. System Administrators should review user permissions periodically to ensure that users are granted only those permissions necessary for their job.(Essential)

All users should be uniquely identifiable, and their access rights to systems and data should be in line with defined and documented business needs.

***Management Response:** The administrator rights will be limited to three MTPD staff. MTPD is currently in the process of creating a master user list. System administrators will be responsible for maintaining the master list.*

The system administrators will coordinate with TCC to make sure the master list properly reflects new, retired and terminated employees. The master list will be reviewed bi-annually by the MTPD system administrators to ensure its accuracy.

***Staff Responsible:** Jim Franklin and Pancho Henderson*

***Timetable:** October 2010*

4. The MTPD should work with the IS Department and Metro Transit to identify a solution for the lack of expertise and support for the necessary technology in the MTPD (Essential)

The PIMS system was implemented by individuals who were not trained in project management or IS system development. As a result, there were a number of things that were not properly documented. In this instance the Council was fortunate that there was a successful implementation that came in within budget.

Given changes in security technology and the requirements of national security initiatives, technology for law enforcement will continue to emerge and change. The MTPD needs to be prepared to handle those changes, which means having access to project management and support professionals who will ensure the success of future systems and technology projects for the MTPD. Resources will need to be identified and designated for this purpose, but given the uniqueness of the MTPD within the Council, it is an important service to provide.

***Management Response:** We agree with this recommendation. MTPD and Information Services continue to work towards a viable solution for the support of current and future MTPD technologies. Budget proposals to address this need by adding additional IS FTE's on a permanent basis are currently under consideration. Using additional consulting resources under the supervision of IS is an alternative but has historically proven to be a more costly option.*

***Staff Responsible:** Pancho Henderson*

***Timetable:** Ongoing*