



Fairfax County Internal Audit Office

**Sheriff's Office
IT Equipment & Software Acquisitions/Inventory Audit
Final Report**

December 2016

"promoting efficient & effective local government"

Executive Summary

The Fairfax County Sheriff's Office is responsible for managing the Fairfax County Adult Detention Center, providing security in the court house, and serving civil law processes. The office uses information technology equipment and software such as computers, iPads, iPad Touches, smart cell phones, kiosks and numerous other state-of-the-art technologies as part of a mobile device network to perform their daily operations. The Sheriff's Office Information Technology Branch (SHF-IT) is responsible for purchasing, inventorying and managing the mobile IT equipment and software.

This audit focused on determining whether the Sheriff's Office has controls in place and effectively functioning to ensure their mobile IT equipment and software acquisitions were proper and inventory was properly managed and safeguarded against unauthorized physical access. We noted that controls were in place to ensure proper access to the storage area and to safeguard IT equipment. SHF-IT had informal unwritten procedures for the management and securing of mobile IT equipment and software, most of these procedures were consistently implemented. However, we noted the following exceptions where compliance and controls could be strengthened:

- Two mobile devices purchased with a procurement card (p-card) were not properly recorded in the inventory database.
- Periodic inventory counts of IT equipment or software were not performed by SHF-IT.
- The SHF-IT did not have documented procedures for the handling, recording, monitoring, securing and managing of IT equipment and software.
- Key identifier and operational information such as purchase date, receive date, and return date was not captured in the inventory database. Additionally, transactions recorded in the inventory database were not reviewed to ensure data accuracy.
- Two PO transactions to purchase mobile IT equipment had missing or incomplete purchase authorization documentation, and eight p-card transactions lacked segregation controls in receiving goods. Additionally, a p-card log to track the possession and use of the p-card was not used by SHF-IT.
- The County's recycling contractor for disposal of mobile devices was not being used by SHF-IT.
- Procedures for pre or post approval of procurement card purchases for IT equipment were not in place.

Scope and Objectives

This audit was performed as part of our fiscal year 2015 Annual Audit Plan and was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This audit covered the period

of July 1, 2014, through July 31, 2016, and our audit objectives were to determine whether:

- Policies and procedures are in place to comply with the county's policy.
- Procedures for managing of IT equipment in inventory management system and software in the Mobile Device Management (MDM) system are adequate.
- Sufficient controls exist for proper performance of the periodic reconciliation of IT equipment and the inventory database.
- Sufficient controls exist for the purchase and receipt of IT equipment and software.
- Internal procedures for disposing (upgrades and/or destruction) of IT equipment hardware and deletion of software items are adequate.
- Controls are in place for physical security and accountability of IT equipment.

Methodology

Our audit approach included interviews of appropriate staff to determine whether the SHF-IT had written policy and procedures for purchasing, safeguarding and managing of IT equipment and software. We picked samples and performed physical inventory checks that covered all categories of IT equipment and software, and performed detail tests of purchasing and receiving IT equipment. We reviewed the documentation for disposing of IT equipment. We also evaluated the processes for compliance with sound internal controls as well as county and departmental policies and procedures.

The Fairfax County Internal Audit Office (IAO) is free from organizational impairments to independence in our reporting as defined by Government Auditing Standards. We report directly and are accountable to the County Executive. Organizationally, we are outside the staff or line management function of the units that we audit. We report the results of our audits to the County Executive and the Board of Supervisors, and IAO reports are available to the public.

Findings, Recommendations, and Management Response

1. Weakness in Inventory Handling

We conducted a test of 3 purchase order and 8 procurement card transactions and noted 1 p-card transaction in which 2 iPads were purchased that were not provided to the SHF-IT/Communication Office to be registered in the inventory database and the MDM system as needed.

According to the SHF-IT informal procedure, all the Apple mobile devices should be recorded in the inventory database and registered in the MDM system when applicable before being distributed to officers and staff. SHF-IT's ability to properly maintain and monitor the department's mobile device inventory is severely impaired when items are not properly recorded in the inventory database or monitoring software. SHF-IT did not have written procedures for the process of recording IT

equipment in the inventory database or MDM, and the other Sheriff Office staff who made these purchases were not aware of the informal procedures.

Recommendation: We recommend the Sheriff's Office develop and implement formal written procedures that require all mobile device be recorded in the inventory database and MDM as needed, prior to distribution to officer or staff for use. Sheriff Office staff should be trained on the new procedures.

Management Response: The Sheriff's Office will develop and implement formal procedures requiring all mobile devices to be managed by the Network Analyst II (NTA II). Going forward the NTA II will maintain a single, centralized database logging in all assignment activity. Management anticipates completing this action by April 1, 2017.

2. Nonperformance of Physical Inventories of IT Equipment and Software Items

We conducted a sample inventory count of 100 IT equipment items in June and July 2016 and noted the following:

- The SHF-IT did not conducted periodic inventory counts of IT equipment or software.
- One iPad and 5 iPod Touches were returned to inventory in 2015 and 2016, but these devices were listed in the inventory database as being issued at the time of our count.

Device Type	Inventory Return Date	IAO Inventory Check Date
iPad	October 2015	August 2016
iPod Touch	Can't identify the return date.	July 2016
iPod Touch	May 2016	July 2016
iPod Touch	January 2016	July 2016
iPod Touch	January 2016	July 2016
iPod Touch	January 2016	July 2016

- One iPad was listed in the database twice in error. One entry had the incorrect serial number.

A physical inventory of IT equipment and software items should be performed on a periodic basis to ensure that inventory records are accurate and complete. The inventory database records should reflect actual quantities on hand, item location, results of inventory counts, and adjustments to inventory. The lack of periodic inventory counts may lead to IT equipment and software items being unaccounted for and inaccurate information stored in the inventory database. Performance of physical inventories ensures completeness and accuracy of inventory records for IT equipment and software. Without an accurate inventory database, it is difficult to understand the department's inventory position such as inventory on hand, total number of devices, and the location of equipment. This increases the risk for theft,

waste and abuse of County assets.

Recommendation: We recommend the Sheriff's Office develop and implement procedures to perform periodic physical inventory counts of IT equipment and software items. The inventory database should be updated for corrections or adjustments resulting from counts performed. Additionally, they should develop and implement written procedures that establish a timeframe for when a purchase, distribution, or return of inventory item must be recorded in the inventory database. Staff should be trained on the new procedures.

Management Response: The Sheriff's Office agrees to periodic physical inventory counts as the standalone SHF-Services network matures. Going forward formal policies to assign purchasing of mobile devices by the NTA II will be implemented; periodic physical inventory counts of mobile device hardware and software to be conducted annually. Implementation of a single, centralized database maintained by the NTA II will ensure accuracy in recordation. Management anticipates completing this action by April 1, 2017.

3. No Formal Written Procedures for Managing IT Equipment and Software Inventory

The SHF-IT did not have documented procedures for the handling, recording, monitoring, securing and managing of IT equipment and software. While the department designed and implemented verbally communicated procedures, and we obtained evidence on the consistent performance of those procedures and controls, very few were formally written and approved.

An element of a good and mature internal control environment is to have written procedures and internal controls to clearly set forth the acceptable practices for staff to follow in managing department IT hardware and software inventory. Procedural documentation should provide a clear guidance and accountability to SHF-IT staff to perform their job functions consistently. The absence of a formal documented policies and procedures can result in inconsistent staff performance of procedures and controls and poor handling and management of IT hardware and software operations. Additionally, the lack of written procedural guidelines can hinder management's ability to hold staff accountable for the performance of procedures.

Recommendation: We recommend the Sheriff's Office develop standard operating procedures to guide the SHF-IT staff on handling and managing IT equipment and software inventory. The policy and procedures should include but not limited to the areas such as:

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| • Inventory Management | • IT Equipment Assignment |
| • IT Equipment and Inventory Record Reconciliation | • IT Equipment and Software Disposal |
| • Mobile Device Management (MDM) | • IT Equipment Storage Area Access |

- Software and Application (App) Management for mobile devices

Management Response: The Sheriff's Office will develop Standard Operating Procedures addressing the handling and management of mobile device hardware and software as the SHF-Services network matures coupled with duty assignment stabilization. Management anticipates completing this action by July 1, 2017.

4. Weakness in the Data Integrity of the Inventory Database

We reviewed the inventory database and noted that key identifier and operational information such as purchase date, receive date, and return date was not captured for all items recorded. Additionally, transactions recorded in the inventory database were not reviewed to ensure data accuracy of inventory transactions recorded. For example, we noted one sampled iPad's serial number was originally entered incorrectly into the inventory database.

Key identifiers should be captured to provide sufficient information regarding computer hardware and software products to assist in inventory management and tracking of IT assets. The absence of key identifier and operational information can result in incomplete or insufficient information being captured in the inventory database. As a result, the inventory database may not be optimized as the system of record for all IT equipment and software products used by the department staff. In addition, inaccurate inventory data can lead to issues with the accountability for maintaining IT equipment and software; and poor inventory decisions based on incomplete information. Key identifiers and operational information for the inventory database were not included in the initial implementation of the inventory database system. The SHF-IT staff did not conduct periodic reviews to update the inventory database based on current priorities, available resources, capability, time and effort.

Recommendation: We recommend the Sheriff's Office assess the current data fields in the inventory data base, MDM system and key information known for inventory items. The database design and structure should be updated to incorporate any new key identifier and operational fields deemed necessary. These key fields should include sufficient information to capture core components that are specific and critical to business processes, such as purchase date, receive date and return date. The performance of periodic physical inventory counts as recommended in Finding #2 will facilitate the validation of information captured in the inventory database.

Management Response: Inventory database to be updated with pertinent data fields pertaining to inventory control; incorporation of additional key identifiers and operational fields for improvement to database design and structure to be added. The agency is proactively seeking an inventory management solution for improved accuracy. Management anticipates completing this action by July 1, 2017.

5. Weakness in Complying with County & Department Procurement Card Procedures

Two PO transactions had missing or incomplete purchase authorization documentation for IT purchases. One purchase was missing the budget officer approval. The other purchase was not supported by a Sheriff's Office Purchase Order Form. Additionally, 8 p-card transactions did not have a person other than the purchaser evidencing the receipt of the items on the purchase receipt or shipping/packing label. Finally, the SHF-IT did not use a p-card log to track the possession and use of the p-card.

According to the Sheriff's Office informal procedures, a Sheriff's Office Purchase Order Form should be filled out and approved by a division commander and budget officer before processing a PO transaction. Procedural Memorandum 12-02, *Use of the County Procurement Card, Agency Internal Control Procedures (ICP)* section states that p-card procedures must include appropriate separation of duties. The receipt of goods purchased via p-card should be evidenced by someone other than the purchaser. The Sheriff's Office Procurement Card Internal Control Procedures states that the credit card Sign In/Out Log should be maintained by the card holder, and credit cards are to be used only for approved purchase. Without supervisory and budget officer review of purchase order transactions, there is an increase in the risk of unauthorized purchase and insufficient budget for the transaction. The lack of segregation of duties for purchasing and receiving goods without any additional reviews of the transaction, may increase the risk of fraudulent purchases.

Recommendation: We recommend the Sheriff's Office remind all staff about the requirement for requesting and evidencing approval of all PO transactions with the proper completion of the Sheriff's Office Purchase Order Form. Additionally, they should develop and implement procedures that enable the receiving of items to be properly segregated to ensure another person other than the p-card purchaser receive and verify all the goods purchased by p-card. Finally, SHF-IT should maintain a p-card transaction log which accurately reflects all procurement card activity, to ensure that p-card use is properly monitored and approved. Staff should be trained on using the p-card transaction log.

Management Response: The Sheriff's Office has recurring monthly charges for services supporting the SHF-Services network that is handled by a single PO at the beginning of the fiscal year and is approved by the Administrative Services Division Major. Policies regarding separation of duties relating to p-card procurements to be implemented. Consolidation to single p-card within the I.T. Branch will ensure p-card transaction log accuracy. Management anticipates completing this action by April 1, 2017.

6. Non Use of County's Recycling Contractor

The Sheriff's Office uses an AT&T BuyBack Program to recycle the mobile devices being disposed. The communication officer was in charge of the whole process,

including erasing all content and settings on the mobile devices and sending them to the AT&T vendor for e-cycle. The residual value of the mobile devices were reimbursed to the Sheriff's Office on its AT&T bill. The program being used was not the electronic device recycle program established by Department of Procurement and Material Management (DPMM).

DPMM has established a recycling and data cleansing program for all electronics (including cell phones). The county's contractor collects, wipes any data according to Virginia standards, recycles the equipment, sends destruction certificates and remits payment to the County along with a data destruction certificate. Without using the county's contractor, the Sheriff's Office may receive less residual value of the mobile devices. In addition, without professional training, data may not be erased completely from devices being recycled in accordance to State Virginia standards. Lastly, having a single person in charge of the whole process decreases asset accountability throughout the disposal process. The Sheriff's Office was not aware that DPMM had a recycling program for electronic devices.

Recommendation: We recommend the Sheriff's Office coordinate with DPMM to assess the feasibility and timing of transferring the disposal of all the Sheriff's Office's electronic devices to the county's recycling vendor, including but not limited to iPhone, iPad and iPod Touches.

Management Response: The Sheriff's Office will discontinue its practice of recycling mobile devices with the AT&T BuyBack program to ensure county data is not compromised. Going forward the NTA II will coordinate with Department of Procurement and Material Management for disposal of all mobile devices. Management anticipates completing this action by February 1, 2017.

7. Weakness in Procurement Card Purchasing Authorization

We conducted a test of 8 procurement card transactions and noted that all of them did not have documented supervisor authorization of the purchase on file.

Given the risk for the type of purchases being made, controls should be in place to pre-approve or post-approve p-card transactions. Without any supervisory review and approval of the procurement card purchases, the risk increases for unauthorized or inappropriate procurement card spending going undetected. The Sheriff's Office did not have adequate controls in place to review and approve their p-card transaction purchases.

Recommendation: We recommend the Sheriff's Office develop and implement procedures for reviewing and approving all their p-card transactions, and maintain the documentation on file. Staff should be trained on the new procedures.

Management Response: Formal procedures pertaining to p-card transactions – pre-approval/post-approval- addressing supervisory review to be implemented. Consolidation to one p-card within the IT Branch decreases risk for unauthorized,

inappropriate, undetected procurement card spending. Implementing planned actions from Finding #5 will inherently strengthen controls in complying with county procurement card procedures. Management anticipates completing this action by April 1, 2017.