



ARLINGTON COUNTY GOVERNMENT

INTERNAL AUDIT REPORT

ACCOUNTING FOR END-POINT DEVICES WITH A LESS-THAN \$5000 PURCHASE PRICE

DEPARTMENT OF TECHNOLOGY SERVICES

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The FY 2018 Internal Audit Work Plan (the Plan) identified Asset Management as an area for audit. In accordance with the Plan, the Department of Management and Finance Internal Audit Unit has reviewed Arlington County’s procedures and identified processes related to accounting for purchases of tangible assets with an initial, individual cost of less than \$5,000 and an estimated useful life of three years or less for further review. Although these items are not accounted for as capital assets and not capitalized in accordance with Arlington County’s policy, it is important that policies and procedures do exist for maintaining accountability of these information technology assets due to the sensitive nature of these items. The Department of Technology Services (DTS) was selected to audit.

This report is organized as follows:

Executive Summary	This section gives a background summary of the function and a detailed description of the issues noted during this cycle audit, recommended actions, and management’s corrective action plan, including the responsible party and estimated completion date.
Background	This section provides an overview of the function within the process and pertinent operational control points and related compliance requirements.
Objective and Approach	The review objectives and focus are expanded upon in this section as well as a review of the various phases of our approach.

We would like to express our appreciation to the staff and all others involved with this audit.

Respectfully Submitted,

Internal Audit
Department of Management and Finance

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Among many duties, DTS is responsible for establishing the County's technology strategy, network, system, data and device governance for the County's mobile devices, laptops, desktops, peripherals and network devices, etc. These assets are generally referred to as End-Point Devices (EPD)

The overall objective of this audit was to assess whether systems and processes are adequate and appropriate to permit the proper accountability of EPD assets with an initial, individual cost of less than \$5,000 and an estimated useful life of three years or less.

Accountability is generally described as maintaining adequate records that permit the County to:

- Know the quantity, quality, location, condition, and value of assets
- Safeguard assets from physical deterioration, theft, loss, or mismanagement
- Minimize unnecessary storage or maintenance costs
- Properly recognize, allocate, or otherwise charge the use/requisition/depletion of these assets to the proper program/accounting period etc.
- Gather reliable, accurate information in order to make informed decisions

The scope of this audit encompassed the current-state processes in DTS and audit of selected transactions on a sample basis from May 2018 to August 2018.

For purposes of this audit, items considered as consumable inventory, e.g. replacement parts, supplies, etc. was not in scope.

A detail of the issues identified and their relative risk ratings is provided below, including recommendations and management's response. Relative risk factors have been assigned to each issue identified. This is the evaluation of the severity of the concern and the potential impact on the operations. There are many areas of risk to consider in determining the relative risk rating of an issue, including financial, operational, and/or compliance, as well as public perception or 'brand' risk. Items are rated as High, Moderate, or Low.

- **HIGH:** Observation presents a high risk (i.e., impact on financial statements, internal control environment, public perception / brand, or business operations) to the organization for the topic reviewed and / or is of high importance to business success / achievement of goals and improve its internal control structure. Action should be taken immediately.
- **MODERATE:** Observation presents a moderate risk (i.e., impact on financial statements, internal control environment, public perception / brand, or business operations) to the organization for the topic reviewed and / or is of moderate importance to business success / achievement of goals and improve its internal control structure. Action should be in the near term.
- **LOW:** Observation presents a low risk (i.e., impact on financial statements, internal control environment, public perception / brand, or business operations) to the organization for the topic reviewed and / or is of low importance to business success / achievement of goals and internal control structure.

I. Lack of EPD Control Framework	HIGH

Overall, the concept of EPD asset management has been addressed informally by DTS; however most key County personnel have not been exposed to any training or written procedures. There is a distinct lack of standardization in accounting for EPD assets County-wide.

Recommendation

A control framework is a structure that organizes and categorizes internal controls, which are practices and procedures established to achieve objectives and minimize risk. An effective framework will drive the design and implementation of internal control. The process of creating a framework includes identifying and inventorying the various risks facing the County associated with achieving the objectives of accounting for EPDs. Control activities and other mechanisms can only be effectively designed after the objectives and risks have been identified. Information critical to identifying risks and achieving the objectives must be communicated to those responsible for accounting for EPDs.

Issue	Risk Ranking
II. Lack of EPD Control Framework	HIGH

Overall, the concept of EPD asset management has been addressed informally by DTS; however most key County personnel have not been exposed to any training or written procedures. There is a distinct lack of standardization in accounting for EPD assets County-wide.

Recommendation

A control framework is a structure that organizes and categorizes internal controls, which are practices and procedures established to achieve objectives and minimize risk. An effective framework will drive the design and implementation of internal control. The process of creating a framework includes identifying and inventorying the various risks facing the County associated with achieving the objectives of accounting for EPDs. Control activities and other mechanisms can only be effectively designed after the objectives and risks have been identified. Information critical to identifying risks and achieving the objectives must be communicated to those responsible for accounting for EPDs.

Management Response

DTS recognizes that current management practices for EPDs rely upon decentralized management by other departments in the County. The County currently operates in a distributed ownership model. EPD Asset purchases are:

- arranged, delivered, and serviced by DTS,
- approved and funded through DMF,
- managed and controlled as individual departmental property

This methodology is in need of reform. The County (through DTS) will adopt an industry standard asset management framework. The Manager has included initial funds for such a system in the Adopted FY2020 Budget. Future budgets will need to address the on-going costs of this system.

In addition, the development of new policy is required to govern the practice of managing EPD's. DTS will take the lead with the Department of Management and Finance (DMF), Human Resources (HR), and individual department leadership to establish a new control framework for onboarding and offboarding that minimizes risk.

DTS has established a dedicated Governance, Risk, and Compliance (GRC) function. This will provide a segregation of accountabilities within DTS and direct activities across: Asset management, Security,

IT policy and IT audit & controls. This function will report to the Division Chief for Information Security, Privacy, and Regulatory Affairs who will serve as the head of the task force to implement the new framework. Within the GRC function, there will be dedicated asset control staff request in the FY 21 budget cycle and a recommendation to augment the GRC staff to conduct a physical inventory and review the on/off boarding process.

Estimated Completion Date: The implementation of the policy will occur by September 2019.

Responsible Party: Division Chief for Information Security, Privacy, and Regulatory Affairs

Issue	Risk Ranking
III. Tracking of EPD Assets	HIGH
<p>I. Currently there is no asset register that captures asset location, description, quantity, cost, identification number, serial number, manufacturer name, year, make, model or other relevant information. Maintaining current, accurate and complete asset records would:</p> <ol style="list-style-type: none"> a. Allow the County to monitor the status of EPDs. A properly structured register can reflect where assets are located, their cost and purchase date, how they are used, who has custody, when it is due for maintenance and/or replacement, etc. b. Permit the ability to record asset activity on a timely basis such as purchases, retirements, movements to other departments, etc. c. Enable DTS to understand the capabilities of its assets, and how they can be operated in an effective manner. d. Help optimize operations including planning, resource use, utilization etc. e. Assist in preventing fraud. Comparing and contrasting physical assets against their related records is key towards identifying missing assets. An effectively maintained asset register will assist DTS in safeguarding against fraud. <p>II. The network management software detects IP-addressable hardware (including servers, desktops, laptops, network printers, switches and devices) and software connected to the County's network. The network management software provides various reports; however, the utilization of the reports is not integrated as part of an overall asset management program.</p> <p>III. Currently there is no proactive mechanism in place that notifies DTS of the status of an EPD when the following changes occur:</p> <ol style="list-style-type: none"> a. An employee commences employment; separates from service or changes departments b. A contractor commences or terminates services that was issued an EPD c. An asset is reissued to another employee (either within or without a particular department) d. The asset is retired etc. e. As described, when an asset is moved, surrendered, retired, etc. no documentation is created 	
Recommendation	
<p>Finding I. and II. A solution is necessary to permit the proper accountability and tracking of EPD assets. IA understands DTS is currently exploring different applications. We recommend DTS immediately commence a process of compiling information about EPD assets with the goal of creating an asset register that will provide accurate, historical asset data which is critical to the success of the final solution. We understand the network management software can currently provide limited information such as description, quantity, identification number, serial number, manufacturer name, make, model asset location, description identification number. The data provided by the network management software does not provide all the necessary information to complete the suggested asset register, thus the data it provides must be merged, adjusted and reconciled with other data base programs that are currently available to DTS.</p> <p>Finding III.</p> <ol style="list-style-type: none"> 1. Create a standard operating policy that documents the process(es) to be used when the EPD custodianship status changes. 2. Develop an online Property Transfer Form, and a Missing, Lost or Stolen Form. Completing these forms would provide DTS with the necessary information to accurately add or update asset records. The form should include a prohibition of surrendering custodianship of any asset without properly completing the form. 3. On a periodic basis, any individual who has been issued an EPD should certify, in writing, any and all assets under their custodianship. Differences between the custodian's certification and DTS records must be immediately investigated. DTS should consider creating the certification such that the custodian is required to provide DTS each asset's identifying information that he/she has been issued. Pre-populating the confirmation with such data will provide the custodian the opportunity to "check the box" without physically confirming the asset's information. 4. Consider conducting EPD asset training on an at least an annual basis that provides guidance around the required protocols for EPD accountability, DTS policies and procedures. 	

Management Response

To reach the management objective, DTS is recommending the purchase of a commercial, asset management system designed to house and maintain the information for servers, PCs, small personal devices (tablets/phones), and general networking equipment.

Asset registers are created at acquisition and exist for equipment delivered by DTS. Once delivered to departments; the decentralized ownership model currently in place makes it difficult to track equipment once it has left DTS custody. To address this issue, DTS received funding from the manager in the FY20 Budget to acquire an asset management system and to automate the framework recommendations from section I above.

An asset management system RFI will be issued to canvas the marketplace in FY20. System selection and implementation will be completed in FY20. In addition, DTS will request a staff position to oversee the asset management program.

The tracking and any life-cycle transfer of EPD assets will involve the HR process of on-boarding, off-boarding, and transfer between staff and/or departments. These workflows will support individual EPD asset accountability. In the interim, DTS will build an employee self-check-in process to capture user EPD asset information.

The selected asset management system should have the following attributes:

- Post-PO (Asset Acquisition) tracking for depreciable assets as well as commodities, consumables and warranty/maintenance contracts
- Asset Location Register
- Capitalization thresholds for asset classes, individual assets, as well as “kitted” assets
- Flexible schedules and lifetimes by asset class
- Bar coding and asset tagging module
- Monthly calculations for asset and expense entering the system
- Monthly depreciation calculations aggregated by asset class, and initial month of service
- Generation of aggregate (block) monthly FA Ledger/FA-Journal entries for DMF
- Transactional workflows for: acquisition, kitting, reverse kitting, asset swap (component & total), RMA (serialized and non-serialized) asset modification, asset improvement, change in depreciable life, change of method, manufacturer end-of-life or service (EOL/EOS), decommissioning, disposal, and physical inventory reconciliation

The selected asset management system will have full location, ownership, operational status and transaction workflow data. This will allow real-time management of the EPD asset base and provide a detailed asset and depreciation register, as well as a means to perform annual physical reconciliation.

Appropriate training will be completed upon implementation of the software. A policy will be written to clarify roles and responsibilities and actions to be taken when EPD custodianship status changes.

Estimated Completion Date:

RFI issued to canvas the asset management system marketplace in early FY20. System selected and implemented within FY20. During Summer 2019, DTS will facilitate a physical accounting and enterprise inventory of all EPD assets.

Create the recommended protocols, certifications and training – December 2019

Responsible Party: Division Chief for Information Security, Privacy, and Regulatory Affairs

Issue	Risk Ranking
III. Absence of Documented, County-wide policy for Assets < \$5,000 (including EPDs) – County Level	MODERATE
<p>Currently, no County-wide policy exists that describes the policies and procedures necessary to properly account for assets with a value less than \$5000, including EPDs. Properly crafted policies inform employees, departments, divisions etc. of the County’s expectations, necessary to achieve its overall mission. Effective policies link the County’s vision to its day-to-day operations.</p>	
Recommendation	
<p>The policy should identify the key activities and provide a general strategy on how to achieve desired accountability for these assets. The following are general subject matter areas to consider in the policy:</p> <ul style="list-style-type: none"> ✓ Policy Statement <ul style="list-style-type: none"> ○ Formulate a statement that describes the purpose of this policy such as: The purpose of this policy is to set forth the guidelines for the physical and reporting control of the County’s assets with a value less than \$5,000 that require accountability due to the nature and sensitivity of the asset. ✓ Reason for Policy <ul style="list-style-type: none"> ○ State that the intent of the policy is to describe the standard policies required for recording new and existing assets, changes in assets and the methodology of record keeping. ✓ Roles and Responsibilities <ul style="list-style-type: none"> ○ Discuss how each department/division which has custody over such assets are responsible to establish effective procedures necessary to comply with this policy. ✓ Types of Assets <ul style="list-style-type: none"> ○ Itemize, in general terms, the types of assets subject to this policy. ✓ Valuation of Assets <ul style="list-style-type: none"> ○ Assets are recorded at historical cost and are periodically reviewed for proper valuation. ✓ Effective asset identification measures such as: <ul style="list-style-type: none"> ○ Performing periodic physical inventory counts and establishing an identification system (tag, bar code) ✓ Effective segregation of duties ✓ Processes for properly disposing of assets 	
Management Response	
<p>DMF will consider all the recommendations provided above and draft the necessary County-wide policy. Once the new policy is approved, it will be posted on the County’s intranet.</p> <p>Responsible Party: DMF Comptroller Estimated Completion Date: July, 2019</p>	

Issue	Risk Ranking
IV. Absence of Documented Departmental Procedures	MODERATE
<p>Currently DTS does not have documented procedures to account for assets with a value less than \$5000, including EPDs.. Establishing and documenting procedures are essential. Procedures demonstrate management’s commitment to effectively maintaining accountability for EPD assets as well as establishing processes and providing all personnel clear communication and comprehensive instructions and guidelines. Establishing written procedures helps ensure consistent and accurate compliance and application needed to achieve high levels of integrity and accuracy.</p>	
Recommendation	
<p>Upon completion of the County-wide policy (as discussed above), DTS should develop a Standard Operating Procedure to properly account for these assets. Effective procedures will achieve the following objectives:</p> <ul style="list-style-type: none"> ✓ Provide employees the proper awareness and wherewithal to execute their roles and responsibilities within these processes, minimize ambiguity, and firmly establish management expectations; ✓ Facilitate transitioning of roles and responsibilities when staff leave; ✓ Afford a basis for training and informing staff; consider including checklists to support procedures; ✓ Formally document the internal control processes and procedures for these assets; ✓ Include all aspects of a physical count process, including the activities or tasks that take place before, during, and after the physical count, objectives of the count, types and timing of counts, instructions for counting and recording, and researching and adjusting variances. Items to consider: <ul style="list-style-type: none"> ○ Establish responsibility for overall count and accuracy goals; ○ Select an approach such as cycle counts (such as annual, bi-annual, etc), full-counts, surprise counts as well as which items to count; ○ Maintain segregation of duties such as those performing counts do not have recordkeeping responsibilities; ○ Train staff on proper count practices and provide proper supervision; ○ Ensure completeness of count including effective cutoff procedures; ○ Perform effective reviews, evaluate count results and timely resolve differences between records and count totals; ○ Compare and contrast recent network management software reports against department ledgers and document and resolve any differences. <p>Elements to consider:</p> <ul style="list-style-type: none"> ✓ Address the life cycle of such assets: <ul style="list-style-type: none"> ○ Planning – Setting standards for configuration and retention, aligning purchase plans to business goals, and negotiating volume discounts; ○ Procurement – Requisitioning, approving requisitions, ordering, receiving, and validating orders; ○ Deployment – Tagging assets, entering asset information into a repository, configuring assets, and installing assets; ○ Management – Inventory/counting, managing contracts for maintenance and support, and monitoring asset age and configuration; ○ Support – Adding and changing configurations, repairing devices, and relocating equipment and software; and ○ Asset Retirement – Removing assets from service, deleting storage contents, disposing of equipment, and removing identified assets from active inventory. Establish accountability and responsibility for physical counts, set accuracy goals 	

Elements to consider (cont'd)

- ✓ Select approach -cycle counts (portions of inventory counted on a rotating basis), wall-to-wall counts (full count at a particular time), blend of the cycle and wall-to-wall etc.
- ✓ Effective segregation of duties:
 - Optimal segregation of duties occurs when no one individual has custody of inventory, access to systems that record and process inventory, and the ability to approve transactions. Individuals who perform the inventory counts should be independent of these processes. If not possible considering limited resources, cost/benefit etc. consider alternative means such as engaging a resource from another department to perform the count(s)
- ✓ Train participants on effective count processes, expected results, unique elements of the inventory etc.
- ✓ Provide proper supervision including clear instructions, proper completion of count sheets, disposition of differences between records and counts, etc.
- ✓ Consider “blind counts” or “surprise counts”:
 - Blind counts are inventory counts performed without its associated records
 - Surprise counts are inventory counts without prior notice
- ✓ Ensure completeness of counts:
 - Verify proper cut-off such as only counting assets that the department has custodial responsibilities over, items in-transit, items deemed retired but not removed from service, etc.
- ✓ Evaluate results
 - Compare/contrast records against physical counts, immediately review unexpected differences
 - Debrief/ report to stakeholders
- ✓ Guidelines for assigning asset tag numbers
- ✓ Based on a current asset listing, periodically contact the asset custodian and require him/her to certify they continue to control the asset(s)

Management Response

DTS deploys EPDs based on requirements determined by each department. The assets are managed in a decentralized model allowing each department to assign resources as they determine to be productive. Once the asset is deployed there is no centralized County system for each department to verify responsibility. DTS and DMF will draft guidelines that will reflect the above considerations that will allow DTS to track assets within each unit and to remain agile to respond to the needs of the County. Upon completion of the guidelines, DTS will schedule department level training sessions that will advise each department of the guidelines and to encourage the departments to document their procedures.

Estimated Completion Date: Three months after the release of County-wide policy as discussed in Finding III, September 2019

Responsible Party: Division Chief for Information Security, Privacy, and Regulatory Affairs

BACKGROUND

BACKGROUND

Overview

Arlington County Department of Management and Finance (DMF) has an established policy where purchases of tangible assets with an initial, individual cost of less than \$5,000 and an estimated useful life of three years or less are not capitalized. As part of the FY18 Internal Audit Plan, Internal Audit reviewed and tested the policies and procedures currently in place to account for such assets.

OBJECTIVES AND APPROACH

Objectives

The overall objective of this audit was to assess whether systems and processes are adequate and appropriate to permit the proper accountability of EPD assets with an initial, individual cost of less than \$5,000 and an estimated useful life of three years or less. Accountability is generally described as maintaining adequate records that permit the County to:

- Know the quantity, quality, location, condition, and value of assets
- Safeguard assets from physical deterioration, theft, loss or mismanagement
- Minimize unnecessary storage or maintenance costs
- Properly recognize, allocate, or otherwise charge the use/requisition/depletion of these assets to the proper program/accounting period etc.
- Gather reliable, accurate information in order to make informed decisions

Approach

The overall approach consisted of the following phases:

Understanding and Documentation of the Process

- Researched current policies, procedures, and protocols
- Understood the processes in place to record, account for, and analyze asset activity employed by DTS
- Conducted interviews with departmental leaders, process owners, and other necessary resources
- Obtained, reviewed, and inspected relevant documents

Evaluate the Processes and Controls Design and Test Operating Effectiveness

The Process and Control Evaluation phase of this audit consisted of an evaluation of the design and operating effectiveness of these processes. We performed walkthroughs and other detailed testing of transactions to achieve the audit objectives, including testing the processes currently in place. Procedures we performed include, but were not limited to:

- Review reasonableness of pricing (when possible)
- Compare, on a test basis, entries per records to physical inventory
- Test documents used to summarize inventory
- Observe inventory count (when possible)