FY2024 REPORT ON OFFICES UNDER THE PRESIDENT SOFTWARE ASSETS AND HARDWARE ASSET INVENTORIES

COOK COUNTY BUREAU OF TECHNOLOGY

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COOK COUNTY REPORT ON SOFTWARE ASSETS AND HARDWARE ASSET INVENTORIES FOR OFFICES UNDER THE PRESIDENT

ASSET STRATEGY

In the wake of the COVID-19 pandemic, thoughtful and strategic procurement of information technology assets has become more important than ever before. Information technology has allowed Cook County to transition to a largely remote workforce with little reduction in productivity. Remote work required greater collaboration and automation of processes and increased leverage of existing software platforms for virtual collaboration, for example the creation of documents allowing for e-signatures via DocuSign and the ubiquitous use of Microsoft Teams as a video conference platform.

Security concerns are a primary consideration when procuring technology assets given the growing sophistication of cyberthreats. The Bureau of Technology routinely implements hardware and software upgrades to maintain the most up-to-date security patches. These upgrades help prevent successful cyberattacks and subsequent costly data breach remediation.

Product lifecycle, or the amount of time from technology implementation through use and eventual decline, affects not only information security but also employee productivity. The current computer and server lifecycles recommended by the Budget Office are six years. All Bureau of Technology enterprise software license procurement contracts are drafted to ensure perpetual upgrades and full support of the manufacturer.

SOFTWARE INVENTORY ASSESSMENTS

The Bureau of Technology manages the procurement of enterprise licenses for Adobe and Microsoft products. Elected Offices and the Cook County Forest Preserve are then charged-back for their portion of licenses. Procurement of licenses on an enterprise-scale helps reduce costs and improve efficiency.

The enterprise software license inventory is measured annually through a true-up process that helps reconcile assignment of licenses. Cook County's largest software asset is its collection of Microsoft Office 365 (O365) licenses. O365 refers to a suite of office productivity desktop products including Outlook (email and calendar), Microsoft Word (word processing), PowerPoint (presentation slide decks), Teams (collaboration), and Excel (spreadsheets), among others.

Microsoft offers various levels of licensing. The County currently uses both G1 and G3 licenses. The G1 license provides access to Outlook and web-based Microsoft applications only and has a lower price per license than the G3 license. The Bureau of Technology has made a concerted attempt to right-size its use of Microsoft licenses to fit the needs of each user, thereby saving the County the expense of unnecessary G3 licenses. In addition, the Bureau of Technology manages enterprise Adobe licenses (web experience and content management).

HARDWARE INVENTORY ASSESSMENTS

COMPUTER INVENTORY

Dept/Agency	Computers
Department of Administrative Hearings	26
Animal Control Department	21
Office of Asset Management	45
County Auditor	12
Budget and Management Services	38
Building and Zoning	68
Bureau of Technology	250
Office of the Chief Administrative Officer	47
Office of the Chief Financial Officer	11
County Comptroller	58
Contract Compliance	26
Office of Economic Development	44
Department of Emergency Management and Regional Security	117
Department of Environment and Sustainability	48
Department of Facilities Management	170
Department of Human Resources	131
Department of Human Rights and Ethics	16
Office of the Independent Inspector General	20
Justice Advisory Council	22
Department of Labor Relations	21
Cook County Land Bank Authority	30
Cook County Law Library	63
Medical Examiner	227
Office of the President	38
Planning and Development	34
Office of the Chief Procurement Officer	38
Public Administrator	16
Public Defender	786
Revenue	160
Risk Management	24
Secretary to the Board	25
Department of Transportation and Highways	427
Zoning Board of Appeals	6

These counts include some computers that are being prepared for salvage. All counts were self-reported by designees from each section.

Per the Bureau of Technology, the minimum standards for new computer purchases for Offices Under the President (OUP) include:

- Sixteen gigabits of RAM
- An i5 processor
- A solid-state hard drive

The procurement vehicle for technology hardware is typically through reseller agreements. Cook County currently has three hardware agreements through SHI, Insight, and CDW-G all of which were obtained through the RFP process and in compliance with all legal requirements.

SERVERS

In 2020, BOT implemented the Cook County Cloud for production applications, following a successful implementation for testing and development. It started with the migration of the Bureau of Records from their aging infrastructure to the new platform that provides disaster recovery and costs less than alternatives.

Cook County has engaged in a change in its computing infrastructure over the past two years to provide a more resilient and available environment including two availability zones of compute infrastructure, each containing four environments (DMZ, Test/Development, Production, and Production database). This hyperconverged environment has brought a significant amount of resiliency and flexibility for the computing infrastructure where Cook County is able to logically separate its various production environments without making additional hardware purchases.

This direction is an avenue away from the traditional three-tiered approach and encompasses technology that bridges the gap between on premise workloads and the public cloud. Cook County has several ways to provide dedicated infrastructure, where the County can physically or logically separate various offices to ensure data ownership remains with our customers. As the solution matures over time, the environment becomes more resilient.

	2018	2020	2022	2023	2024
Windows Server 2003	6	0	0	0	0
Windows Server 2008	92	25	22	17	6
Windows Server 2012	242	204	147	99	37
Windows Server 2016	32	180	187	205	134
Windows Server 2019	0	10	69	162	179
Windows Server 2022	0	0	0	3	46

PRINTERS

The County has moved away from using multiple devices for printing and scanning. The Bureau of Technology recommends that when printers reach the end of their lifecycle they are replaced with multi-functional devices (MFDs). MFDs incorporate printing, photocopying, and scanning into one device that can be used by multiple users. This results in greater efficiency and reduced maintenance costs as well as greater accessibility through the implementation of ADA-compliant screens. It is important to note that this standardization has been implemented for the Offices Under the President and is recommended for all Elected Offices.

Multi-Functional Devices bar chart: Monochrome = 1195, Color = 146.
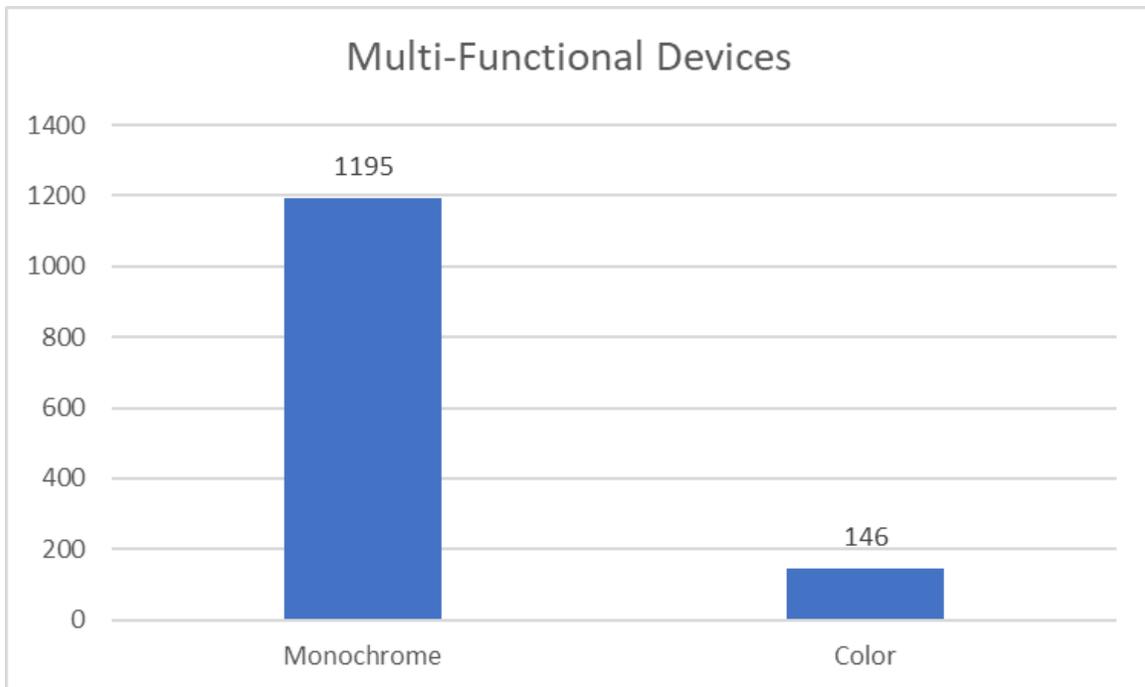
TELECOMMUNICATIONS

The CIO manages all telecommunication hardware throughout the County, including the jail complex and Health and Hospital System. Voice-over-internet protocol (VOIP) has become the industry standard because it provides more features for users such as voicemail, call forwarding, and conference call features while reducing telecom provider costs and increasing call quality. The County recently completed a five-year implementation.

MOBILE DEVICES

The Bureau of Technology manages all County mobile devices and contracts, except for Cook County Health. Mobile devices include cellphones, smartphones, MiFis and wireless network equipment known as "data transmitting devices."

Basic Cell Phones	597
Data Transmitting Devices	641
MiFi Devices	658
Smart Phones	1465
Tablets	4873
Total	**8234**

MOBILE DEVICE MANAGEMENT

In March 2022, Cook County rolled out the Microsoft Intune Mobile Device Management (MDM) application for employees within our Microsoft Office 365 tenant with compatible County-issued cell phones. To date, 1,001 devices have been enrolled.

MDM software allows IT administrators to remotely manage mobile devices. Using MDM allows Cook County to install and update apps. MDM also provides the ability to delete Cook County data from a device if it becomes lost or stolen.

Other benefits of utilizing MDM include:
• Improved efficiency
• Decreased downtime for users
• Mitigation of compliance risks
• Increased data security
• Seamless delivery of services

MDM works on newer smart phones with either Android or iPhone operating systems. Android phones need to be on version 8.0 or later, and iPhones/iPads have to have iOS version 13.0 or later.