

Office of Internal Audit

IT Asset Management



February 15, 2019

Reviewed and approved by Yikchau Sze, OIA Director

Electronically Signed 2/26/19

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Prepared for Audit Committee Meeting of the Department of Employee Trust Funds, 3.21.19;
prepared by Michelle Hoehne

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Executive Summary

We have completed an audit of information technology (IT) asset management by the Department of Employee Trust Funds (ETF). This audit was completed in accordance with the 2017-2019 Biennial Audit Plan to evaluate the design and operating effectiveness of internal controls over IT assets. The review incorporated an assessment of management's corrective action for closed audit recommendations from the Office of Internal Audit's (OIA) 2014 Mobile Computing Device Audit.

The Division of Management Services (DMS), Bureau of Information Technology Services (BITS) is responsible for the management of ETF's IT hardware and software assets throughout the asset lifecycle. This includes acquisition, tracking, licensing, inventory, security and disposal. The Division of Trust Finance (DTF) is responsible for the financial reporting of IT assets.

During the audit, we noted significant improvements implemented in the IT asset management process since the 2014 Mobile Computing Device Audit, including regularly scheduled inventory procedures and enhancement in the process for tracking of assets. However, we noted concerns regarding the effectiveness of two IT asset inventory controls, as shown in the table below:

IT Asset Inventory Control	Assessment of Control Effectiveness
Biweekly inventory for hardware not in use	Effectiveness is reduced due to inadequate separation of duties over the entire IT asset management process.
Secured storage of hardware not in use	Effectiveness is reduced due to the inability to consistently track employees entering the secured storage area.

Additionally, we noted a lack of consistent process for ETF internal policy development and maintenance has led to different versions of policies being posted in different locations, which could affect the effectiveness of the policies and ETF staff's compliance with the policies.

Background

BITS is responsible for IT asset management at ETF, including management of IT hardware and software for all ETF staff and contractors¹. BITS has dedicated one staff member to the management of IT assets throughout the asset lifecycle. This includes oversight of the acquisition, tagging, tracking, storage, inventory and disposal of assets:

- Acquisition: Asset purchases require a business justification prior to acquisition.
- Tagging: Hardware valued more than \$1,000; mobile computing devices; equipment used by employees to work from home; and other items that can be checked out all have an asset tag attached.
- Tracking: All tagged assets are recorded in the STAR Asset Management Module. Additionally, supplemental spreadsheets are used by staff to track information for daily use.
- Financial Reporting: DTF is responsible for the financial reporting of assets, based on information provided by BITS staff and expenditures processed directly through the STAR accounting system. Assets with a unit cost of \$5,000 or more, including purchased software installed without modification, or intangible assets, such as software, with a unit cost of \$1.0 million or more are considered capital assets. Non-capital IT asset expenditures are rolled up into the WRS blended administration category for financial reporting.
- Storage: Hardware not currently in use is stored in a secure area.
- Inventory: A biweekly inventory is completed of assets not currently in use to ensure device location is tracked and necessary equipment is available when needed. The Department of Administration does not require agencies to perform physical inventories.
- Decommissioning: Hardware no longer needed is wiped of any data, as applicable, and disposed of through the State's Surplus with a Purpose program.
- Software: License and renewal information is tracked. Only certain IT staff have security roles permitting the ability to install software on ETF devices.

BITS staff have various policies and procedures developed for the IT asset management process. In addition to these, policies also exist for ETF staff to follow as users of technology. These policies are published on ETF's intranet.

¹ In addition to the assets managed by BITS, ETF also pays for services provided by the Department of Administration's Division of Enterprise Technology (DOA-DET). DOA-DET serves as the enterprise IT service provider for the mainframe, email, other essential IT system operations and provides other services for hosting equipment needed for ETF's IT infrastructure.

Audit Objective and Scope

Our audit was conducted in conformance with the International Standards for Professional Practice of Internal Auditing issued by the International Internal Audit Standards Board.

The audit objective was to evaluate the design and operating effectiveness of internal controls over IT assets, including software, throughout the IT asset lifecycle and confirm that prior audit findings had been mitigated by management. The audit scope included all IT assets managed but excluded IT asset information security².

Results and Recommendations

2014 Mobile Computing Device Audit Issues and Current Assessment

In the 2014 audit OIA reported a lack of established and documented asset management processes, including no inventory procedures and significant discrepancies between asset tracking records kept by staff.

The current audit work found that asset management processes are now well established and in the process of being thoroughly documented. Biweekly inventory procedures are now in place. Asset tracking procedures have been further developed and different tracking records do not have the significant discrepancies previously noted.

Positive Results

As indicated previously, we noted improvements implemented in the IT asset management process since the 2014 Mobile Computing Device Audit. We also found that BITS staff are skilled and dedicated to the management of IT assets at ETF. Throughout the audit, staff indicated a desire and the initiative to continually improve the efficiency and effectiveness of controls over IT asset management, including in the inventory and asset tracking processes.

² An external Information Security Assessment was completed at ETF in January 2018.

Findings, Recommendations and Management Responses:

Finding	Risk/Effect
<p>1. Separation of Duties within IT Asset Management Process</p> <p>One individual is responsible for all functions of the IT asset lifecycle, including purchasing, receiving, tagging, tracking and inventory of assets.</p> <p>While there are some mitigating controls, such as approvals within the purchasing process, these controls are not sufficient to allow effective management of risk associated with a lack of separation of duties within other aspects of the IT asset management process.</p>	<p>Separation of duties is a critical component of an internal control system. Without separation of duties in asset management, the risk of error or asset misappropriation increases.</p>
<p>Recommendation</p> <p>BITS management should reallocate a portion of IT asset management responsibility to another employee within BITS to create a separation of duties within the IT asset management process.</p>	
<p>Management Response</p> <p>Since the 2014 Mobile Computing Device Audit, BITS has greatly improved the IT asset management processes, procedures, and efficiency. Historically, BITS has employed one FTE to the full IT asset lifecycle, allowing for the development of improved processes and documentation as well as more consistent inventory tracking. As a result of having better procedures, BITS is easily able to introduce a separation of duties within our IT asset management work. Starting with the February 15, 2019 bi-weekly inventory, BITS management assigned a different FTE to perform the physical bi-weekly inventory, which includes dating and sign off. The BITS IT Asset Manager will also sign off on the completion of inventory and will validate against inventory reports from STAR.</p> <p>Going forward, BITS management will evaluate further ways that a separation of duties can be put in place as our IT Asset Management lifecycle continues to mature.</p> <p>Responsible Staff: Aaron Vanden Heuvel Completion Date: February 15, 2019</p>	

Finding	Risk/Effect
<p>2. Secured Storage of IT Assets</p> <p>The secured storage area for IT assets not in use contains two entry doors. One door requires the scan of a State employee ID badge with authorized access. The other door has the option of a pin code entry or use of a physical key. The pin code is shared by multiple ETF employees</p>	<p>Due to the multiple entry methods, employees entering the secured storage area may not be tracked. This could lead to a greater risk of misappropriation of IT assets contained within the secured storage area.</p>

<p>needing access to the room and the key is also stored in a shared location.</p>	
<p><u>Recommendation</u> BITS management should require all employees entering the primary secured storage area for IT assets to access using their State employee ID badge. Deactivation of the pin pad and enhanced security over the physical key for the secured storage area would be necessary to enforce this requirement.</p>	
<p><u>Management Response</u> In March 2018 ETF moved from two separate locations to a single location in the Hill Farms State Office Building. As part of this move, ETF's IT assets were able to be further secured by being in one secure IT storage and imaging room. The security design at Hill Farms, including which doors would have card readers and keypads, was ultimately approved by DOA. Because the keypad does not track and log staff entry, our staff will be required to use the door with the card reader. The code for the keypad has been changed and the cylinder has been re-keyed. ETF staff were not given the code or a new key. As a result, this door is now locked at all times. Should the card reader malfunction or need repair, DOA facilities would have a key in case of an emergency.</p> <p>Responsible Staff: Aaron Vanden Heuvel, ETF Facilities, DOA Facilities Completion Date: February 11, 2019</p>	

<u>Finding</u>	<u>Risk/Effect</u>
<p>3. Management of Internal ETF Policies During our audit, we reviewed select IT policies established for ETF employees. For two different policies, we found that different versions of the policy were published in different locations on ETF's intranet.</p> <p>We confirmed with ETF management that there is no consistent or formal process in place for the development, communication, and maintenance of internal ETF policies.</p>	<p>An inconsistent process for development and maintenance of internal ETF policies can lead to inefficiencies in policy development. Additionally, this can lead to confusion and inconsistent implementation of policies by ETF staff.</p>
<p><u>Recommendation</u> ETF management should create a formal process for the development, communication, and maintenance of internal ETF policies.</p>	
<p><u>Management Response</u> The two policies that form the basis of this audit finding are Employee Handbook policies. Almost all the written policies in the Department with agency-wide application to ETF's workforce are in the Employee Handbook. Updates to Employee Handbook policies have traditionally been coordinated by the Human Resources director, via subject matter experts throughout the Department, and reviewed by the Human Resources director, Legal Services, Office of Policy, Privacy and Compliance and senior management prior to publication. When there are changes to policies or new policies, HR has had a practice of promptly communicating the policy information to all staff via email and augmenting that when necessary</p>	

with articles in *ETF Community*. Significant HR policies are reflected in workforce training and online training modules, such as HIPAA Privacy, and Workplace Violence. Employees are required to take these trainings and to certify in writing that they have read and agree to abide by the policies in the Employee Handbook.

However, there is indeed no formal workflow or documented process for development, communication and maintenance of Employee Handbook policies, nor for the smaller number of other non-Handbook policies that apply at an enterprise level, such as IT Security Policy or Records Management Policy.

To address this finding, the Director of the Office of Policy, Privacy and Compliance will establish a team to determine scope, general requirements, and to outline a proposed workflow for the development of new policy and changes to existing policy. The workflow should incorporate general recommendations to improve the oversight and quality of policy materials, for tracking of draft versions of policy, and how to ensure that policies are cyclically reviewed and updated. The OPPC Director will provide the results to the ETF Leadership Team no later than May 1, 2019.

The Leadership Team will evaluate the results and agree on next steps for communication, rollout and implementation of a new policy process. The goal for full implementation of all recommended changes is December 31, 2019.

Responsible Staff: Director of the Office of Policy, Privacy and Compliance, ETF Human Resources Director

Completion Date: December 31, 2019

Process Improvement Observations:

Minor potential process improvements within the inventory and asset tracking processes were communicated to BITS for consideration. Additionally, BITS should continue to develop and finalize procedural documentation and periodically review it for necessary updates.

Audit Methodology

The OIA conducted this audit by:

- obtaining an understanding of the procedures used by BITS to manage IT assets throughout the asset lifecycle, including conducting interviews with responsible staff and performing process walkthroughs;
- considering prior audit findings from OIA's 2014 Mobile Computing Device Audit;
- reviewing pertinent end-user IT policies;
- reviewing asset tracking data in the STAR Asset Management Module and other tracking methods used by staff, including those used to track software licenses;

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- observing inventory counting; and
- reviewing purchases for business justification and appropriate classification of asset type.