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Report to the Chairman, Subcommittee on the District of Columbia, Committee on Appropriations, House of Representatives

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DISTRICT OF COLUMBIA

Software Acquisition Processes for a New Financial Management System

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The Honorable Charles H. Taylor
Chairman, Subcommittee on the
District of Columbia
Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

This report responds to your request that we determine whether the District of Columbia had implemented disciplined software acquisition processes for its new financial management system (FMS). We found that the District's software acquisition processes for the FMS acquisition, while having some strengths, are not mature when compared to standards established by the Software Engineering Institute (SEI).[1] Accordingly, we are making recommendations for strengthening these processes as they relate to the FMS project and to improve any future software acquisitions.

Background

In September 1997, the District of Columbia Financial Responsibility and Management Assistance Authority (Authority) awarded a contract to acquire a new FMS. The overall objective of the FMS project is to improve the District's financial systems through faster, more efficient, and accurate processing providing increased functionality, flexibility, and reduced cost of operations. According to the Chair of the Authority, the new FMS is intended to (1) eliminate the principal problems that exist with the current system and ensure that all financial management guidelines are adhered to, (2) enable managers to more effectively and efficiently monitor and control financial resources, and (3) produce timely, accurate, and reliable information, providing decisionmakers with the basic financial information needed to make more informed decisions.

The Authority awarded a contract for the new FMS in September 1997 and committed to an aggressive implementation schedule. The schedule anticipates (1) pilots in five agencies beginning in February 1998, (2) the accounting system to be implemented by October 1998, and (3) District-wide implementation by February 1999.

[1]Carnegie Mellon University's Software Engineering Institute (SEI), recognized for its expertise in software processes, has developed models and methods that define and determine organizations' software process maturity.

Objective, Scope, and Methodology

We were asked to review the District's efforts to acquire a new financial management system. Our objective was to determine whether the District had implemented disciplined software acquisition processes for acquiring its new financial management system.

To accomplish this, we applied the Software Engineering Institute's Software Acquisition Capability Maturity Model (SA-CMM) and its Software Capability Evaluation (SCE) method. SEI's expertise in, and methods for, software process assessment are recognized and accepted throughout the industry. Our evaluators were all SEI-trained software specialists.

SA-CMM ranks organizational maturity according to five levels (see figure 1). Maturity levels 2 through 5 require the verifiable existence and use of certain software acquisition processes, known as key process areas (KPA). According to SEI, an agency that has these acquisition processes in place is in a much better position to successfully acquire software than an organization that does not have these processes in place. We evaluated the District's software acquisition processes against six of the seven level 2 KPAs (the transition to support KPA was not evaluated because the District does not plan to support FMS in-house) and one level 3 KPA (see table 1). We selected level 2 because it is the minimum level at which any assurance exists that software acquisition processes are mature enough to consistently deliver promised software capabilities on time and within budget. We included one level 3 KPA—acquisition risk management—because it is considered by software experts to be a very important process area.

Figure 1: SA-CMM Levels and Descriptions

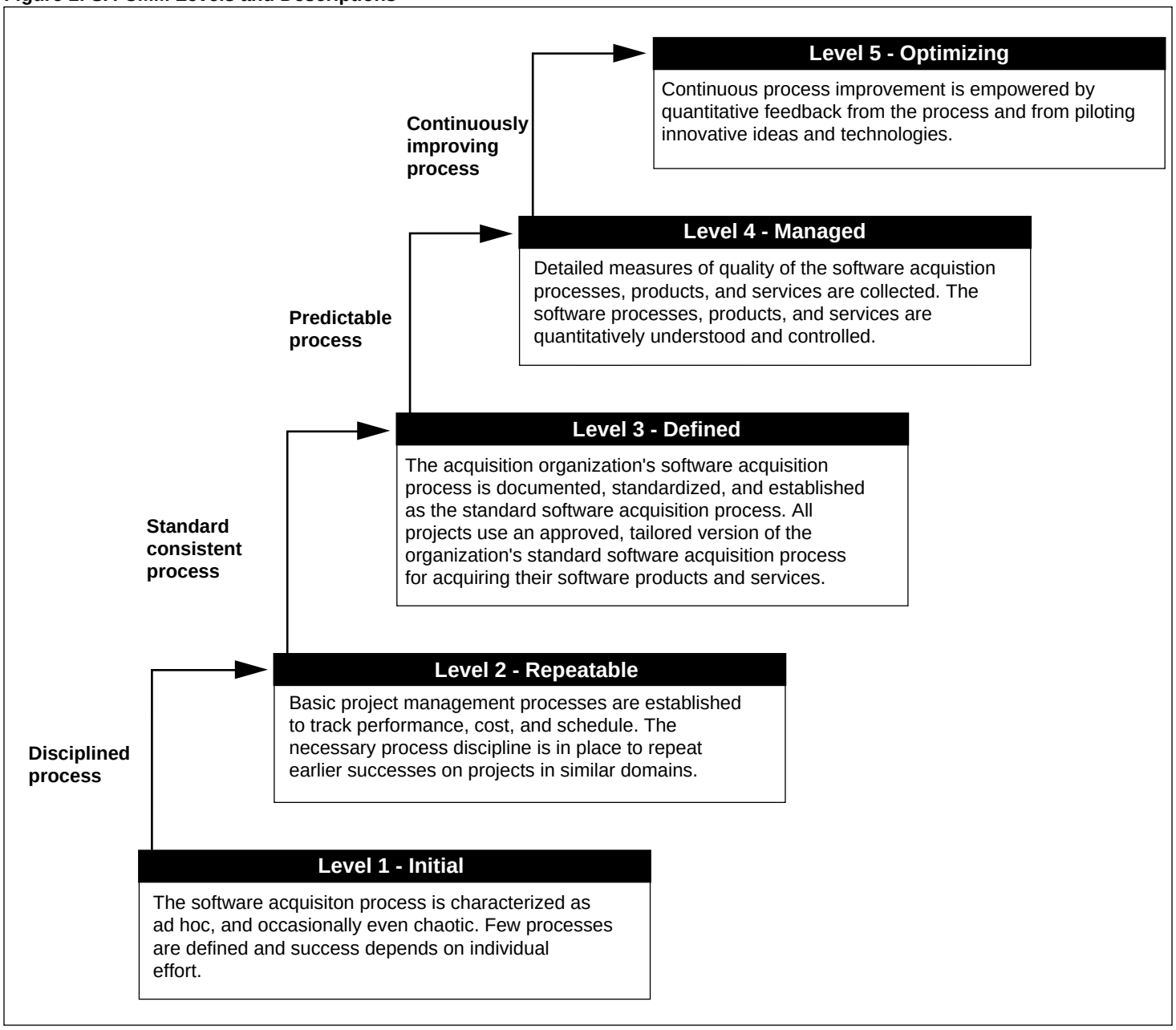

Table 1: SA-CMM KPAs Used to Assess the FMS Project Software Acquisition Maturity

SA-CMM level 2 key process areas	Description
Software acquisition planning	Ensuring that reasonable planning for the software acquisition is conducted and that all elements of the project are included.
Solicitation	Ensuring that award is made to the contractor most capable of satisfying the specified requirements.
Requirements development and management	Establishing a common and unambiguous definition of software acquisition requirements understood by the acquisition team, system user, and the contractor.
Project management	Managing the activities of the project office and supporting contractor(s) to ensure a timely, efficient, and effective software acquisition.
Contract tracking and oversight	Ensuring that the software activities under contract are being performed in accordance with contract requirements, and that products and services will satisfy contract requirements.
Evaluation	Determining that the acquired software products and services satisfy contract requirements prior to acceptance and transition to support.
SA-CMM level 3 key process area	**Description**
Acquisition risk management	Identifying risks as early as possible, adjusting acquisition strategy to mitigate those risks, and developing and implementing a risk management process as an integral part of the acquisition process.

As established by the model, each KPA contains five common attributes that indicate whether the implementation and institutionalization of a KPA can be effective, repeatable, and lasting. The five common attributes are:

Commitment to perform. Commitment to perform describes the actions that the organization must take to establish the process and ensure that it can endure. Commitment to perform typically involves establishing organizational policies and sponsorship. Key practices under commitment to perform include having written organization policy for the process area and designating and assigning responsibility to individuals to perform the activities.

Ability to perform. Ability to perform describes the preconditions that must exist in the project or organization to implement the software acquisition process competently. Ability to perform typically involves resources, organizational structures, and training. Key practices under ability to perform include having either experienced or trained personnel

and providing adequate resources to conduct the activities for the process area.

Activities performed. Activities performed describes the roles and procedures necessary to implement a KPA. Activities performed typically involve establishing plans and procedures, performing the work, tracking it, and taking appropriate management actions. Key practices under activities performed include performing these activities in accordance with documented plans and overall management of the project team and process area.

Measurement and analysis. Measurement and analysis describes activities performed to measure the process and analyze the measurements. Measurement and analysis typically includes defining the measurements to be taken and the analyses to be conducted to determine the status and effectiveness of the activities performed.

Verifying implementation. Verifying implementation describes the steps to ensure that the activities are performed in compliance with the process that has been established. There are two key practices under verifying implementation, including reviews by various levels of management.

In accordance with SEI's methodology, for each KPA selected, we evaluated the District's policies and practices. This project-specific comparison can result in one of four possible outcomes: (1) project strength—an effective implementation of the key practice, (2) project weakness—ineffective implementation of a key practice or failure to implement a key practice, (3) project observation—key practice evaluated but evidence inconclusive and cannot be characterized as either a strength or weakness, and (4) not rated—key practice not currently relevant to project, therefore not evaluated.

As requested, we applied the SEI methodology to evaluate the District's management of only one project—the acquisition of a new financial management system. As a result, we have no information regarding the process strengths and weaknesses of other acquisitions the District may have underway.

We performed our work at District of Columbia offices in Washington, D.C. between September 16, 1997, and January 16, 1998, in accordance with generally accepted government auditing standards.

Results in Brief

While the District has many strengths in its acquisition processes for FMS, it also has many weaknesses. When compared to standards established by the SEI, the District's processes for software acquisition are not mature. Of the six KPAs evaluated for the repeatable level, the District fully satisfied only one—solicitation. Severe weaknesses were found in other critical key processes, including requirements development and management and evaluation. For example, the District does not have a policy for establishing and managing software-related requirements, does not, at present, have adequate resources for requirements development, and has not formally designated responsibility for requirements development and management.

Similarly, the District does not have an effective evaluation process, and is currently unable to objectively determine if the acquired system will satisfy the contract requirements. Finally, the District has not satisfied the one key process area evaluated for the "defined" level of maturity, acquisition risk management. The FMS project does not have a risk management plan and does not track project risk. Figure 2 provides a comprehensive listing of the FMS project's strengths, weaknesses, and observations for the seven KPAs. The items under features in figure 2 refer to the five common attributes in each KPA and are explained in detail in the following sections.

Figure 2: Key Process Area Results

Feature	Software acquisition planning	Solicitation	Requirements development and management	Project management	Contract tracking and oversight	Evaluation	Acquisition risk management
Commitment 1	Weakness	Strength	Weakness	Weakness	Weakness	Weakness	Weakness
Commitment 2	Weakness	Strength	Weakness	Strength	Strength	Strength	Strength
Commitment 3	Not rated	Strength	Not rated	Not rated	Weakness	Not rated	Not rated
Ability 1	Strength	Strength	Weakness	Strength	Strength	Strength	Weakness
Ability 2	Weakness	Strength	Weakness	Observation	Observation	Observation	Weakness
Ability 3	Not rated	Strength	Observation	Weakness	Strength	Strength	Weakness
Ability 4	Not rated	Strength	Not rated	Strength	Not rated	Strength	Not rated
Activity 1	Strength	Observation	Strength	Strength	Strength	Weakness	Weakness
Activity 2	Strength	Strength	Strength	Strength	Weakness	Weakness	Weakness
Activity 3	Weakness	Strength	Observation	Strength	Strength	Strength	Weakness
Activity 4	Weakness	Strength	Observation	Strength	Not rated	Weakness	Weakness
Activity 5	Strength	Strength	Weakness	Strength	Strength	Weakness	Weakness
Activity 6	Not rated	Not rated	Not rated	Strength	Weakness	Observation	Not rated
Measurement 1	Weakness	Weakness	Weakness	Weakness	Weakness	Weakness	Weakness
Verification 1	Strength	Strength	Strength	Strength	Strength	Weakness	Weakness
Verification 2	Strength	Strength	Strength	Strength	Strength	Weakness	Weakness

	= Weakness	Key practice not implemented
	= Strength	Key practice effectively implemented
	= Observation	Key practice evaluated but evidence inconclusive. Cannot characterize as either strength or weakness
	= Not rated	Key practice not currently relevant to project, therefore not evaluated

Software Acquisition Planning

The purpose of software acquisition planning is to ensure that reasonable planning for the software acquisition is conducted and that all aspects of the total software acquisition effort are included in these plans at the proper level of detail. The software acquisition planning process, among other things, includes (1) addressing software life-cycle support in acquisition plans, (2) preparing life-cycle software cost estimates, (3) having a written software acquisition policy, (4) measuring and reporting on the status of software acquisition planning activities, and (5) having guidance on software training and experience requirements for project personnel.

FMS Project Performs Some but Not All Software Acquisition Planning Practices

The FMS project had many strengths in this KPA. The District received pro bono assistance from several companies to help define the acquisition strategy and conduct the activities for software acquisition planning. An acquisition strategy was developed and the acquisition planning team was staffed with personnel with software and systems experience. The team developed a cost estimate and the District management was briefed by the team on a periodic basis. This enabled the District management to be informed on the progress of the acquisition planning and the various activities through the solicitation phase.

However, the FMS project also had many weaknesses in this KPA. Weaknesses observed included a lack of policy on acquisition planning and no specific assignment of responsibility for acquisition planning. Furthermore, the FMS project did not always document significant project decisions or update the planning document to reflect these decisions. For example, when the District decided to not pursue a single contract to both acquire FMS and outsource data center operations, the capability assessment (a software acquisition planning document) was not updated to reflect this decision. Decisions should be documented and the planning documents updated to ensure that large acquisitions such as FMS can be effectively managed. Table 2 shows the strengths and weaknesses for the software acquisition planning KPA and the specific findings supporting these ratings.

Table 2: Software Acquisition Planning Findings

Feature	Key practice	Finding	Rating
Commitment 1	The acquisition organization has a written policy for planning the software acquisition.	There is no written policy for software acquisition planning.	Weakness
Commitment 2	Responsibility for software acquisition planning activities is designated.	Responsibility for software acquisition planning activities was not designated.	Weakness
Ability 1	The acquisition organization has experienced software acquisition management personnel.	The acquisition staff (10-15 Authority and D.C. government staff, and 10-15 private sector employees working on a pro bono basis) had requisite experience.	Strength
Ability 2	Adequate resources are provided for software acquisition planning activities.	Required resources for acquisition planning were not determined.	Weakness
Activity 1	Software acquisition planning personnel are involved in system acquisition planning.	The District government recruited outside software experts to assist with system acquisition activities.	Strength
Activity 2	The software acquisition strategy for the project is developed and documented.	The software acquisition strategy is developed and includes risk identification and schedules. It is documented in the capability assessment document.	Strength
Activity 3	The project's software acquisition planning is documented and the planning documentation is maintained over the life of the project.	Program changes regarding outsourcing of the data center and upgrading the current system versus buying off the shelf were made, but the software acquisition planning documentation was not updated.	Weakness
Activity 4	Life-cycle support of the software is included in software acquisition planning documentation.	The software acquisition planning documentation does not address life cycle support of the software.	Weakness
Activity 5	Life-cycle cost and schedule estimates for the software products and services being acquired are prepared and independently reviewed.	Life-cycle cost and schedule estimates were prepared by a consultant. They were reviewed by the District Chief Financial Officer and Authority Executive Director.	Strength
Measurement 1	Measurements are made and used to determine the status of the software acquisition planning activities and resultant products.	Measurements of software acquisition activities were not taken.	Weakness
Verification 1	Software acquisition planning activities are reviewed by acquisition organization management on a periodic basis.	The Authority Executive Director was briefed on planning activities on a periodic basis.	Strength
Verification 2	Software acquisition planning activities are reviewed by the project manager on both a periodic and event-driven basis.	Software acquisition planning activities were reviewed by the project manager.	Strength

Solicitation

The purpose of solicitation is to prepare a request for proposal that delineates a project's software-related requirements and select a contractor that can most cost-effectively satisfy these requirements while complying with relevant solicitation laws and regulations. Specific

requirements for a solicitation process include, among other things (1) having and following a solicitation plan, (2) assigning responsibility and ensuring sufficient resources for coordinating and conducting solicitation activities, (3) preparing and reviewing cost and schedule estimates for the software products and services being acquired, and (4) periodically measuring solicitation work completed and effort and funds expended, comparing these measures to plans, and reporting the results to management.

FMS Project Performing Most Solicitation Practices

The FMS project exhibited many process strengths during the solicitation. The District has a policy on solicitation and the FMS project followed this policy. The project had experienced personnel on the source selection team and these personnel briefed the team members on the objectives of the solicitation. However, the District did not measure either time or funds expended to conduct the solicitation. Specifically, no evidence was provided to show that the FMS project tracked personnel hours or costs during the conduct of the solicitation. Addressing this weakness would enable the District to better estimate the resources needed to conduct similar acquisitions in the future. For example, if these data were collected and made available to other projects, such as the tax systems upgrade, the District would be in a better position to understand its own capability to effectively conduct solicitation, to estimate how long such a solicitation was likely to take, and to eliminate problems that may have hampered the FMS solicitation. Table 3 shows the strengths, weaknesses, and observations for the solicitation KPA and the specific findings supporting these ratings.

Table 3: Solicitation Findings

Feature	Key practice	Finding	Rating
Commitment 1	The acquisition organization has a written policy for the conduct of the software portion of the solicitation.	Authority's procurement regulations provides written policies for solicitation.	Strength
Commitment 2	Responsibility for the software portion of the solicitation is designated.	Authority's Executive Director has designated specific individuals to serve as members of a selection committee.	Strength
Commitment 3	A selection official has been designated to be responsible for the selection process and the decision.	Authority's Executive Director is designated as the source selection official.	Strength
Ability 1	A group that is responsible for coordinating and conducting solicitation activities exists.	A solicitation organization has been identified in the source selection plan.	Strength

(continued)

Feature	Key practice	Finding	Rating
Ability 2	Adequate resources are provided for solicitation activities.	Adequate resources (including Authority staff and a team of private sector experts) were provided for solicitation activities.	Strength
Ability 3	Individuals performing solicitation activities have experience or receive training.	Experienced individuals from private contractor staff and public sectors assisted in the solicitation activities.	Strength
Ability 4	The groups supporting the solicitation (e.g., end user, systems engineering, software support organization, and application domain experts) receive orientation on the solicitation's objectives and procedures.	Participants in source selection process were trained on the objectives and procedures of FMS solicitation.	Strength
Activity 1	The project team performs its activities in accordance with its documented solicitation plans.	Project team conducted its activities according to the source selection plan, however, that plan does not cover all solicitation tasks.	Observation
Activity 2	The project team performs its activities in accordance with its documented proposal evaluation plans.	A number of subcommittees evaluated proposals according to the process documented in the source selection plan.	Strength
Activity 3	Cost and schedule estimates for the software products and services being sought are prepared.	Capabilities assessment report documents the cost and schedule estimates for the new financial management system. A preliminary economic analysis of FMS was also performed.	Strength
Activity 4	Software cost and schedule estimates are independently reviewed for comprehensiveness and realism.	Capabilities assessment report and the economic analysis of FMS were reviewed by the D.C. Office of the Inspector General and a report was issued.	Strength
Activity 5	The project team takes action to ensure the mutual understanding of software requirements and plans prior to contract award.	The project team ensured mutual understanding of software requirements by holding question and answer sessions with potential FMS vendors.	Strength
Measurement 1	Measurements are made and used to determine the status of the solicitation activities and resultant products.	No measurements were taken to determine the status of solicitation activities.	Weakness
Verification 1	Solicitation activities are reviewed by the designated selection official or acquisition organization management on a periodic basis.	Authority Executive Director and the District Chief Financial Officer are briefed on status of all FMS activities (including solicitation) on a periodic basis.	Strength
Verification 2	Solicitation activities are reviewed by the project manager on both a periodic and event-driven basis.	During the solicitation, the entire team reported to the Executive Director who served as the project manager. The Executive Director was briefed periodically and in response to significant events.	Strength

Requirements Development and Management

The purpose of requirements development and management is to establish and maintain a common and unambiguous definition of software requirements among the acquisition team, system users, and software development contractor. This KPA involves two subprocesses:

(1) developing a baseline set of software-related contractual requirements and (2) managing these requirements and changes to these requirements for the duration of the acquisition.

A number of requirements development and management practices are necessary to satisfy this key process area. These include (1) having a written organizational policy for establishing and managing requirements allocated to software, (2) documenting plans for the development and management of requirements, (3) having documented processes for requirements development, including elicitation, analysis, and verification, (4) measuring and reporting on the status of requirements development and management activities to management, (5) appraising the impact on software of system-level requirements changes and (6) having a mechanism to ensure that contractor-delivered work products meet specified requirements.

FMS Project Performing Some but Not Most Requirements Development and Management Practices

The FMS project has some process strengths in the conduct of requirements development and management. The project team is performing requirements management activities in accordance with its documented plan and software-related contractual requirements have been baselined. In addition, District management periodically reviews the status of requirements development and management activities with the project team. However, in acquiring FMS, the District did not perform many of the requirements development and management practices necessary to satisfy this KPA. For example, the District does not have an organizational policy for establishing and managing software-related requirements, there is no clear assignment of responsibility for requirements development and management and no documented evidence exists to show either resource requirements or resources expended for requirements development activities.

Currently, the FMS project has begun to hold "requirements confirmation meetings" with the users to validate the requirements already specified in the FMS contract. Although requirements should be validated, this should have been done prior to releasing the request for proposal to ensure that the proposal accurately reflects the District's requirements. Changing requirements after contract award may adversely impact project cost, schedule, and/or performance. Table 4 shows the strengths, weaknesses, and observations for the requirements development and management KPA and the specific findings supporting these ratings.

Table 4: Requirements Development and Management Findings

Feature	Key practice	Finding	Rating
Commitment 1	The acquisition organization has a written policy for establishing and managing the software-related contractual requirements.	There is no organizational policy for establishing and managing software-related requirements.	Weakness
Commitment 2	Responsibility for requirements development and management is designated.	There is no formal documentation assigning anyone responsibility for requirements development and management.	Weakness
Ability 1	A group that is responsible for performing requirements development and management activities exists.	There is no documentation assigning any group responsibility for performing requirements development and management activities.	Weakness
Ability 2	Adequate resources are provided for requirements development and management activities.	No documented evidence exists to show either resource requirements or resources used for requirements development and management activities.	Weakness
Ability 3	Individuals performing requirements development and management activities have experience or receive training.	Individuals currently performing requirements management have appropriate experience. However, no documented evidence was provided to show the experience of individuals who developed the requirements.	Observation
Activity 1	The project team performs its activities in accordance with its documented requirements development and management plans.	The requirements management activities are incorporated in the project management plan, volumes I and II. This project team is performing its activities in accordance with this plan.	Strength
Activity 2	The project team develops and baselines the software-related contractual requirements and places them under change control early in the project, but not later than release of the solicitation package.	The project team baselined software-related contractual requirements in the statement of work prior to the release of the solicitation. The requirements are under change control.	Strength
Activity 3	The project team appraises system requirements change requests for their impact on the software being acquired.	There have been no requirements changes to date to appraise. However, a process to appraise changes exists and is documented in the program management plan.	Observation
Activity 4	The project team appraises all changes to the software-related contractual requirements for their impact on performance, architecture, supportability, system resource utilization, and contract schedule and cost.	The scope change process documented in the project management plan requires the appraisal of cost and schedule impact. However, no evidence provided of any changes to the contract to date.	Observation
Activity 5	Bi-directional traceability between the software-related contractual requirements and the contractor's software work products and services is maintained throughout the effort.	There is no evidence to show traceability between contractual requirements and the contractor's work products.	Weakness
Measurement 1	Measurements are made and used to determine the status of the requirements development and management activities and resultant products.	No measurements made to determine status of the requirements development and management activities.	Weakness

(continued)

Feature	Key practice	Finding	Rating
Verification 1	Requirements development and management activities are reviewed by acquisition organization management (and the contractor) on a periodic basis.	Project manager periodically reviews requirements development and management activities.	Strength
Verification 2	Requirements development and management activities are reviewed by the project manager on both a periodic and event-driven basis.	Periodic and event-driven meetings are held to discuss requirements development and management activities.	Strength

Project Management

The purpose of project management is to manage the activities of the project office and supporting contractors to ensure a timely, efficient, and effective software acquisition. Effective project management requires, among other things, that project teams (1) be organized to accomplish the project's objective, (2) have a written policy for the management of the software project, (3) document their plans for the activities of the project team, (4) have the authority to alter either the project's performance, cost, or schedule baseline while maintaining the other two, and (5) periodically brief management on the status of project management activities.

FMS Project Performing Most Project Management Practices

The FMS project has many process strengths in project management. For example, a team was assigned responsibility for managing the project and staffed with experienced individuals whose roles and responsibilities were defined. The program management plan was written and a corrective action system to track issues and problems was implemented. However, the District has no written policy for the execution of the software project. As a result, the District has no assurance that FMS or any other software acquisition project it undertakes will be conducted in a disciplined manner. Table 5 shows the strengths, weaknesses, and observations for the project management KPA and the specific findings supporting these ratings.

Table 5: Project Management Findings

Feature	Key practice	Finding	Rating
Commitment 1	The acquisition organization has a written policy for execution of the software project.	There is no documented policy for the execution of the software project.	Weakness
Commitment 2	Responsibility for project management is designated.	Responsibility for project management has been designated to the financial management system project team/program manager.	Strength
Ability 1	A team that is responsible for performing the project's software acquisition management activities exists.	A team that is responsible for performing software acquisition management activities exists.	Strength
Ability 2	Adequate resources for the project team and matrix support persons are provided for the duration of the software acquisition project.	Adequate personnel resources for project management were provided. At the time of the audit, there were no telephones, copiers, or supplies.	Observation
Ability 3	When project trade-offs are necessary, the project manager is permitted to alter either the performance, cost, or schedule software acquisition baseline.	The project manager is not permitted to independently alter either the performance, cost, or schedule.	Weakness
Ability 4	The project team and matrix support individual(s) have experience or receive training in project software acquisition management activities.	Project team and matrix support individuals have experience in acquisition management activities.	Strength
Activity 1	The project team performs its activities in accordance with its documented software acquisition management plans.	Project team activities are performed in accordance with program management plan.	Strength
Activity 2	The organization of the project provides for the management of all project functions.	The organization of the project provides for the management of all project functions.	Strength
Activity 3	The software acquisition management activities of the project team are directed to accomplish the project's objectives.	The roles and responsibilities of team members are defined and serve to accomplish the project's objectives.	Strength
Activity 4	The software acquisition management activities of the project team are controlled.	The software acquisition management activities of the team are controlled.	Strength
Activity 5	The project team implements a corrective action system for the identification, recording, tracking, and correction of problems discovered during the software acquisition.	A corrective action system, called the issue process, has been implemented.	Strength
Activity 6	The project team tracks project status, execution, funding, and expenditures and takes action.	The project team tracks the project's status and execution. Funding and expenditures are tracked by the Office of the Chief Financial Officer.	Strength
Measurement 1	Measurements are made and used to determine the status of the project management activities and resultant products.	No evidence that measurements are taken to determine the status of project management activities.	Weakness
Verification 1	Project management activities are reviewed by acquisition organization management on a periodic basis.	Monthly meetings are held where all levels of management are briefed on the project status.	Strength
Verification 2	Project management activities are reviewed by the project manager on both a periodic and event-driven basis.	Monthly meetings are held where all levels of management are briefed on the project status.	Strength

Contract Tracking and Oversight

The purpose of contract tracking and oversight is to ensure that (1) the software development contractor performs according to the terms of the contract, (2) needed contract changes are identified, negotiated, and incorporated into the contract, and (3) contractor performance issues are identified early, when they are easier and less costly to address. An effective contract tracking and oversight process, among other things, includes (1) having a written organizational policy for contract tracking and oversight, (2) having a documented plan for contract tracking and oversight, (3) conducting tracking and oversight activities in accordance with the plan, and (4) ensuring that individuals performing contract tracking and oversight are suitably experienced or trained.

FMS Project Performing Many but Not All Contract Tracking and Oversight Practices

The FMS project had many strengths in this KPA. The project has a designated project manager, a group is responsible for managing contract tracking and oversight activities, and the team is meeting periodically with the contractor and tracking issues in a corrective action system. However, at the time of our review, there was no contracting specialist supporting the team in the execution of the contract. In addition, the District has no documented policy for contract tracking and oversight activities. Table 6 shows the strengths, weaknesses, and observations for the contract tracking and oversight KPA and the specific findings supporting these ratings.

Table 6: Contract Tracking and Oversight Findings

Feature	Key practice	Finding	Rating
Commitment 1	The acquisition organization has a written policy for contract tracking and oversight of the contracted software effort.	There is no written policy for contract tracking and oversight activities for the financial management system project.	Weakness
Commitment 2	Responsibility for contract tracking and oversight activities is designated.	The project manager and the program management team are responsible for contract tracking and oversight.	Strength
Commitment 3	The project team is supported by contracting specialists in the execution of the contract.	The project team is not supported by contracting specialists.	Weakness
Ability 1	A group that is responsible for managing contract tracking and oversight activities exists.	Project manager and program management staff are responsible for managing contract tracking and oversight activities.	Strength
Ability 2	Adequate resources are provided for contract tracking and oversight activities.	Staff and funding resources are adequate. However, at the time of the audit, the project team was lacking tools such as telephones, fax, copiers, and office supplies.	Observation
Ability 3	Individuals performing contract tracking and oversight activities have experience or receive training.	Staff members have experience in contract tracking and oversight.	Strength

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Feature	Key practice	Finding	Rating
Activity 1	The project team performs its activities in accordance with its documented contract tracking and oversight plans.	The project team performs its activities in accordance with the program management plan.	Strength
Activity 2	The project team reviews required contractor software planning documents which, when satisfactory, are used to oversee the contractor's software engineering effort.	The project team did not review any of the contractor's planning documents (e.g., project management plan, software risk management plan, software engineering plan, configuration management plan).	Weakness
Activity 3	The project team conducts periodic reviews and interchanges with the contractor.	The team conducts periodic reviews with the contractor.	Strength
Activity 4	The project team reviews and tracks the development of the software engineering environment required to provide life-cycle support for the acquired software.	The District does not plan to support FMS in-house.	Not rated
Activity 5	Any problems or issues found by the project team during contract tracking and oversight are recorded in the appropriate corrective action system and tracked to closure.	The issue tracking system is used to track and provide oversight of problems or issues found during the contract. Issues are tracked to closure.	Strength
Activity 6	The project team maintains the integrity of the contract throughout the contract performance period.	No one assumed responsibility for maintaining the integrity of the contract.	Weakness
Measurement 1	Measurements are made and used to determine the status of the contract tracking and oversight activities and resultant products.	No measurements are taken to determine the status of contract tracking and oversight activities.	Weakness
Verification 1	Contract tracking and oversight activities are reviewed by acquisition organization management on a periodic basis.	Periodic and event-driven meetings are held with the Authority to review contract tracking and oversight activities.	Strength
Verification 2	Contract tracking and oversight activities are reviewed by the project manager on both a periodic and event-driven basis.	Periodic and event-driven meetings are held with the program manager to review contract tracking and oversight activities.	Strength

Evaluation

The purpose of evaluation (testing) is to determine that the acquired software products and services satisfy contract requirements prior to acceptance. The evaluation process includes (1) documenting evaluation plans and conducting evaluation activities in accordance with the plan, (2) developing and managing evaluation requirements in conjunction with developing software technical requirements, (3) incorporating evaluation requirements into the solicitation and the resulting contract, (4) tracking contractor performance of evaluation activities for compliance with the contract, (5) ensuring that adequate resources are provided for evaluation activities, and (6) measuring and reporting on the status of evaluation activities to management.

FMS Project Performing Some but Not Most Evaluation Practices

The FMS project has some process strengths in this KPA. For example, responsibility for evaluation activities has been designated to the project manager, individuals designated to perform evaluation activities have experience, and members of the evaluation team received briefings on the objectives of the evaluation. However, there is no documented evaluation policy or plan, no evidence that evaluation requirements have been developed, and neither the Authority nor the project manager reviews the status of evaluation activities. Table 7 shows the strengths, weaknesses, and observations for the evaluation KPA and the specific findings supporting these ratings.

Table 7: Evaluation Findings

Feature	Key practice	Finding	Rating
Commitment 1	The acquisition organization has a written policy for managing the evaluation of the acquired software products and services.	No written policy exists for managing the evaluation of acquired software products and services.	Weakness
Commitment 2	Responsibility for evaluation activities is clearly designated.	Responsibilities for evaluation activities has been designated to the program manager.	Strength
Ability 1	A group that is responsible for planning, managing, and performing evaluation activities for the project exists.	The joint program management and contractor team, along with the users, is responsible for planning, managing, and performing evaluation activities.	Strength
Ability 2	Adequate resources are provided for evaluation activities.	While personnel resource requirements for evaluation are identified, other resources such as traceability and data collection tools have not yet been identified.	Observation
Ability 3	Individuals performing evaluation activities have experience or receive training.	Individuals performing evaluation have experience in evaluation.	Strength
Ability 4	Members of the project team and groups supporting the software acquisition receive orientation on the objectives of the evaluation approach.	Members of the project team receive orientation on the objectives of the evaluation.	Strength
Activity 1	The project team performs its activities in accordance with its documented evaluation plans.	There is no documented evaluation plan.	Weakness
Activity 2	The project's evaluation requirements are developed in conjunction with the development of the system or software technical requirements.	There is no evidence that evaluation requirements were developed in conjunction with system requirements.	Weakness
Activity 3	The evaluation requirements are incorporated into the solicitation package and resulting contract.	Requirements for the contractor to support the evaluation are in the solicitation and contract.	Strength
Activity 4	The project team assesses the contractor's performance for compliance with evaluation requirements.	The project team did not assess the contractor's performance for compliance with evaluation requirements.	Weakness

(continued)

Feature	Key practice	Finding	Rating
Activity 5	Planned evaluations are performed on the acquired software products and services prior to acceptance for operational use.	Since no documented evaluation plan exists, there is no plan to follow.	Weakness
Activity 6	Results of the evaluations are analyzed and compared to the contract's requirements to establish an objective basis to support the decision to accept the products and services or to take further action.	The FMS project has not yet reached the stage where evaluation activities are analyzed and compared to the contract.	Observation
Measurement 1	Measurements are made and used to determine the status of the evaluation activities and resultant products.	No measurements are made to determine the status of evaluation activities.	Weakness
Verification 1	Evaluation activities are reviewed by acquisition organization management on a periodic basis.	The Authority does not review the status of evaluation activities.	Weakness
Verification 2	Evaluation activities are reviewed by the project manager on both a periodic and event-driven basis.	The project manager does not review the status of evaluation activities.	Weakness

Acquisition Risk Management

SEI defines risk as the possibility of suffering a loss. The purpose of acquisition risk management is to formally identify risks as early as possible and adjust the acquisition to mitigate those risks. An effective risk management process, among other things, includes (1) having a written policy on acquisition risk management, (2) developing a software acquisition risk management plan, (3) conducting software risk management activities in accordance with the plan (e.g., identifying risks, taking mitigation actions, and tracking risk mitigation actions to completion), and (4) measuring and reporting on the status of acquisition risk management activities to management.

FMS Risk Management Processes Are Ineffective

The FMS project had one strength for this KPA. The project has designated responsibility for risk management to the project management team. However, the District is not performing any of the other practices to satisfy this KPA. For example, there is no written policy or plan for acquisition risk management, resource requirements for risk management have not been identified, and at the time of this audit, neither the Authority nor the project manager were reviewing the activities for risk management. Table 8 shows the strengths, weaknesses, and observations for the acquisition risk management KPA and the specific findings supporting these ratings.

Table 8: Acquisition Risk Management Findings

Feature	Key practice	Finding	Rating
Commitment 1	The acquisition organization has a written policy for the management of software acquisition risk.	There is no written policy for software acquisition risk management.	Weakness
Commitment 2	Responsibility for software acquisition risk management activities is designated.	Responsibility for software acquisition risk management was designated to the acquisition management contractor and the program office.	Strength
Ability 1	A group that is responsible for coordinating software acquisition risk management activities exists.	No group is responsible for coordinating software acquisition risk management activities.	Weakness
Ability 2	Adequate resources are provided for software acquisition risk management activities.	Resource requirements for acquisition risk management have not yet been defined.	Weakness
Ability 3	Individuals performing software acquisition risk management activities have experience or receive required training.	Individuals designated to perform software acquisition risk management do not have experience and have not yet received training.	Weakness
Activity 1	Software acquisition risk management activities are integrated into software acquisition planning.	Software acquisition risk management activities were not integrated into software acquisition planning.	Weakness
Activity 2	The software acquisition risk management plan is developed in accordance with the project's defined software acquisition process.	A software acquisition risk management plan has not been developed in accordance with a defined software acquisition process.	Weakness
Activity 3	The project team performs its software acquisition risk management activities in accordance with its documented plans.	There is no documented acquisition risk management plan.	Weakness
Activity 4	Risk management is conducted as an integral part of the solicitation, project performance management, and contract performance management processes.	Risk management is not conducted as an integral part of the solicitation, project performance management, and contract performance management processes.	Weakness
Activity 5	Software acquisition risk handling actions are tracked and controlled until the risks are mitigated.	Software acquisition risk handling actions are not tracked and controlled until the risks are mitigated.	Weakness
Measurement 1	Measurements are made and used to determine the status of the acquisition risk management activities and resultant products.	Measurements are not made for risk management.	Weakness
Verification 1	Acquisition risk management activities are reviewed by acquisition organization management on a periodic basis.	Risk management activities are not reviewed by the Authority.	Weakness
Verification 2	Acquisition risk management activities are reviewed by the project manager on both a periodic and event-driven basis.	Risk management activities are not reviewed by the project manager.	Weakness

Conclusions

Leading software acquisition organizations rely on defined and disciplined software acquisition processes to deliver promised software capabilities on time and within budget, first on a project-by-project basis, and later, as the organization's processes become more mature, consistently across the

institution. While the District has many strengths in its acquisition processes for FMS, it also has many weaknesses that, overall, make its processes undisciplined and immature. As a result, the District's success or failure in acquiring FMS depends largely on specific individuals rather than on well-defined software acquisition management practices. This greatly reduces the probability that the system will consistently perform as intended and be delivered on schedule and within budget.

To satisfy the intent of all the software acquisition key process areas and thereby have a reasonable assurance that acquisition efforts are effectively planned, managed, evaluated, and tracked, the District must address the many weaknesses identified in this report. This would entail the District formulating and implementing a written policy for software acquisition planning, requirements development and management, project management, contract tracking and oversight, evaluation, and acquisition risk management. In addition, it is important for the District to track the various activities for each KPA to ensure that they are being performed and that evaluation and risk management activities are being planned and effectively conducted.

Recommendations

We recommend that the Chairman of the District of Columbia Financial Responsibility and Management Assistance Authority direct the District's Chief Financial Officer to (1) take the following actions for the six KPAs we reviewed to ensure that the current FMS acquisition and implementation is satisfactorily completed and (2) apply these actions to any future software acquisitions.

Software Acquisition Planning:

- Document decisions and update the planning documents to ensure that large acquisitions such as FMS can be effectively managed.
- Designate responsibility for software acquisition planning activities.
- Determine required resources for acquisition planning.
- Ensure that measurements of software acquisition activities are taken.
- Ensure that the software acquisition planning documentation is updated as well as make program changes regarding outsourcing of the data center and upgrading the current system versus buying off-the-shelf.
- Ensure that the software acquisition planning documentation addresses life-cycle support of the software.
- Develop a written policy for software acquisition planning.

Requirements Development and Management:

- Develop an organizational policy for establishing and managing software-related requirements.
- Clearly assign responsibility for requirements development and management.
- Document either resource requirements or resources expended for requirements development activities.
- Develop the capability to trace between contractual requirements and the contractor's work products.
- Develop measurements to determine the status of the requirements development and management activities.

Project Management:

- Develop a written policy for the execution of the software project.
- Authorize the project manager to independently alter either the performance, cost, or schedule.
- Require that measurements be taken to determine the status of project management activities.

Contract Tracking and Oversight:

- Develop written policy for contract tracking and oversight activities for the financial management system project.
- Support the project team with contracting specialists.
- Require that the project team review the contractor's planning documents (for example, the project management plan, software risk management plan, software engineering plan, configuration management plan).
- Assign someone responsibility for maintaining the integrity of the contract.
- Take measurements to determine the status of contract tracking and oversight activities.

Evaluation:

- Develop written policy for managing the evaluation of acquired software products and services.
- Develop a documented evaluation plan.
- Develop evaluation requirements in conjunction with system requirements.

- Assess the contractor's performance for compliance with evaluation requirements.
- Develop measurements to determine the status of evaluation activities.
- Ensure that the Authority and the project manager review the status of evaluation activities.

Acquisition Risk Management:

- Develop written policy for software acquisition risk management.
- Designate a group to be responsible for coordinating software acquisition risk management activities.
- Define resource requirements for acquisition risk management.
- Ensure that individuals designated to perform software acquisition risk management have adequate experience and training.
- Integrate software acquisition risk management activities into software acquisition planning.
- Develop a software acquisition risk management plan in accordance with a defined software acquisition process.
- Develop a documented acquisition risk management plan and conduct risk management as an integral part of the solicitation, project performance management, and contract performance management processes.
- Track and control software acquisition risk handling actions until the risks are mitigated.
- Ensure that risk management activities are reviewed by the Authority and the project manager.

Agency Comments and Our Evaluation

GAO requested comments on a draft of this report from the Chairman, District of Columbia Financial Responsibility and Management Assistance Authority, and the District's Chief Financial Officer. They provided us with written comments that are reprinted in appendixes I and II.

In their comments, the District of Columbia Financial Responsibility and Management Assistance Authority's Executive Director and the District of Columbia's Chief Financial Officer acknowledged that the software acquisition project for the new financial management system was a high risk initiative and that the District's processes were not sufficiently mature. The District Chief Financial Officer identified initiatives in each of the key process areas. Both cited ongoing corrective actions, which, if properly implemented, will address several of our recommendations. For example, the Chief Financial Officer stated that the District is developing a Risk Management Plan and is evaluating various strategies to identify and

manage risks, and that the Chief Technology Officer for the District of Columbia is developing policies and procedures for information resource management which will include software acquisition.

However, the District Chief Financial Officer also added that their efforts to date have achieved a sound acquisition state consistent with the intent of the SA-CMM. As discussed in the report, significant improvements would be necessary to achieve the minimally acceptable level of maturity as defined by the Software Engineering Institute's Software Acquisition Maturity Model to satisfy the intent of all the software acquisition key process areas. Accordingly, the District has not yet achieved a sound acquisition state consistent with the intent of the SA-CMM. If the District is to instill the needed discipline into its systems acquisition processes consistent with the intent of SA-CMM, it will need to effectively implement all of our recommendations.

We are sending copies of this report to the Ranking Minority Member of your Subcommittee and to the Chairmen and Ranking Minority Members of the Subcommittee on Oversight of Government Management, Restructuring, and the District of Columbia, Senate Committee on Governmental Affairs, the Subcommittee on the District of Columbia, Senate Committee on Appropriations, and the Subcommittee on the District of Columbia, House Committee on Government Reform and Oversight. We are also sending copies to the Director of the Office of Management and Budget, the Chairman of the District of Columbia Financial Responsibility and Management Assistance Authority, and the Chief Financial Officer of the District of Columbia. Copies will be made available to others upon request. If you have questions or wish to discuss the issues in this report, please contact me at (202) 512-6412. Major contributors to this report are listed in appendix III.

Sincerely yours,

Dr. Rona B. Stillman
Chief Scientist for
Computers and Telecommunications

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Abbreviations

FMS	financial management system
KPA	key process area
SA-CMM	Software Acquisition Capability Maturity Model
SCE	Software Capability Evaluation
SEI	Software Engineering Institute

Comments From the Chairman, District of Columbia Financial Responsibility and Management Assistance Authority

District of Columbia Financial Responsibility
and Management Assistance Authority
Washington, D.C.

March 18,1998

Revised

Mr. Gene L. Dodaro
Assistant Comptroller General
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Dodaro:

This letter provides the views of the District of Columbia Financial Responsibility and Management Assistance Authority ("Authority") regarding the draft report of the General Accounting Office ("GAO") on the software acquisition process of the District of Columbia for a new financial management system.

The draft report notes that there are problems with the development of the requirements, risk management, and project management. The Authority shares the overall conclusion of the GAO that the new system is a high risk acquisition. It is the view of the Authority that the new financial management system is a high-risk acquisition due to the complexity of the system, the infrastructure needs, and the conversion of the incomplete, unreliable data that is in the present system. Additionally, the system is high risk because of the aggressive schedule that is necessary to implement the system before the onset of the problems associated with Year 2000. The District has been developing the requirements for the new financial management system since October 1996. The requirements were part of the initial phase of the implementation of the new system.

The GAO draft report notes that the process for acquiring the District's software is immature. This is the result of the absence of major software acquisitions by the District in recent years. The newly hired, Chief Technology Officer for the District of Columbia is in the process of developing policies and procedures for information resource management, These will include software acquisitions.

Finally, primarily the James Martin and Company staff, contracted to supplement the District's staff monitoring the implementation of the new system, has conducted project management. Measurements are constantly made and used to determine the status of the project performance management activities, including the following:

--Project funds are tracked through a budget versus actual analysis.
--The project schedule is monitored using automated scheduling software. Project baseline, actual, and revised dates are maintained for tasks, deliverables, and milestones.
--Planned and actual hourly effort estimates are maintained for non-fixed processes.

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--Deliverable statistics are produced monthly to determine the timeliness.
--Both contractors present monthly status reports to the Project Manager.

We appreciate this opportunity to provide comments before the report is finalized.

Sincerely,

John W. Hill, Jr.
Executive Director

Comments From the District of Columbia Chief Financial Officer

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Chief Financial Officer

Anthony A. Williams

April 16, 1998

Mr. Gene L. Dodaro - Assistant Comptroller General
Accounting and Information Management Div.
United States General Accounting Office
Washington, D.C. 20005

Dear Mr. Dodaro:

Thank you for the opportunity to review a copy of your draft report on the District of Columbia's software acquisition processes for a new financial management system (FMS), dated March 6, 1998. The development and implementation of the new FMS for the District of Columbia is well underway. We currently have five District Agencies operating the new FMS as pilot agencies. The experienced gained and lessons learned at these pilot agencies will establish the agenda for preparing the remaining agencies of the District to receive the new systems.

Our contractors have been extremely helpful in assisting the District with this very important project. I would venture to say that we could not have accomplished what we have without their assistance and outstanding cooperation and commitment to the success of this project.

We would like to commend the efforts of your staff in assisting the District by providing guidance and insight in the area of software acquisition management. In view of the level of sophistication of policy, organization and process suggested by the Software Engineering Institute's (SEI) Software Acquisition Capability Maturity Model (SA-CMM), we recognize that we have not yet achieved this level of formalization; however, we believe the measures we have taken to arrive at our current level of software acquisition maturity had many strengths and in fact, achieved a sound acquisition state consistent with the intent of the SA-CMM. We believe the SA-CMM provides a rational basis from which to evaluate the successful accomplishments of the District's FMS project and will serve as a goal as we evolve and re-establish our Information Technology Infrastructure to support the acquisition of new systems in the future.

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Mr. Gene L. Dodaro
April 16, 1998
Page Two

Your report identifies several key process areas of improvement. We have examined your recommendations and offer the following general statements and specific comments.

Software acquisition planning and requirements development and management are areas in which the District will be formalizing specific policy, allocating resources, assigning responsibility and establishing methodologies for measurement. We believe these areas are very important in the development of systems.

In October 1997, the Chief Information Officer in the Office of the Chief Financial Officer developed policies and procedures for information resource management in the District. A written policy for both project management and process management was developed.

The District has selected a process management enabling tool suite to support the District's FMS Program Management Office (PMO). The suite of process management tools supports planning and estimating project resource requirements. The user can record the characteristics of business processes, project deliverables and objectives to create an automatic workplan. With the existing written District policy on project management, and the FMS Program Management Plan, which constitutes clear procedural guidance, the District believes that effective guidelines are in place to ensure a timely, efficient, and effective FMS software acquisition. This statement is supported by your findings of significant strengths in this area; however, the District does plan to formalize its policy on program management. When the District implements the policy on process management, the District will have further assurance that other software acquisition projects such as FMS will be conducted in a more structured manner. One of the prerequisites to achieve quality results is to follow a proven, repeatable process. Process management and the enabling processes and methods are the keys to successful repeatable processes.

The FMS Program Management Office is permitted to independently manage the three components of the FMS Project: Quality, Budget, and Schedule. In order to effectively manage the FMS project, the Program Manager on a day-to-day basis must make decisions to balance each of these factors to the overall goals of the District. Several recent important decisions have been made which demonstrate that the Program Manager is making independent adjustments in performance, cost or schedule. For example:

- In order to ensure the FMS Pilots would be implemented in February 1998, interim deliverable due dates were adjusted to ensure the major milestone would be met.
- In order to meet the District's aggressive schedules, funds budgeted for optional technical services can now be released to perform an infrastructure assessment for the remaining agencies not included in the original pilot.

Mr. Gene L. Dodaro
April 16, 1998
Page Three

Measurements are frequently made and used to determine the status of the project performance management activities and resultant products.

- Project funds are tracked through a budget versus actual system.
- The project schedule is monitored using automated scheduling software. Project baseline, actual, and revised dates are maintained for tasks, deliverables, and milestones.
- Planned and actual hourly effort estimates are maintained for all Indefinite Delivery Indefinite Quality (IDIQ) tasks.
- A library and repository of all software acquisition products is maintained.
- Deliverable statistics are produced on a monthly basis to determine the number of deliverables completed on time, late, or in process. Other deliverable statistics include the number of deliverables initially accepted, initially rejected, and initially conditionally accepted.
- Monthly status reports are delivered both in writing and orally to the PMO from the FMS contractor.
- Weekly status reports by project focus area are delivered in writing and orally to the PMO from the FMS contractor. Status is recorded on these reports with issues and corrective actions noted.

A measurement methodology will be further developed as part of the program management policy.

There is no formal written policy for contract tracking and oversight activities; however, the FMS Program Management Plan constitutes the policies and procedures necessary for effective contract management. The contract requirements associated with budget, quality, and schedule are managed by this plan. The District does plan to formalize its policy on contract tracking and oversight for use in other software acquisition projects.

District and FMS Program Management Office personnel formally review all contractor deliverables and software planning documents, such as the Project Management Plan and the Software Risk Management Plan. The quality management standards and procedures as documented in the FMS Program Management Plan are used to review each deliverable to determine contractual compliance and its acceptance. A methodology for measurement will be developed and implemented for future contract tracking and oversight.

Mr. Gene L. Dodaro
April 16, 1998
Page Four

The District is currently working with the FMS contractors to insure the elements of a comprehensive evaluation process are established and properly executed. A system testing and acceptance plan will provide the basis for district users to test and accept or reject the contractual business requirements identified in the Request For Proposal (RFP) and any additional requirements identified during the implementation process. In addition, the testing plan will include tests which will verify that existing system data and reports are available in the new system. The new FMS system will not be accepted into production until all tests associated with the acceptance test plan have been passed.

The project is constantly focused on the management of risk. Currently, the District is engaged in the development of a more comprehensive Risk Management Plan for the FMS project and is exploring the development of a comprehensive continuous risk management program for financial all system acquisitions. Our contractor is currently engaged in conducting a risk assessment and performing the necessary steps to establish the activities for risk management.

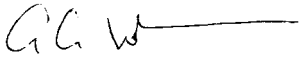
We believe that the development and implementation of the risk management plan will address all of the identified weakness and the District will be in compliance with the recommendations of this report once approved. The risk management plan will serve as the basis for identifying and assessing risk. We will develop a written policy for the management of software acquisition risk. This policy will span all systems currently underdevelopment and those developed in the future. The policy will become the cornerstone of a District CIO/CFO Risk Management Program.

Resources within the FMS project management organization will be assigned the responsibility for coordinating software acquisition risk management activities to include tracking the planned activities to our actual progress. Additional resources will be identified, as required, to provide the necessary staff, contractors, methods and tools. In order to maintain the appropriate management attention, risk management will be a standing agenda item for discussion for the regular meetings of the FMS Steering Committee. In addition, we plan to provide the individuals performing software acquisition risk management activities for the District the necessary training to perform these functions. We are currently examining the SEI course on "Continuous Risk Management" for applicability.

Mr. Gene L. Dodaro
April 16,1998
Page Five

A measurement strategy will be deployed to determine the status of the acquisition risk management activities and resultant products. The District of Columbia Financial Responsibility Management Authority will review the Risk Management Plan and the associated risk management activities.

Sincerely,



Anthony A. Williams
Chief Financial Officer

AAW:ECC/os

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