Office of the County Auditor
**Mary Modelski**
Cook County Auditor
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September 9, 2024

The Honorable Toni Preckwinkle, President
Board of Cook County Commissioners
118 N. Clark Street, Room 537
Chicago, Illinois 60602

Dear President Preckwinkle and Board of Commissioners:

The Sheriff's Office Information Technology Asset Inventory Audit, part of the Fiscal Year 2021 Audit Plan, was conducted as permitted by the Cook County Auditor Ordinance.

The overall objective of the audit was to assess the management of information technology assets for compliance with department policies associated with IT asset lifecycle (acquisition, deployment, and disposal) and logical access to IT asset inventory. The period under review was May, June, and July 2024.

Please refer to the report below for audit results. The audit report contains two recommendations. The Executive Summary provides an overview of the audit and recommendations.

During this engagement, we sincerely appreciate the cooperation the Sheriff's Office extended to Terry Martey, Field Auditor, and Joe L. Walthour Jr, Audit Supervisor. Their collaboration has been invaluable. We have discussed our recommendations with the Sheriff's Office, and they have had an opportunity to review our report. Management comments are included in their entirety within the Recommendations section.

Respectfully Submitted,

Mary Modelski
County Auditor

Cc: Marlon Parks, Undersheriff
     Amar Patel, Chief Information Officer
     Adnan Memon, Chief Technology Officer

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# COOK COUNTY GOVERNMENT

# OFFICE OF THE COUNTY AUDITOR

Cook County Sheriff's Office
Information Technology Asset Inventory Audit

Internal Audit Report

Report Date:
September 9, 2024

Issued By:
Mary Modelski, County Auditor

Audit Conducted By:
Terry Martey, Field Auditor
Joe L. Walthour Jr, Audit Supervisor

# EXECUTIVE SUMMARY

The Office of the County Auditor (OCA) completed an audit of the Information Technology (IT) Asset Inventory of the Sheriff's Office. The overall objective of the audit was to assess the management of information technology assets for compliance with department policies associated with IT asset lifecycle (acquisition, deployment, and disposal) and logical access to IT asset inventory. The audit was accomplished by gathering, reviewing, and testing support documentation to achieve the overall objective. The audit scope was focused solely on workstations and laptops, reported in the Manage Engine Service Desk Plus inventory management system, in the months of May through July 2024. The OCA conducted its fieldwork from April to July 2024.

The OCA presented the audit report to the Cook County Sheriff's Office, which was asked to respond to two recommendations for managing IT assets. The recommendations were:

- Implement a phased retirement plan for IT assets to come into compliance with the Cook County guidelines for the useful life of IT assets. In addition, collaborate with the Bureau of Finance to secure sufficient capital to replace necessary aged IT assets. (Recommendation #1)
- Address identified Service Desk inventory records discrepancies by performing detailed reconciliations of inventory records, focusing on updating missing data/items, to help ensure accurate inventory records. (Recommendation #2)

Please refer to the Recommendations section for more details, including management responses, corrective action plans, and estimated completion dates.

# BACKGROUND

The Sheriff of Cook County directs over 5,305 officers, deputies, and civilians who perform diverse tasks within the criminal justice system. Within the Sheriff's Office is the Bureau of Information Technology (BOIT), which plans, implements, and maintains the Sheriff's Office's technology enterprise. For Fiscal Year 2024, the Sheriff's Office requested $2,118,900 for capital equipment related to IT assets under review. The Sheriff's Office stores the disposition of their IT assets in an inventory management system.

The Sheriff's Office utilized the Manage Engine inventory management system until the year 2018. The Sherriff's Office currently utilizes the Manage Engine Service Desk Plus (Service Desk) inventory management system. The Sheriff's Office BOIT migrated from Manage Engine to Service Desk because Service Desk has a ticketing system with an inclusive repository for asset management that is customizable to their needs. The Service Desk inventory management system tracks the acquisition, deployment, and disposal of workstations, laptops, monitors, audio and visual equipment, body-worn cameras and docking stations, servers, routers/switches, scanners, projectors, tasers, telephones, webcams, tablets, televisions,

storage devices, rack hardware, and modems. As of May 16, 2024, there were 30,456 IT assets in Service Desk. We focused on 5,808 IT assets consisting of workstations and laptops.

Even though the Sheriff's Office is separately elected, BOIT follows many of Cook County's policies and guidelines for the acquisition, disposal, and maintenance requirements of technology assets. The Cook County Capital Equipment (CEP) and Capital Improvement (CIP) Request Guidelines specify a capital asset as having a useful life of five years or more. The Sheriff's Office's policy permits the utilization of IT assets with a useful life of seven or more years. The Sheriff's Office uses such IT assets, as long as they are fully supported and have passed the appropriate patch and security requirements. Figure 1 shows the aging of Sheriff's Office IT assets under review.

Figure 1
Sheriff's Office Aging of IT Assets
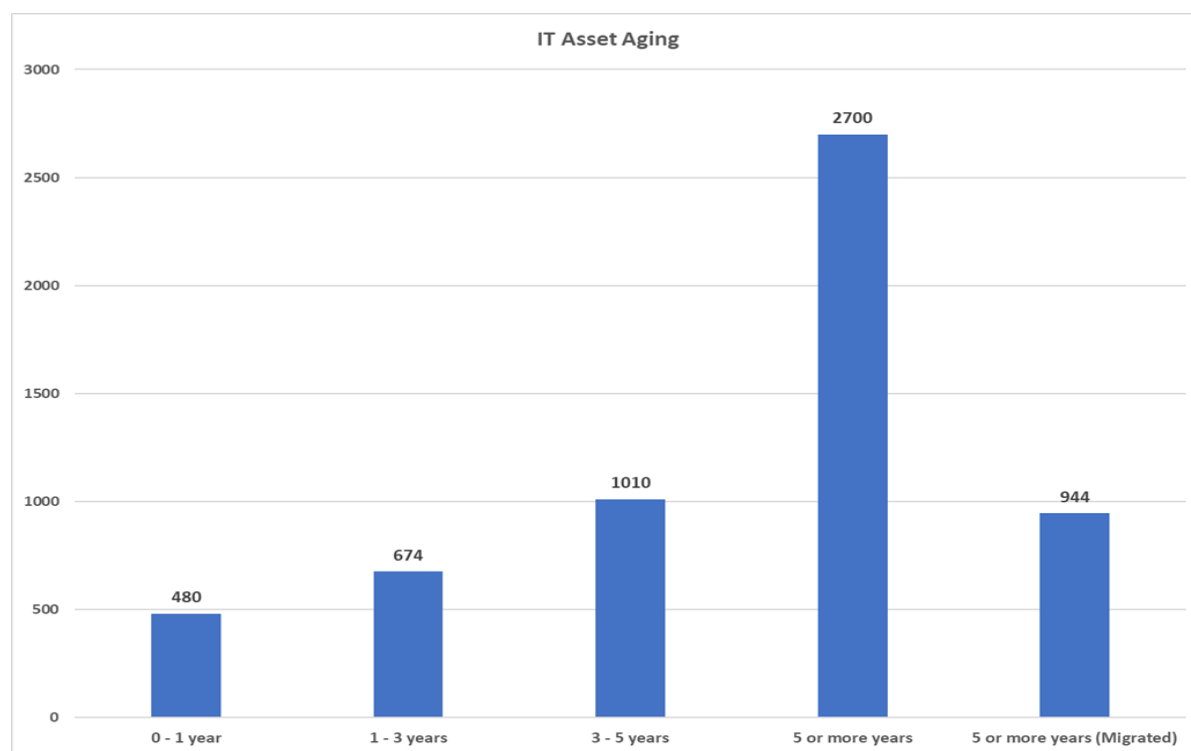


The IT asset lifecycle involves the acquisition, deployment, and disposal stages. When an asset is to be acquired, the Sheriff's Office Procurement proceeds with a quote to an approved vendor using capital funds. Upon delivery to the warehouse, the 'In-Store' process begins.

The Sheriff's Office BOIT identified several classifications related to IT assets. These classifications are called "Asset State" in Service Desk. Figure 2 shows the number of aging IT assets in a particular asset state. The Asset State descriptions are:

- **In Repair**: Pending manufacturer repair – on-site or shipped to the manufacturer.
- **In-Store**: On-site, in inventory storage.
- **In Use**: In the field.
- **Legal Hold**: Awaiting legal preservation to be then returned to inventory.
- **Missing**: Attempts were made to locate the device, and a freeze was issued.
- **Pending Deployment**: Currently waiting to be deployed to the field.
- **Pending Salvage**: Awaiting to be salvaged/recycled out of rotation.
- **RMA**: Return to manufacturer.
- **Under Investigation**: In the process of locating the device.
- **Disposed**: No longer in use or on-premises. The unit has been recycled out of rotation.
- **At Warehouse**: Currently stored at the warehouse.

Figure 2
Sheriff's Office Aging IT Assets (Asset State)

# AUDIT SCOPE AND OBJECTIVES

The overall objective of the audit was to assess the management of information technology assets for compliance with department policy associated with the IT asset lifecycle (acquisition, deployment, and disposal) and logical access to IT asset inventory. The audit scope was focused solely on workstations and laptops reported in the Manage Engine Service Desk Plus inventory management system in May, June, and July 2024.

The detailed audit objectives were the following:

- Determine compliance with the policies on the useful life of IT assets.
- Determine the effectiveness of IT asset management.

The following procedures were performed to assess the objectives. The OCA:

- Reviewed IT policies and procedures for acquiring, deploying, and disposing IT related assets.
- Reviewed documentation and workflows to identify inefficiencies.
- Interviewed IT staff to gather insights into process and system effectiveness.
- Reviewed the inventory management system (Service Desk) and procedures.
- Observed the tagging and recording of a sample of IT assets into Service Desk.
- Verified that asset details (e.g., serial number, model, location) were accurately recorded.
- Assessed IT assets' physical security, preventing theft or unauthorized access.

# AUDIT RESULTS

Based on analysis and evaluation of the Sheriff's Office's policy, internal controls, and inventory management system, the OCA has reached the following conclusions:

- Aging IT Assets: Over 50% of the IT asset inventory under review were aged five or more years after acquisition, with 30% exceeding seven years after acquisition.
- IT Inventory Management: Missing items and data in data fields were identified in inventory records.

# RECOMMENDATIONS

**Recommendation #1**

The Cook County Capital Equipment and Capital Improvement Request Guidelines specify a capital asset as having a useful life of five years or more, and the Sheriff's Office's internal policy permits seven years of useful life before retiring IT assets. The OCA found that 50% of IT assets were five or more years after acquisition and with 30% exceeding seven years after acquisition. The Sheriff's Office has an inventory management process, but IT assets are not retired from use according to Cook County guidelines.  Noncompliance with the guidelines inhibits prioritizing critical IT assets for replacement, which may impact operations.

The OCA recommends that the Sheriff's Office:

- Implement a phased retirement plan for IT assets to come into compliance with the Cook County guidelines for the useful life of IT assets.
- Collaborate with the Bureau of Finance to secure sufficient capital to replace aged IT assets.

**Management Response**

The Cook County Sheriff's Office (CCSO) acknowledges, understands, and agrees with the OCA recommendation.

CCSO will implement a multi-year plan to retire and salvage assets identified as having aged 5 years or more, and replace those assets with new equipment where appropriate and where need has been identified. CCSO will implement a multi-year plan for this effort to balance budgetary needs with adherence to the recommendation. CCSO will work with the recommendations provided to implement this plan, including developing and implementing budgetary justification where needed.

CCSO retains equipment aged greater than five years only where the equipment and software, including operating systems, receives regular security and functional updates. Any equipment for which updates are not available, or where equipment is unable to accept and install such updates, is immediately removed from active inventory and slated for salvage. This insures that CCSO deploys and maintains equipment that meets or exceeds security standards set by both Cook County and the Sheriff's Office.

CCSO retains aged but compliant equipment to support special projects and to provide emergency equipment replacement if needed. An example of a special project where aged equipment may be deployed is the internationally recognized chess competition held annually through the Cook County Department of Corrections.  The aged equipment was utilized because the software did not have large processing or memory needs.  This equipment is still compliant with security standards and is fully supported.

**Estimated Completion Date**
September 30, 2029

**Recommendation #2**

The Sheriff's Office provided the OCA with IT asset data from the Service Desk inventory management system, which contained 5,808 records. The system contains the following fields:

- Asset Name
- Product
- Product Type
- Org Serial Number
- Asset Tag
- Vendor Name
- Purchase Order
- Asset Category
- Asset State
- Site
- Location
- User

Upon review of the data, OCA found that not all fields were populated or complete. OCA learned from the Sheriff's Office that when the data was migrated to Service Desk, all fields were not adequately converted.

The OCA selected a random sample of 80 out of the 5,808 records and visited the location of the IT asset. The OCA found that of the 80 IT assets:

- One item was found missing, a workstation (asset tag number A15048).
- Seven items had been relocated and the physical location had not been updated.

The OCA recommends that the Sheriff's Office:

- Implement an IT asset cycle count process to ensure completeness of information in the Service Desk records and accuracy of inventory disposition.
- Implement a process to locate items not converted into Service Desk, labelled "Not Assigned" or deemed missing.
- Collaborate with the Bureau of Finance on a process to notify of IT asset inventory value changes.

**Management Response**

The Cook County Sheriff's Office (CCSO) acknowledges, understands, and agrees with the OCA recommendation.

CCSO determined the missing workstation identified during review was a computer monitor. CCSO located the equipment and updated the Service Desk system to reflect the correct device type and equipment location. CCSO updated OCA with this corrected information.

CCSO will refine and adjust data collection practices to update all missing information identified by OCA, especially regarding equipment records migrated from the previous inventory management system.

CCSO has already started the review and update of any missing data elements in the system. Most of the records need to be updated to match the purchase order number to the device. CCSO estimates completion of the data remediation. This is intended to be an ongoing effort involving data review and remediation. CCSO understands completion here means resolving those issues identified during the current OCA review.

**Estimated Completion Date**
September 2025