

# AUDIT REPORT



CITY OF NEW YORK  
OFFICE OF THE COMPTROLLER  
BUREAU OF FINANCIAL AUDIT  
**WILLIAM C. THOMPSON, JR., COMPTROLLER**

## **Audit Report on the Development and Implementation of the City Automated Personnel System By the Department of Citywide Administrative Services**

**7A04-064**

**May 19, 2005**



THE CITY OF NEW YORK  
OFFICE OF THE COMPTROLLER  
1 CENTRE STREET  
NEW YORK, N.Y. 10007-2341

WILLIAM C. THOMPSON, JR.  
COMPTROLLER

**To the Citizens of the City of New York**

Ladies and Gentlemen:

Pursuant to Chapter 5, Section 93 of the New York City Charter, we performed an audit on the development and implementation of the New York City Automated Personnel System by the Department of Citywide Administrative Services. The results of our audit, which are presented in this report, have been discussed with agency officials, and their comments have been considered in preparing this report.

Audits such as this provide a means of ensuring that City agencies are developing computer applications in an efficient, timely and cost-effective manner.

I trust that this report contains information that is of interest to you. If you have any questions concerning this report, please contact my audit bureau at 212-669-3747 or e-mail us at [audit@Comptroller.nyc.gov](mailto:audit@Comptroller.nyc.gov).

Very truly yours,

A handwritten signature in cursive script that reads "William C. Thompson, Jr.".

William C. Thompson, Jr.

WCT/gr

**Report: 7A04-064**  
**Filed: May 19, 2005**

*The City of New York  
Office of the Comptroller  
Bureau of Financial Audit  
EDP Audit Division*

**Audit Report on the  
Development and Implementation of the  
City Automated Personnel System by the  
Department of Citywide Administrative Services**

**7A04-064**

---

**AUDIT REPORT IN BRIEF**

We performed an audit on the development and implementation on the New York City Automated Personnel System (NYCAPS) by the Department of Citywide Administrative Services (DCAS). The goal of the system was to make available to users more accurate and accessible personnel-related information.

**Audit Findings and Conclusions**

Despite spending more than \$50 million on its development and nearing its estimated completion date, NYCAPS is not complete. (City officials estimate that it will cost another \$70 million to complete NYCAPS and if the City decides to include the Department of Education and other enhancements in NYCAPS' development it will cost an additional \$35 million, which would bring the total cost of developing the system to \$155 million.) Consequently, we are unable to determine whether NYCAPS as a finished product meets the overall goals stated in the system justification, whether its system design allows for future enhancements and upgrades, and whether it meets initial DCAS business and system requirements. We did find, however, that DCAS did not adequately define the business and system requirements for the four NYCAPS applications that were completed.

In addition, although DCAS followed a formal system development methodology when it began developing NYCAPS, it did not successfully implement that methodology. Moreover, while NYCAPS was generally procured in accordance with PPB Rules and City Charter provisions, deficiencies in the procurement process led to DCAS' failure to complete NYCAPS in a timely manner and within its original budget. In addition, DCAS has not incorporated the completed NYCAPS applications into its disaster recovery plan. Finally, the information presented about NYCAPS to the public in the Mayor's Management Report (MMR) for Fiscal Years 2000 through 2002 gave the impression that development of the system was progressing smoothly.

## **Audit Recommendations**

To address these issues we recommend that DCAS should:

- Comply with all applicable provisions of Directive 18. In particular, DCAS should ensure that the formal systems methodology for developing NYCAPS is implemented.
- Ensure that sufficient staff is assigned to undertake all remaining development tasks.
- Ensure that business and system requirements are adequately defined for the remaining NYCAPS applications. In that regard, requirements should contain definitions of each phase or definitions of the standards for determining whether the system meets the objectives of the applications, safety and security requirements, user-interface requirements, and performance requirements. In addition, test plans for the applications should contain all essential details.
- Develop formal disaster recovery plans for each of the completed NYCAPS applications and incorporate them into the DCAS agency-wide disaster recovery plan.
- Develop formal disaster recovery plans for each new phase or application of NYCAPS and incorporate them into the DCAS agency-wide disaster recovery plan upon completion.
- Address the user concerns noted in this report. In addition, DCAS should perform user surveys during testing and after each module has been in production to identify user concerns with the new modules.
- In conjunction with the NYPD, address any security concerns with the NYPD Shields application. Any outstanding problems should be promptly corrected so that the application can be reactivated.
- Employ an independent quality-assurance consultant to oversee and monitor the entire development process from its inception. The development of testing models and tests should be performed by the quality-assurance consultant.
- Employ an approved and properly solicited systems integrator from a project's inception for system programming and testing.
- Ensure that business and system requirements are adequately defined before commencing development. In that regard, sufficient staff and resources should be allotted to defining system requirements.
- Ensure that contracts for system development projects contain specific deliverables with due dates and provisions for acceptance testing and nonperformance penalties.

- Ensure that only approved vendors are selected when using State contracts.
- Ensure that new system applications are justified before commencing work and expending development costs. In that regard, DCAS should consider requiring agencies to conduct cost-benefit analyses for prospective new applications.
- Ensure that it provides complete and reliable information to the Mayor's Office of Operations for inclusion in the MMR.

## **INTRODUCTION**

### **Background**

DCAS provides personnel and support services to City agencies. Its personnel management functions include personnel development, civil service administration, license issuance as required by law, oversight of the citywide equal employment opportunity program and policies, and classification of positions and salary levels. In order to centralize, integrate, and replace many of the City's independent human resources and employee benefits systems and civil service functions, DCAS began planning for the NYCAPS in 1998.<sup>1</sup> NYCAPS is intended to facilitate access and data sharing by City oversight agencies and agency human resources divisions. The goal of the system is to make available to users more accurate and accessible personnel-related information.

The development of NYCAPS was to commence in January 2000 and occur over a four-year period until 2004. The original NYCAPS budget was \$66 million, of which DCAS expended \$50 million as of January 2004. In March 2000, DCAS chose PeopleSoft software as the product it would use to develop NYCAPS. Using New York State vendor lists, DCAS awarded a contract to the Hunter Group (Hunter) in July 2000, which required that Hunter analyze user needs, define and develop business and system requirements, and develop a technical design and test plan for the system. By June 2001, Hunter had completed its analysis of user needs at six City agencies applicable to NYCAPS' human resources component. Rather than having Hunter proceed with the remaining tasks, DCAS had Hunter develop sample prototype screens that would enable users to preview the actual screens that would be available under the completed system. Development of these prototype screens was completed by November 2001.

In December 2000, DCAS officials directed Hunter to develop the Personal Data QuickHit (QuickHits) application and the Online Exam Application (OLA). In addition, DCAS requested Hunter to develop two other applications—one application was requested by and designed exclusively for the Administration for Children's Services (ACS), and the other was requested by

---

<sup>1</sup>NYCAPS will incorporate Premium Accounting Central Enrollment System (PACES), Personnel Reporting and Information System for Employees (PRISE), Certification Evaluation, Reporting, and Tracking System (CERTS), Applications (APPS), Citywide Equal Employment Opportunity Personnel Database System (CEEDS), Personnel Investigation Control and Tracking System (PICTS), Graphical Employee Management System (GEMS), and other local agency human resources-related systems.

and designed exclusively for the Police Department (NYPD).<sup>2</sup> QuickHits became operational in July 2001; OLA and the other applications became operational in June 2002.

In December 2001, DCAS awarded a contract for quality assurance to Grant Thornton. On July 10, 2002, a security breach was discovered in the OLA—individuals who accessed the application were able to access other people’s personal data. As a result, use of this application was halted, and NYCAPS development was suspended while DCAS conducted an investigation to remedy the problem. In August 2002, DCAS terminated its contract with Grant Thornton and hired a new quality-assurance consultant, CTG, Inc. The contract with Hunter was also terminated. In October 2002, the new quality-assurance consultant tested all four applications and found that the security problem was corrected.

In April 2003, DCAS presented a plan to complete NYCAPS to the Office of Management and Budget (OMB) and other City officials. The plan was approved by OMB in August 2003; in November 2003 DCAS resumed development of NYCAPS. City officials estimate that it will cost another \$70 million to complete NYCAPS. If the City decides to include the Department of Education and other enhancements in the NYCAPS development it will cost an additional \$35 million. This represents a potential increase of \$89 million or 134% over the original \$66 million budget.

### **Objectives**

The objectives of the audit were to evaluate whether:

- NYCAPS, as a finished product, meets overall goals as stated in the system justification;
- The system design allows for future enhancements and upgrades;
- NYCAPS meets initial DCAS business and system requirements;
- DCAS followed a formal system development methodology when developing NYCAPS;
- NYCAPS was procured by DCAS in accordance with City Charter provisions and Procurement Policy Board (PPB) rules; and
- The system has been incorporated into the DCAS disaster recovery plan.

---

<sup>2</sup> The ACS Training Administration application allows ACS officials to administer and schedule classes online. It maintains attendance records, test scores, and student evaluations. E-mails, confirmations, and announcements are posted for students and instructors. The NYPD Shields application permits NYPD officials to view, update, and report on the status of all police shields that have been issued by shield rank and shield number. NYPD Shields will interface with NYPD’s Personnel Inquiry System, and the history of each shield will be maintained.

It should be noted that our audit objectives focus on the original development of NYCAPS from its inception until development was suspended by DCAS in 2002. The audit does not cover DCAS's contract with CTG, Inc., or its plan to complete development of NYCAPS that was approved by OMB in August 2003.

### **Scope and Methodology**

Our fieldwork was conducted from August 2003 through March 2004. To achieve our objectives, we interviewed DCAS officials, conducted a walk-through of the system, and reviewed, analyzed, and evaluated the initial project analysis and summary for NYCAPS and the Department of Information and Technology's (DoITT) January 2000 NYCAPS Business Plan. In addition, we reviewed and evaluated the NYCAPS consultant's "needs assessment" strategy as well as the December 2000 and March 2001 project strategy, the exit agreement between DCAS and Hunter, DoITT's quality-assurance project definition and disaster recovery plan. We also reviewed contract agreements, project work-plans, analysis, planning documents, and implementation strategies.

We conducted user satisfaction surveys for three applications. For the QuickHits application, we judgmentally selected 102 of 455 users who accessed the application from January 2003 to January 2004. The 102 users surveyed were from 26 of 44 agencies using QuickHits. We received 29 user responses from 14 agencies. For the ACS Training application, we judgmentally selected 26 of the 39 users who accessed the application from January 2003 to January 2004. Thirteen of the 26 users responded to our survey. Finally, we selected all eight NYPD Shields users and received responses from seven. The general purpose of these surveys was to determine whether users were satisfied with the applications, whether they had been appropriately trained, and what changes they would like made to the applications. The results of the survey, while not projectable to their respective populations of users, provide a reasonable basis to assess user satisfaction.

Since the City does not have a formal systems development methodology, we used Comptroller's Internal Control and Accountability Directive 18, *Guidelines for the Management, Protection and Control of Agency Information and Information Processing Systems* (Directive 18), and the National Institute of Standards and Technology (NIST) Publication #500-223, *A Framework for the Development and Assurance of High Integrity Software*, as criteria for this audit. We also reviewed provisions of the City's Procurement Policy Board Rules (PPB), New York State procurement guidelines, and the New York City Charter.

This audit was conducted in accordance with generally accepted government auditing standards (GAGAS) and included tests of the records and other auditing procedures considered necessary. This audit was performed in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, § 93, of the New York City Charter.

### **Independence Disclosure**

As of February 2004, an employee of the New York City Comptroller's Office—the Assistant Comptroller for Information Technology/Chief Information Officer—began sitting on the DCAS Executive Steering Committee and Executive Working Group responsible for providing oversight to NYCAPS. The Assistant Comptroller for Information Technology was not involved in planning or conducting this audit, or in writing or reviewing the audit report.

### **Discussion of Audit Results**

The matters covered in this report were discussed with DCAS officials during and at the conclusion of this audit. A preliminary draft report was sent to DCAS officials and was discussed at an exit conference held on December 15, 2004. On January 18, 2005, we submitted a draft report to DCAS officials with a request for comments. We received a written response from DCAS officials on February 16, 2005. In its response, DCAS stated that management changes "...resolved many of the issues identified in the draft report..." and "...since all of the technical functions performed in relation to application development and support for the NYCAPS project have recently been transferred from DCAS to FISA, all of the recommendations in the draft report pertaining to the ongoing development and implementation of the project have been rendered moot as they pertain to DCAS."

In addition, DCAS disagreed with the report's recommendations: to retain a systems integrator at the inception of every project; that all contracts for system development projects contain specific deliverables with due dates and provisions for acceptance testing and nonperformance penalties; and, that it ensure that it provides complete and reliable information to the Mayor's Office of Operations for inclusion in the MMR. Finally, while DCAS agreed with our recommendation that it ensure that only approved vendors be selected when using State contracts, DCAS contends that it fulfilled this requirement for the NYCAPS project.

The full text of the DCAS response is included as an addendum to this report.

## **FINDINGS AND RECOMMENDATIONS**

Despite spending more than \$50 million on its development and nearing its estimated completion date, NYCAPS is not complete. (As stated earlier, City officials estimate that it will cost another \$70 million to complete NYCAPS. If the City decides to include the Department of Education and other enhancements in the NYCAPS development it will cost an additional \$35 million, which would bring the total cost of the development to \$155 million.) Consequently, we are unable to determine whether NYCAPS as a finished product meets the overall goals stated in the system justification, whether its system design allows for future enhancements and upgrades, and whether it meets initial DCAS business and system requirements. We did find, however, that DCAS did not adequately define the business and system requirements for the four NYCAPS applications that were completed.



In addition, although DCAS followed a formal system development methodology when it began developing NYCAPS, it did not successfully implement that methodology. Moreover, while NYCAPS was generally procured in accordance with PPB Rules and City Charter provisions, deficiencies in the procurement process led to DCAS's failure to complete NYCAPS in a timely manner and within its original budget. In addition, DCAS has not incorporated the completed NYCAPS applications into its disaster recovery plan. Finally, the information presented about NYCAPS to the public in the Mayor's Management Report (MMR) for Fiscal Years 2000 through 2002 gave the impression that development of the system was progressing smoothly.

These issues and the results of our user satisfaction surveys are discussed in detail in the following sections of this report.

### **Systems Development Weaknesses**

Despite having spent \$50 million, having the active sponsorship and support of DCAS's management, involving end users in the specification of system requirements, and using a project manager who had successfully implemented another systems application, NYCAPS is incomplete. DCAS's failure to ensure adequate quality assurance and system integration has caused the project to be behind schedule and over budget.

Specifically, we attribute DCAS's failure to complete NYCAPS to problems with its initial inability to hire a quality-assurance consultant, its allowing Hunter to continue with the development of NYCAPS without adequate oversight, its late hiring of a systems integrator, its failure to adequately define system requirements, and its awarding of contracts without due dates, delivery schedules, and acceptance testing requirements and penalties for nonperformance.

#### **Inadequate Quality Assurance**

DCAS did not employ a quality-assurance consultant for more than one year after the project's inception. DCAS originally selected a quality-assurance consultant in September 2000, though the agreement with this vendor was never finalized. It was not until December 2001, more than one year after Hunter Group (Hunter) had been hired and had begun to develop NYCAPS, that DCAS awarded a contract to Grant Thornton, the initial quality-assurance vendor for NYCAPS.

Directive 18 states that engaging "an independent quality-assurance consultant to assist the agency monitor and review the work of the development and integration team" can help "insure the success of system development projects." In fact, the engagement of a quality-assurance consultant is even more critical for overseeing and monitoring projects of such magnitude as NYCAPS. The delay in employing a quality-assurance consultant meant that Hunter proceeded to develop the system without adequate oversight. In addition, the quality-assurance vendor was supposed to develop testing models and conduct tests before the system was implemented. However, this work was done by DCAS staff rather than by an independent party.

## **Problems with Systems Integration And Needs Assessment**

DCAS did not employ an approved systems integrator at the project's inception. DCAS did not award a contract for system integration to Accenture until March 2002—prior to this time Hunter acted as the system integrator despite the fact that it was not an approved State vendor for system integration and its agreement with DCAS indicated that it could not respond to the solicitation for the systems integration portion of the project. Thus, not only did DCAS disregard its own contractual agreement with Hunter, it also failed to justify the basis upon which it selected Hunter to do the system integration work

The system's development was also hampered by DCAS's decision in February 2001 to have Hunter develop sample prototype screens and additional applications before Hunter completed the needs assessment for the project. Based on this decision, Hunter's staff was split into two groups, which left insufficient staff available to complete the needs assessment and contributed to the project's delay.

### **System Requirements Not Defined**

DCAS did not adequately define the business and system requirements of the four NYCAPS applications that were completed (QuickHits, OLA, ACS Training Administration, and NYPD Shields). NIST Publication #500-223, §2.1.states that the software requirement process should “describe each software requirement giving enough information to design each component . . . [and] analyze each system requirement allocated to software for understandability, correctness, testability, consistency, and completeness.”

The requirements did not contain definitions of each phase or definitions of the standards for determining whether the system met the objectives of the applications, safety and security requirements, user-interface requirements, and performance requirements. Moreover, each of the applications' test plans lacked essential details (i.e., who reconciles and approves testing results, how test scripts should be built to ensure that business and system requirements are met, and how to state test failure criteria and report test results).

### **Recommendations**

To ensure that NYCAPS development is completed so that the system will meet its overall goals, DCAS should:

1. Comply with all applicable provisions of Directive 18. In particular, DCAS should ensure that the formal systems methodology for developing NYCAPS is implemented.
2. Ensure that sufficient staff is assigned to undertake all remaining development tasks.
3. Ensure that business and system requirements are adequately defined for the remaining NYCAPS applications. In that regard, requirements should contain

definitions of each phase or definitions of the standards for determining whether the system meets the objectives of the applications, safety and security requirements, user-interface requirements, and performance requirements. In addition, test plans for the applications should contain all essential details.

**DCAS Response:** DCAS did not directly respond to Recommendations 1, 2, and 3. Instead it stated that “since all of the technical functions performed in relation to application development and support for the NYCAPS project have recently been transferred from DCAS to FISA, all of the recommendations in the draft report pertaining to the ongoing development and implementation of the project have been rendered moot as they pertain to DCAS. However, we have shared the draft audit report with FISA for its consideration.”

To ensure that the problems identified in this report are corrected and do not beset future development projects, DCAS should:

4. Employ an independent quality-assurance consultant to oversee and monitor the entire development process from its inception. The development of testing models and tests should be performed by the quality-assurance consultant.

**DCAS Response:** DCAS did not respond to Recommendation 4.

5. Employ an approved and properly solicited systems integrator from a project’s inception for system programming and testing.

**DCAS Response:** “We disagree . . . that on all development projects, a systems integrator should be retained at the inception of every project. It has been our experience that on numerous projects, there is no need for a systems integrator until such time as the appropriate user requirements have been established and it would certainly be an enormous waste of the public fisc [sic] to retain and pay for a consultant prior to there being a need for such integration services.”

**Auditor Comment:** Notwithstanding DCAS’ stated experience with systems integrators, NYCAPS development suffered because DCAS did not employ an approved systems integrator at the project’s inception. Moreover, DCAS’s claim that it would be wasteful to have a systems integrator before user requirements have been established is without merit. Most contracts with system integrators, including the one for NYCAPS, are based on time and materials. Therefore, having an integrator at project inception poses no financial risk to the agency since costs would only be incurred when services are actually provided.

6. Ensure that business and system requirements are adequately defined before commencing development. In that regard, sufficient staff and resources should be allotted to defining system requirements.

**DCAS Response:** DCAS did not respond to Recommendation 6.

## **Procurement Weaknesses**

As stated previously, NYCAPS was generally procured in accordance with PPB Rules and City Charter provisions. In this regard, DCAS's Agency Chief Contracting Officer (ACCO) determined that the purchase using New York State Back-Drop contracts was in the best interests of the City and that the price was fair and reasonable.<sup>3</sup> However, DCAS did not adhere to the State's contracting rules. New York State Back-Drop Contract, General Terms and Conditions, Section D, §17.0, requires that "project Definition/Specifications will set forth the delivery schedule, acceptance testing and progress payment criteria for completion of work and acquisition of project components." However, despite this stipulation, the DCAS contract with Hunter did not contain deliverable due dates and schedules.

In addition, as stated previously, DCAS contracted with Hunter to act as the system integrator despite its not being an approved State vendor for system integration and despite its agreement with DCAS that stipulated it could not respond to the solicitation for the systems integration portion of the project. New York State Procurement Guidelines Section 4 requires that vendors be selected from the State's approved vendor list. In that regard, while Hunter was on the State's approved list as a needs-assessment vendor, it was not listed as an approved vendor for system integration. Thus, as stated previously, we question the basis upon which Hunter was selected to perform the integration work.

Stipulating deliverable due dates and schedules for completing certain tasks, linking vendor payments to specific deliverables and due dates, and ensuring that contracts contain provisions for acceptance testing and nonperformance penalties are critical components of contract management that can assist in ensuring that vendors can be held accountable for nonperformance and that system development projects progress on schedule.

## **Recommendations**

7. DCAS should ensure that contracts for system development projects contain specific deliverables with due dates and provisions for acceptance testing and nonperformance penalties.

**DCAS Response:** "We . . . disagree . . . that all contracts for system development projects should contain specific deliverables with due dates and provisions for acceptance testing and nonperformance penalties. While the inclusion of these provisions is certainly desirable and should be the norm, there are situations in which, at the outset of a project, system requirements and level of effort are not fully known. In those situations, it is simply not feasible to include the relevant provisions in contracts."

---

<sup>3</sup>According to the New York State Office of General Services, a "Back-Drop" contract is procured from a pool of qualified vendors for services such as elevator maintenance and information technology. Under back-drop contracts, terms and conditions are already stipulated.

**Auditor Comment:** DCAS’s opinion on the need for due dates is irrelevant for the NYCAPS project. As discussed in the report, State contracting rules required DCAS to stipulate deliverable due dates for its contract with Hunter. In any case, we question DCAS’s position on this matter given that the NYCAPS project is over budget, behind schedule, and has been transferred to another agency for completion.

8. DCAS should ensure that only approved vendors are selected when using State contracts.

**DCAS Response:** “The eighth recommendation provides that DCAS should ensure that only approved vendors are selected when using State contracts. While we certainly agree with this recommendation, we strongly disagree with the auditors’ assertion that DCAS did not follow this axiom in connection with the NYCAPS project. Our records establish that we only used such approved vendors on the project and, as the auditors themselves acknowledged, we complied with both the City Charter and the PPB Rules on all NYCAPS procurements.”

**Auditor Comment:** DCAS is being somewhat disingenuous when it states that it only used “approved vendors on the project.” While, as stated previously, Hunter was an approved State vendor, we reiterate that it was not an approved State vendor for system integration—therefore, DCAS should not have contracted with Hunter for these services. In addition, while the audit report appropriately stated that DCAS generally complied with the City Charter and PPB Rules, it also stated that DCAS violated State contracting rules regarding the use of approved vendors. Therefore, we question how DCAS can assert compliance in this area.

### **Lack of a Formal Disaster Recovery Plan**

DCAS does not have a formal disaster recovery plan for two of the completed NYCAPS applications that are currently in use: Personal QuickHit and ACS Training Administration. According to Directive 18, “A formal plan for the recovery of agency operations and the continuation of business after a disruption due to a major loss of computer processing capability is an important part of the information protection plan.” DCAS does have a draft version of a disaster recovery plan for the Personal QuickHit application; however, the draft plan lacks the following items, which are required by Directive 18:

- The steps the agency will take to determine whether or not an event is sufficiently serious to invoke the plan.
- Responsibility assignment: names, telephone numbers, and specific responsibilities of each individual in a disaster situation.
- Specific procedures: the specific steps that people must follow if a disaster occurs.

## **Recommendations**

DCAS should:

9. Develop formal disaster recovery plans for each of the completed NYCAPS applications and incorporate them into the DCAS agency-wide disaster recovery plan.
10. Develop formal disaster recovery plans for each new phase or application of NYCAPS and incorporate them into the DCAS agency-wide disaster recovery plan upon completion.

**DCAS Response:** DCAS did not respond to Recommendations 9 and 10.

## **Other Issues**

### **User Satisfaction**

We conducted user satisfaction surveys of the QuickHits, ACS Training Administration, and NYPD Shields applications. The following are the results from users who responded to our survey for each application: (See Appendix for a copy of the survey.)

#### **QuickHits**

Most users are generally satisfied with QuickHits (93 percent of the respondents reported that they found QuickHits easy to access; 72 percent found it easy to use; 79 percent considered the initial training sufficient; and 65 percent were somewhat happy with the application). However, 52 percent of respondents reported that they would like to see some changes made; 48 percent felt that the reporting features did not meet their needs. Some users reported that QuickHits should capture more of an individual's personal data, the application's reporting features should be improved, and that additional training was needed in system use and operation.

#### **ACS Training Administration**

Most users are satisfied with the ACS Training Administration application. In fact, 93 percent of the respondents stated that the application works adequately, 61 percent reported that the application was somewhat easy to use, and 69 percent of respondents were somewhat happy with the application. However, most users reported that they would like to see changes made to the application—61 percent reported that previously entered data were sometimes inaccurate, and 61 percent reported that the application is not user friendly. Additionally, respondents felt that the reporting features needed improvement that the screen format needed modification, and that on-going training was needed.

#### **NYPD Shields**

Six of the seven users who responded to our survey stated that the reporting features did not meet their needs; all respondents consider the screen format and information flow as functional, but changes need to be made to meet the NYPD's needs. All respondents considered the application somewhat easy to use, but not very user-friendly; 42 percent of respondents reported that training was insufficient.

It should be noted that security concerns led the NYPD to discontinue its use of NYPD Shields in July 2002. Since then, the NYPD's apparent lack of urgency in correcting any problems with the application leads us to question the application's original necessity and the justification for the development costs incurred.

### **Recommendations**

DCAS should:

11. Address the user concerns noted in this report. In addition, DCAS should perform user surveys during testing and after each module has been in production to identify user concerns with the new modules.
12. In conjunction with the NYPD, address any security concerns with the NYPD Shields application. Any outstanding problems should be promptly corrected so that the application can be reactivated.
13. Ensure that new system applications are justified before commencing work and expending development costs. In that regard, DCAS should consider requiring agencies to conduct cost-benefit analyses for prospective new applications.

**DCAS Response:** DCAS did not respond to Recommendations 11, 12, and 13.

### **Lack of Reliable Information in the Mayor's Management Report**

The MMR, which is required under the City Charter, is the only citywide document that sets forth goals, objectives, and outcomes for services provided for the dollars expended. As such, it must be thorough, reliable, and accurate so that the public, as well as City officials, have appropriate information to evaluate City operations. However, the problems encountered on the NYCAPS project have not been properly reflected in the Mayor's Management Report. In fact, the information presented gives a false impression that the project was progressing on schedule, which certainly was not the case.

The information presented to the public about NYCAPS in the MMR from Fiscal Years 2000 through 2002 gave the impression that development of the system was progressing smoothly. In that regard, the MMR for Fiscal Year 2000 states, "The Department has selected a software product and expects to complete the first phase by June 2001." In the MMR for Fiscal

Year 2001, DCAS indicated that “the Department purchased a software product in March 2000 and began to conduct a requirements analysis.” The Fiscal Year 2001 MMR also provides information about the development of the OLA application: “As part of the New York City Automated Personnel System (NYCAPS), develop an online application system for civil service examinations. Complete Phase 1 by July 2001.” The other applications (i.e., QuickHits, ACS Training Administration, and NYPD Shields) are discussed in the Preliminary Fiscal Year 2002 MMR:

“In Fiscal 2002 the first phase of the system will be implemented using a two-track approach. The personnel track provides human resource professionals in City agencies with access to NYCAPS functions. During Fiscal 2002 DCAS will conduct a pilot program to track employee training, assignment of shields or badges to civilian and uniformed employees, and other human resources functions...The self-service track provides employees and the public with limited access to NYCAPS data. In Fiscal 2002 the self-service track will allow employees to maintain their own emergency contact information and to access electronic pay stubs.”

As the MMR reports indicate, the software was indeed purchased in 2000. However, the requirement analysis (the first phase of development), was not completed because of the discovery of a security breach in the OLA in July 2002, when development was halted. In addition, other important information about the status of the project’s development is not reported, such as the problems we previously discussed about the system integrator and quality-assurance vendors. In fact, there is no mention of NYCAPS in the Fiscal Year 2003 MMR, thereby denying the public complete and reliable information about this costly project. We acknowledge that the format of the MMR was significantly changed for 2003. However, we noted that other system development projects, which were presumably running smoothly, were discussed in the 2003 MMR.

### **Recommendation**

14. DCAS should ensure that it provides complete and reliable information to the Mayor’s Office of Operations for inclusion in the MMR.

**DCAS Response:** “We take exception to the fourteenth recommendation, which states that ‘DCAS should ensure that it provides complete and reliable information to the Mayor’s Office of Operations for inclusion in the MMR.’ During my tenure as Commissioner of DCAS, I have always ensured that the information we have provided for the MMR is accurate. The absence of any mention of NYCAPS in the FY 2003 MMR is attributed to the fact that beginning with Fiscal 2002, the Mayor’s Management Report was retooled to serve as public report card, providing focused information about citizen concerns. While previous MMRs were organized around concepts focusing on internal management, the new report provided information on the way City services affect the lives of the public. The NYCAPS project, while important for internal management purposes, did not fall into



the category of services that directly impact the lives of the public. Thus, the project did not meet the criteria for inclusion in the revised MMR.”

**Auditor Comment:** We question DCAS’s claim that the absence of information pertaining to NYCAPS in the MMR is due to its being “retooled” to provide information about City services that affect the lives of the public. Our review of the Fiscal Year 2003 MMR indicates that it contains information about agency systems that, like NYCAPS, do not have a direct impact on the lives of the public. For example, the MMR discusses the Department of Finance’s Professional Auditing Support System, which is being developed to enhance the process of selecting candidates for audit. As another example, the Law Department provided information in the MMR about its development of a centralized database for tracking documents in connection to lawsuits. Finally, DCAS itself provided information in the Fiscal Year 2003 MMR about the development of a system for electronically transmitting fingerprints to the New York State Division of Criminal Justice Services. Accordingly, we maintain that the problems encountered on the NYCAPS project should have been disclosed in the MMR to ensure that the public received complete and reliable information about this costly project.



DEPARTMENT OF CITYWIDE ADMINISTRATIVE SERVICES  
OFFICE OF THE COMMISSIONER

One Centre Street, 17<sup>th</sup> Floor  
New York, NY 10007  
(212) 669-7111 • Fax: (212) 669-8992  
Email: [mhirst@dcas.nyc.gov](mailto:mhirst@dcas.nyc.gov)

Martha K. Hirst  
*Commissioner*

February 14, 2005

*Citywide Personnel  
Services*

*Facilities  
Management &  
Construction*

*Municipal Supply  
Services*

*Real Estate Services*

*Citywide Equal  
Employment  
Opportunity*

*Citywide  
Occupational Safety  
& Health*

*Transportation  
Services*

*The City Record*

*CityStore*

Greg Brooks, Deputy Comptroller  
Policy, Audits, Accountancy & Contracts  
City of New York Office of the Comptroller  
1 Centre Street, Room 530  
New York, New York 10007-2341

Re: Audit Report on the Development  
and Implementation of the City  
Automated Personnel System by  
the Department of Citywide  
Administrative Services  
(7A04-064)

Dear Mr. Brooks:

Thank you for the opportunity to respond to the above referenced draft audit report.

The draft report focuses almost exclusively on events and transactions that occurred prior to my appointment as Commissioner of DCAS and, as you know, shortly after my appointment, I changed the management structure of, and the consultants assigned to, the NYCAPS project. We firmly believe that those changes resolved many of the issues identified in the draft report, and the extensive documentation memorializing those changes and showing the progress the project has made as a result of such changes was shared with your auditors during the course of this audit.

Moreover, since all of the technical functions performed in relation to application development and support for the NYCAPS project have recently been transferred from DCAS to FISA, all of the recommendations in the draft report pertaining to the ongoing development and implementation of the project have been rendered moot as they pertain to DCAS. However, we have shared the draft audit report with FISA for its consideration. While this agency is no longer responsible for the development and implementation of NYCAPS, we do nonetheless feel obliged to respond to several recommendations that we believe are unwarranted.

Greg Brooks  
February 14, 2005  
Page 2

Specifically, we disagree with the fifth recommendation that on all development projects, a systems integrator should be retained at the inception of every project. It has been our experience that on numerous projects, there is no need for a systems integrator until such time as the appropriate user requirements have been established and it would certainly be an enormous waste of the public fisc to retain and pay for a consultant prior to there being a need for such integration services.

We also disagree with the seventh recommendation that all contracts for system development projects should contain specific deliverables with due dates and provisions for acceptance testing and nonperformance penalties. While the inclusion of these provisions is certainly desirable and should be the norm, there are situations in which, at the outset of a project, system requirements and level of effort are not fully known. In those situations, it is simply not feasible to include the relevant provisions in contracts.

The eighth recommendation provides that DCAS should ensure that only approved vendors are selected when using State contracts. While we certainly agree with this recommendation, we strongly disagree with the auditors' assertion that DCAS did not follow this axiom in connection with the NYCAPS project. Our records establish that we only used such approved vendors on the project and, as the auditors themselves acknowledged, we complied with both the City Charter and the PPB Rules on all NYCAPS procurements.

Lastly, we take exception to the fourteenth recommendation, which states that "DCAS should ensure that it provides complete and reliable information to the Mayor's Office of Operations for inclusion in the MMR." During my tenure as Commissioner of DCAS, I have always ensured that the information we have provided for the MMR is accurate. The absence of any mention of NYCAPS in the FY 2003 MMR is attributed to the fact that beginning with Fiscal 2002, the Mayor's Management Report was retooled to serve as public report card, providing focused information about citizen concerns. While previous MMRs were organized around concepts focusing on internal management, the new report provided information on the way City services affect the lives of the public. The NYCAPS project, while important for internal management purposes, did not fall into the category of services that directly impact the lives of the public. Thus, the project did not meet the criteria for inclusion in the revised MMR.

In conclusion, we appreciate the opportunity to provide these comments and, although the recommendations at issue are no longer applicable to this agency vis-à-vis the NYCAPS project, we will certainly take them into account with respect to any future system development projects we pursue.

Sincerely,



Martha K. Hirst

C: Lewis S. Finkelman  
Donald P. Brosen  
Christopher Lane