



# FY2020 REPORT ON SOFTWARE AND TECHNOLOGY HARDWARE ASSET INVENTORIES AND PROPOSED STRATEGIC TECHNOLOGY POLICY

COOK COUNTY BUREAU OF TECHNOLOGY

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# COOK COUNTY REPORT ON SOFTWARE ASSETS AND HARDWARE ASSET INVENTORIES AND PROPOSED STRATEGIC TECHNOLOGY POLICY

## ASSET INVENTORY AND STRATEGY

### CONTEXT FOR REPORT

Cook County Ordinance 16-3977, “Performance Based Management and Budgeting” requires preparation of a consolidated report on Software Assets and Technology Hardware Asset Inventories. A proposed strategic technology policy document prepared by the Chief Information Officer (CIO) is required as well. This report consolidates both the asset inventories and proposed strategic technology policy.

The Bureau of Technology manages some or all internet technology assets for the following offices and agencies: Cook County Assessor, Cook County Board of Review, Office of the Chief Judge, Clerk of the Circuit Court, Cook County Clerk, Cook County Forest Preserves, Cook County Health and Hospital System, Offices Under the President, Public Administrator, Cook County Public Defender, Cook County Recorder of Deeds, Cook County Sheriff, Cook County State’s Attorney, and Cook County Treasurer. To have full context for the information contained in this report, it is necessary to understand how asset inventory information is compiled. The CIO oversees some countywide hardware and software asset procurements, but Elected Offices have traditionally handled their own. Therefore, the CIO can attest to the accuracy of information regarding Offices Under the President and has relied on self-reporting by Elected and Appointed Offices concerning their asset inventories.

### PROPOSED STRATEGIC TECHNOLOGY POLICY

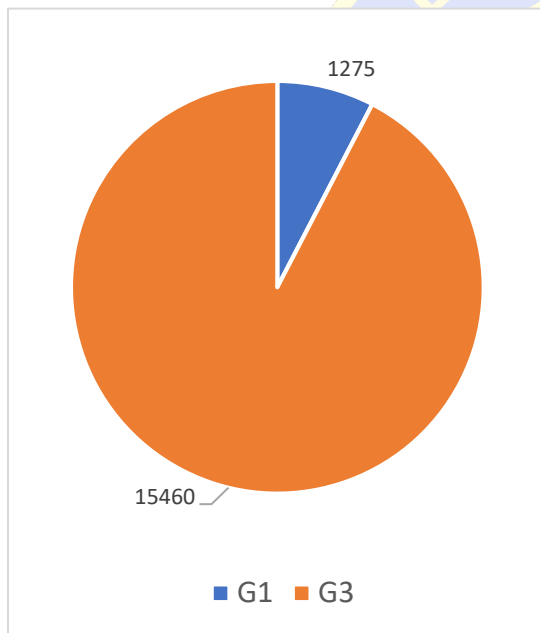
Cook County Ordinance 18-5634, Division 2, “Cook County Information Technology Consolidation” states that: “All separately elected County and State Officials, Departments, or Agencies funded by the Cook County Board of Commissioners, ... shall... coordinate to deliver information technology services in an efficient and cost-effective manner consistent with County, State and Federal law and industry standards.” Therefore, the intent of this asset inventory and corresponding proposed strategic technology policy is to provide additional insight to the Cook County Board to provide Commissioners with the information necessary to effectively steward County resources.

Given the current 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 has 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 newly 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 expense of unnecessary G3 licenses.

In addition, the Bureau of Technology manages enterprise Adobe licenses (web experience and content management).

## CURRENT ENTERPRISE SOFTWARE LICENSES

Software Title Name	Quantity
Microsoft Project Standard	5
Microsoft Project Pro	10
Microsoft Project Line	25
Microsoft Project Online Essentials	90
Microsoft Power BI	70
Microsoft Visio Pro	69
Microsoft Visio Standard	20
Microsoft Visio Plan	10
Microsoft SQL Server Enterprise Core	47
Microsoft SQL Server Standard Core	105
Microsoft System Center Standard Core	500
Adobe Acrobat Pro	1000
Adobe Creative Cloud all apps	70
Adobe Creative Cloud single app	43
Adobe Captivate Enterprise	2
Adobe Presenter	17

## HARDWARE INVENTORY ASSESSMENTS

### COMPUTERS

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

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

Older purchases that do not meet the minimum requirements above are expected to reach the end of the products' lifecycle by December 2021 and will either be upgraded to meet the minimum standards or retired.

The procurement vehicle for technology hardware is typically via 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. Please note that historically the Bureau of Technology has not managed the procurement, deployment, or lifecycle of hardware assets for Elected Officials.

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## SERVERS

The Bureau of Technology manages servers throughout the County that store and process County data, although some servers are maintained by their respective offices. The County has disaster recovery contingencies in place to ensure minimal downtime in the event of a catastrophic failure of the primary servers. While some servers predate 2003, the majority were implemented between 2012 to 2016. Server standards will be issued in 2021 and the Bureau of Technology will release server recommendations upon completion of the RFP for consolidated hosting, disaster recovery, and business continuity which is currently being prepared for release by the Office of the Chief Procurement Officer and presented in greater detail below. The CIO anticipates that the server recommendation will include replacement of all server hardware from 2012 or before. The Bureau of Technology is working to further consolidate technology infrastructure, such as through the new deployment of virtual servers that will reduce footprint while improving reliability, storage, and flexibility.

### BUREAU OF TECHNOLOGY-MANAGED SERVERS

	2018	2019	2020
<b>Windows Server 2003</b>	6	4	0
<b>Windows Server 2008</b>	92	88	25
<b>Windows Server 2012</b>	242	224	204
<b>Windows Server 2016</b>	32	46	180
<b>Windows Server 2019</b>	0	0	10

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## BUSINESS IMPACT ANALYSIS AND DISASTER RECOVERY

The CIO is currently evaluating County resiliency in the event of disruptions. Given the criticality of County information technology for the continued operation of government, disaster recovery and business continuity must be maintained at the level of industry best practices. The Business Impact Analysis (BIA) identified the impact to County services in the event of an unforeseen disruptive event. The BIA reviewed 71 services across 17 agencies to document the most critical services. This enabled the CIO to identify to prioritize services in need of restoration to immediately focus efforts on restoring the most critical in the event of a disaster. Two key recommendations from the analysis are: creation of a business continuity team to further develop a business continuity strategy, and creation of a consolidated disaster recovery plan. The disaster recovery plan will document specific processes to be implemented by each office to recover critical business services and assets. In collaboration with the various offices, the CIO has begun the work of analyzing each disaster recovery plan.

## IT INFRASTRUCTURE ASSESSMENT

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The Bureau of Technology has recently completed benchmarking of the Countywide information technology infrastructure. This will allow the County to maximize savings through standardization of cloud networking, infrastructure management, and contract and vendor management. The Bureau of Technology has established a baseline for current information technology infrastructure assets and

contracts for critical services. As a result, the County can review infrastructure budgets versus productivity which will allow for a better determination of gaps in performance versus cost.

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## 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.

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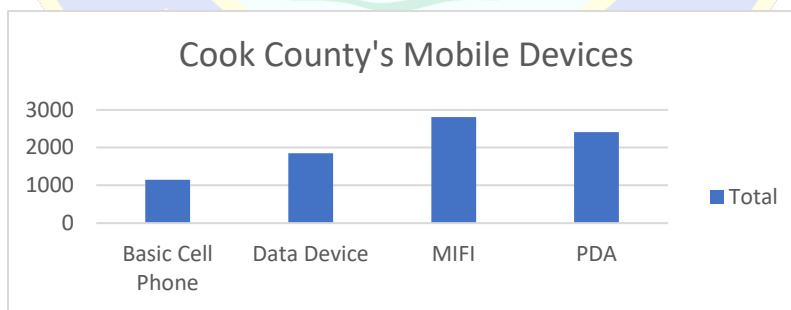
## TELECOMMUNICATIONS

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 capability while reducing telecom provider costs and increasing call quality. The County is currently in year three of a five-year implementation schedule. As of October 2020, 14,528 VOIP phones have been installed Countywide. An estimated additional 14,250 VOIP phones will be installed by the end of the five-year schedule.

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## MOBILE DEVICES

The Bureau of Technology manages all County mobile devices and contracts. Mobile devices include cellphones, smartphones or “data devices”, PDAs, and MiFis. Unsurprisingly there has been a significant uptick in mobile device requests since early March 2020.



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## ASSESSMENT CONCLUSION

The CIO appreciates the willingness of the Elected Offices to share the information necessary to create this report. The Bureau of Technology is in the process of implementing an internet technology asset

management tool (ITAM) to further automate the inventory process. This will allow additional reporting to conduct detailed analysis to improve budget forecasting.

