

FY2024 REPORT ON SOFTWARE AND TECHNOLOGY HARDWARE ASSET INVENTORIES AND PROPOSED STRATEGIC TECHNOLOGY POLICY

Item #24-1705

THE COOK COUNTY SHERIFF'S OFFICE
BUREAU OF INFORMATION AND TECHNOLOGY

COOK COUNTY SHERIFF'S OFFICE REPORT ON SOFTWARE AND HARDWARE ASSET INVENTORIES AND PROPOSED STRATEGIC TECHNOLOGY POLICY

ASSET INVENTORY AND STRATEGY

CONTEXT

The Cook County Sheriff's Office submits the following consolidated Software and Technology Hardware assets to fulfill the obligations set forth in Cook County Ordinance 16-3977, "Performance Based Management and Budgeting," and to meet our commitment to transparent and responsible operations. The report includes a proposed technology policy document.

The Cook County Sheriff's Office's Bureau of Information and Technology [BOIT] procures and manages all technology assets deployed across the Sheriff's Office enterprise. The enterprise includes the Department of Corrections, Community Corrections, Sheriff's Police, Courts Services, Investigatory Operations and Administration. The BOIT supports more than 5,500 users who face multiple mission objectives and challenges on a daily basis.

The BOIT relies upon the Cook County Bureau of Technology [BOT] to provide county-wide network resources critical to the Sheriff's Office's mission and to establish clear technology standards. The BOIT collaborates with BOT and multiple other agencies within and outside Cook County Government. The Sheriff's Office's BOIT oversees inventory management and reporting for the Sheriff's Office enterprise only.

PROPOSED STRATEGIC TECHNOLOGY POLICY

The intent of this combined asset inventory and technology policy outline is to provide the Cook County Board of Commissioners transparent detail regarding the Sheriff's Office's BOIT in support of the Board's efforts to effectively manage taxpayer resources. Further, this report outlines the strong collaboration between the Cook County BOT and The Sheriff's Office's BOIT evidenced by the Sheriff's Office adopting technology standards set by Cook County BOT.

The Sheriff's Office faces dynamic challenges daily in meeting its mission. The BOIT has become a key partner in supporting the Sheriff's Office to meet and overcome those challenges. The operational environment is further complicated by the increasing need for data security. The multitude of bad actors threatening data integrity and security multiplies on a daily basis. Managing these multiple challenges requires innovation and process change.

Security surrounding data access and integrity is tantamount to the Sheriff's Office's ability to meet our obligations. The Sheriff's Office has implemented multiple software, hardware, policy and procedural safeguards to ensure that data is used only when needed by whom it's needed as defined by job role requirements. These safeguards also protect our data from constant external threats.

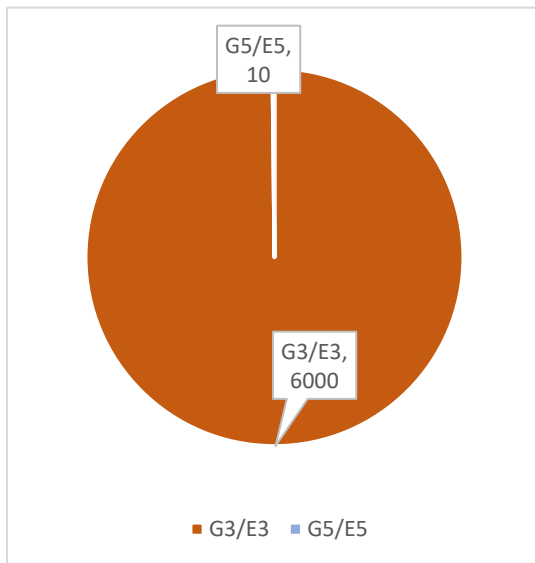
The Sheriff's Office has implemented a comprehensive hardware inventory management approach that includes both closely managing the inventory lifecycle from acquisition through salvage, and tight integration with the Sheriff's Office's network security infrastructure so that only hardware belonging to and authorized by the Sheriff's Office can access any BOIT resources. This integrated inventory

management approach further supports responsible procurement and deployment of taxpayer-funded resources.

The Sheriff's Office has implemented and continues to develop a multi-faceted software arsenal to protect data integrity and security, and to ensure that data is used only for those mission-related purposes for which it is required. The Sheriff's Office works closely with the Information Security Working Group [ISWG] and the Cook County Information Security Office [ISO] to establish and implement data standards covering malware attacks, unauthorized access, suspicious activity and a range of other threats to data security. The Sheriff's Office has implemented a comprehensive data classification infrastructure to apply strict data-use policies automatically and to alert appropriate personnel if any unauthorized attempt is made.

The Sheriff's Office has implemented and continues to refine acceptable use and security policies related to data access and hardware and software resource use. All Sheriff's Office employees are required to complete regular periodic training on safe data handling practices and acceptable hardware use. The Sheriff's office has instituted an IT compliance unit to review IT policy and standards adherence and to identify potential risks and monitor mitigation.

SOFTWARE INVENTORY ASSESSMENTS



The Sheriff's Office's Bureau of Information and Technology collaborates closely with the Cook County Bureau of Technology and the Office of the Chief Procurement Officer to acquire and deploy technology solutions that adhere closely with established Cook County processes and standards.

The Sheriff's Office's BOIT worked closely with Cook County BOT and Microsoft to determine the optimal mix of licensing to support the Sheriff's Office's operational requirements. Microsoft offers three tiers of O365 licensing: G1 where all office application access is mediated via the web; G3 where applications are available via both the web and user local desktops with additional Teams and other functionality; and G5 with a vast array of capabilities including some administrative

functionality in the O365 environment. Analysis by The Sheriff's Office, Cook County BOT and Microsoft showed the best mix of functionality was achieved through a majority deployment of G3 licenses with a very small number of G5. The G1 license was determined unable to integrate with The Sheriff's Office's security infrastructure to the extent required to meet The Sheriff's Office's requirements.

The Sheriff's Office uses the established County procurement process for the Microsoft, Adobe and other productivity applications. The Sheriff's Office requests licenses for required products, such as Adobe Acrobat Pro, from the Cook County BOT. When these licenses are granted and deployed BOT will then recharge the Sheriff's Office via the established process. Unified procurement and license management is critical to responsible and transparent operations for all Cook County agencies.

CURRENT SOFTWARE LICENSING

The Cook County Sheriff's Office licenses the majority of its productivity applications through Cook County BOT. This licensing does not include the Microsoft Office suite or licenses acquired under the Microsoft Server and Cloud Engagement [SCE] program. These products are licensed through a sub-agreement under County's current Microsoft Master agreement. Microsoft Office licensing currently stands at 6,000 G3 licenses and 10 G5 licenses. The Sheriff's Office procures these licenses through established reseller channels.

The Cook County Sheriff's Office invested in Microsoft Dynamics and Microsoft PowerApps during the most recent Microsoft contract renewal. These new licenses enable multiple benefits to the Sheriff's Office. This investment enables migrating the Jail Management system (CCOMS) to the Azure cloud. This migration significantly reduces the need to invest in server hardware, streamlines support and maintenance requirements, and enables new functionality not previously available. This investment enables rapid application and report development for existing and new applications within the Sheriff's Office.

The SCE program allows the Sheriff's Office to flexibly implement server infrastructure as needed to support The Office's operations. Further, the SCE allows the establishment of MS SQL servers as needed to support The Sheriff's Office's increasing reliance on business intelligence data to inform decision making. The Sheriff's Office has 140 Cores (70- 2 packs) of SQL SCE licenses.

Beyond the standard Microsoft licensing engagements, the Sheriff's Office has invested in multiple software systems ranging from enterprise-spanning applications such as the Jail Management System, small applications such as the AVTech temperature monitoring system used to alert BOIT should server room temperature deviate from baseline. A high-level view of The Sheriff's Office's most significant software investments includes:

- CCOMS/Offender 365 – an enterprise-wide jail management system that serves as a key management resource in Department of Corrections operations;
- Absolute Device Tracking – installed on all laptop, desktop, and MDT equipment managed by The Sheriff's Office, allowing BOIT to locate any Sheriff's Office's device anywhere in the world;
- CrowdStrike Solutions – monitoring services, identity management and malware monitoring software that ensures Sheriff's Office's data is secure, as a layered approach with BOT's McAfee Software;
- Lexipol Policy and Knowledge Management – software used by all Sheriff's Office employees to ensure all employees understand current and new policy requirements;
- Tableau Server/Data Analytics – an integrated software platform that enables dynamic display of business intelligence data and allows users to explore this data for deeper operational and policy insights.

HARDWARE INVENTORY ASSESSMENTS

COMPUTERS

The Cook County Sheriff's Office follows the configuration standards for desktop and laptop equipment established by the Cook County Bureau of Technology. The Sheriff's Office adheres to current Cook

County Procurement equipment lifecycle requirements and works to utilize all desktop equipment until the end of its useful life. The Sheriff's Office conforms to the BOT's minimum standard for new computer procurements:

- Sixteen Gigabits of RAM
- An i7 processor at minimum
- Five Hundred Twelve Gigabits Solid State Drive

The Sheriff's Office does procure mobile data terminals [MDTs] which conform to County BOT standards and to standards and requirements established within the law enforcement community. These MDTs are procured through standard County-established procurement channels. As equipment reaches the end of useful life the Sheriff's Office will request new equipment where needed and retire older devices.

SERVERS

The Sheriff's Office's BOIT manages all servers processing Sheriff's Office-specific data. The Sheriff's Office has been developing and implementing a high-resiliency, high-availability infrastructure to support The Sheriff's Office's mission-critical operations. Improvements in technology coupled with increasing threats from external bad actors have led to the expansion of this highly resilient infrastructure to support all operations. The infrastructure has matured significantly throughout 2023 by shifting from three-tier architecture to hyperconverged architecture. The Sheriff's Office will continue to refine this infrastructure through 2024 and beyond. The Sheriff's Office looks forward to sharing its experience gained during this effort with all Cook County agencies as well as the law enforcement community.

The Sheriff's Office's BOIT has substantially completed an initiative whereby all server operating systems will be moved to Windows Server 2019. This modernization effort ensures The Sheriff's Office is utilizing the most modern server technology as well as realizing cost savings through standardization and the elimination of older, more expensive technologies.

| Server OS | 2023 | CURRENT |
|---------------------|------|---------|
| Windows Server 2003 | 0 | 0 |
| Windows Server 2008 | 0 | 0 |
| Windows Server 2012 | 25 | 0 |
| Windows Server 2016 | 50 | 45 |
| Windows Server 2019 | 204 | 203 |
| Windows Server 2022 | 5 | 40 |

The Cook County Sheriff's Office is participating with Cook County BOT and other County agencies to continue to implement findings from the Cook County BOT's Business Impact Analysis assessment. The resiliency plan identifies and mitigates multiple risks to data security, integrity and exposure. The BOIT has invested in multiple Information Security Office resources to secure our data perimeter and is expanding its compliance and governance unit to secure our supply chain and verify processes support safe data handling practice.

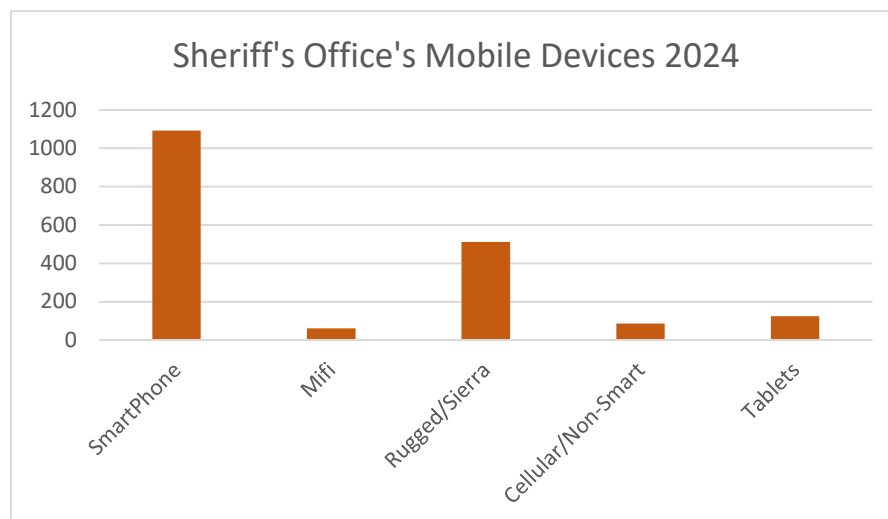
The Sheriff's office has invested in a hyper-converged infrastructure which allows data to be flexibly and safely stored whether on premise or in the cloud. This infrastructure also enables the Sheriff's Office to easily participate in any continuity efforts developed by County BOT. The hyper-converged infrastructure enables resiliency across the Sheriff's data enterprise.

PRINTERS

The Sheriff's Office utilizes the multi-functional devices (MFDs) contracts Cook County BOT has put in place except for specific applications. For example, The Sheriff's Office Police requires citation printers in its mobile units. The Sheriff's Office's BOIT manages the acquisition of these printers through Cook County Procurement. These printers are also a critical piece of the County-wide DACRA citation processing project.

MOBILE DEVICES

The Sheriff's Office's BOIT Manages mobile devices across the Sheriff's enterprise. The lessons learned during and following the Covid-19 pandemic show that mobilization is a key element in overall workforce deployment.



CONCLUSION

The Sheriff's Office is committed to responsible and transparent technology investment management. The Sheriff's Office has made significant investment in security and resiliency understanding that the greatest threats to our operations lie outside the County network perimeter. As our internal security

approach matures The Sheriff's Office will collaborate with Cook County BOT and the Information Security Office to focus on data sent out from our networks to ensure it is used only for expressly stated purposes.

The Sheriff's Office has recognized the critical value of analyzing business intelligence data to manage daily operations as well as to establish meaningful policy. All technology investments both current and future must leverage the ability to gather pertinent operational data. Any technology procurement effort must follow careful strategic consideration.