

FY2018 Technology Asset Inventory Assessment & Strategy

COOK COUNTY BUREAU OF TECHNOLOGY

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ASSET INVENTORY AND STRATEGY

Pursuant to Ordinance No. 16-3977, all County offices and agencies are required to submit annual software and IT hardware inventories during the Budget cycle. The ordinance requires the Bureau of Technology (BOT) and County Budget Office to summarize and assess the inventories in the context of a “strategic document” to be delivered to the Board. The following document presents BOT’s IT strategy and accompanying assessment of received software and IT hardware asset inventories.

HARDWARE INVENTORY ASSESSMENTS

COMPUTERS

BOT minimum standards for computer purchases include:

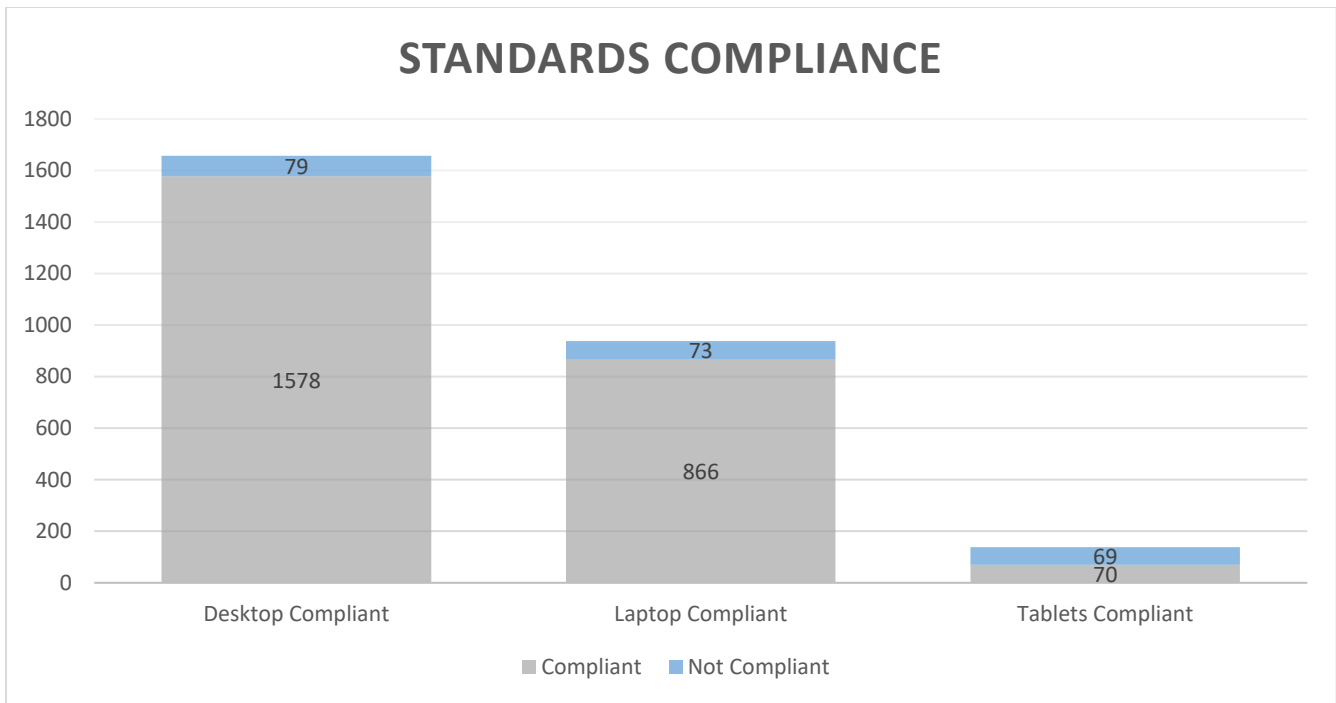
- Sixteen gigabits of RAM
- An i5 processor
- A solid-state hard drive

By purchasing computers that meet these specifications, BOT expects five years of use before the computer should be replaced. For older computers still in use, BOT expects that machines with at least eight gigabits of RAM and other minimum standards will remain viable for the next 12 to 24 months.

On a five-year cycle BOT would be replacing 20 percent of all computers in Offices Under the President (OUP) every year, which would be approximately 500 computers per year. The actual number of computers having reached that age is very close but not exactly 20 percent. Based on estimates from earlier this year:

- 19.55 percent of OUP computers will be five years old in 2019
- 18.31 percent of OUP computers will be five years old in 2020
- 14.67 percent of OUP computers will be five years old in 2021

BOT is currently working to replace approximately 26 percent of OUP computers, which are over five years old. The backlog is due to cost cutting measures of the previous year. During the last budget cycle, in an effort to find savings, the Budget office was unable to fund requests for computers less than six years old. This created de-facto six-year lifecycle for machines that were due to be replaced in 2019. BOT has prioritized replacing the approximately 500 computers too slow or old to be upgraded to Windows 10.



Desktop compliance has increased significantly. Less than five percent of desktops are now out of compliance, whereas 18 percent were non-compliant last year. Laptop and tablet compliance is lower due to the devices being less frequently connected to the County network where updates are pushed out to devices automatically. BOT is working on a policy to address this issue.

Asset inventories demonstrate that Cook County agencies and offices have a variety of desktop and laptop computers. Currently, these assets aren't centrally managed. Agencies can purchase a wide variety of computers through reseller contracts, and many agencies manage their own hardware replacement lifecycles.

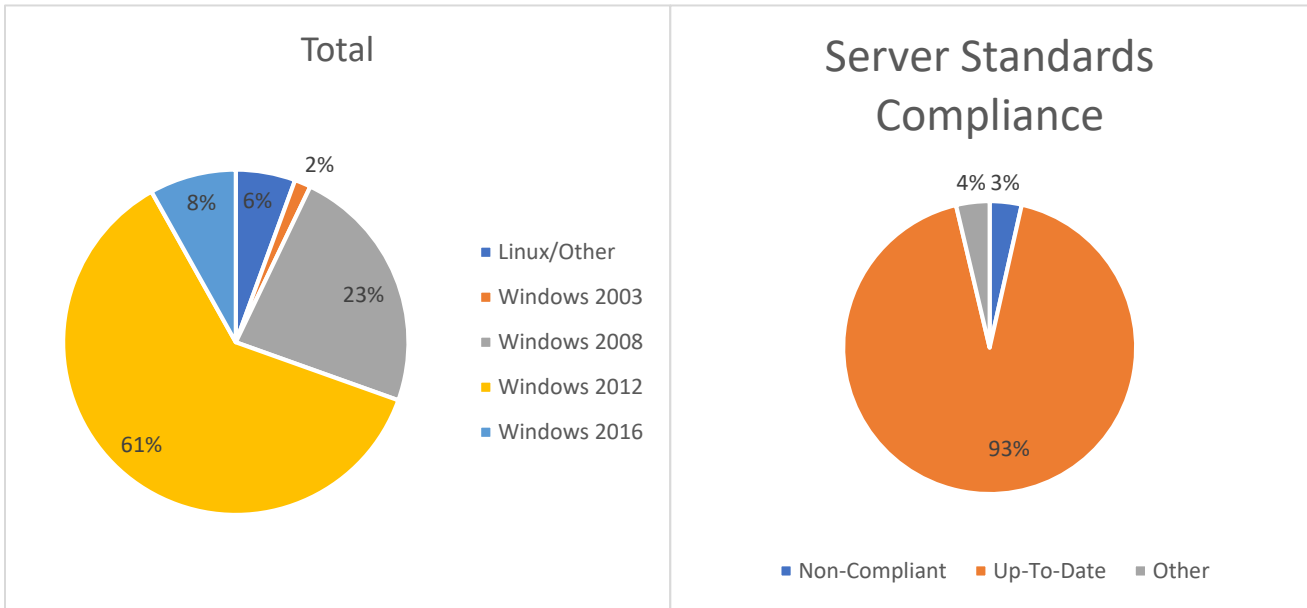
SERVERS

Within BOT's data centers, the servers are over 90 percent up-to-date. Operating system patch compliance levels have gone up from 25 percent in FY2017 to about 85 percent in FY2018. Just over two percent of BOT's servers are running Windows 2003 infrastructure. These will be decommissioned during FY2019. Slightly less than 39 percent of our servers are running a Windows 2008 environment; these will also be upgraded during FY2019.

Moving forward, BOT will begin rolling out the infrastructure for hyperconverged technology. Hyperconverged infrastructure is a fully software-defined IT infrastructure that virtualizes all the elements of conventional 'hardware-defined' systems.

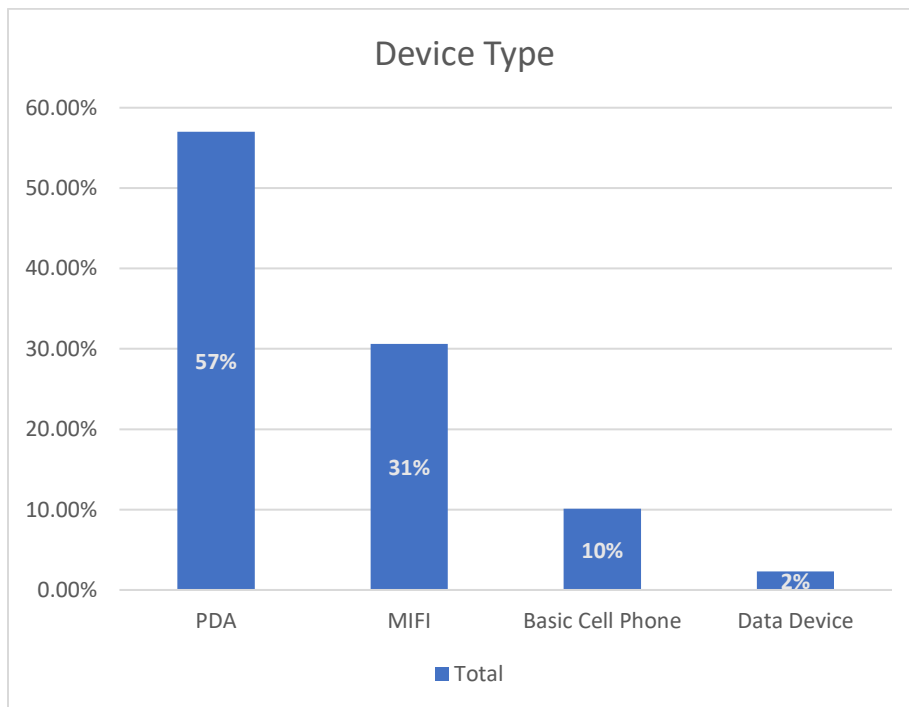
The inventory included some but not all servers owned by each agency. Some servers currently in use in other offices predate even the 2003 machines. We have recommended that these be upgraded as soon as possible and efforts to encourage upgrades are ongoing.

The charts below represent only BOT managed servers. In FY2019 BOT plans to identify all hosting environments Countywide and explore potential future migration strategies.



MOBILE DEVICES

Under specific circumstances, some Cook County employees may be required to carry a County-issued mobile device. The chart below was compiled from data maintained by the BOT's Telecommunications Department.



PRINTERS

BOT standards for printers dictate that employees move away from more expensive-to-use desktop personal printers and instead use shared, efficient multifunctional devices. Other standards include Americans with Disabilities Act (ADA) compliant screens and the ability to password protect your print jobs for private printing. BOT’s standard machines will also report monthly usage statistics, which we can use to be sure the device assigned is appropriate for the average workload of the office where it resides.

- **MFDs:** Multifunctional (print/scan/copy/fax/etc.) Devices
- **AMV:** Average Monthly Volume in printing

2016-2018						
MFDs	Total	Total AMV	Mono AMV	Color AMV	BW Devices	Color Devices
<i>Konica-Minolta</i>	342	1,856,479	1,789,395	67,084	319	23
<i>Toshiba</i>	568	3,850,902	3,755,329	95,573	541	27
Total	1,210	5,707,381	5,544,724	162,657	860	50
Desktop Printers	Total	Total AMV	Mono AMV	Color AMV	BW Devices	Color Devices
<i>HP</i>	1,743	3,288,455	3,121,547	166,908	1,386	357
<i>Dell</i>	268	442,318	430,120	12,198	244	24
<i>Lexmark</i>	136	204,140	203,903	237	134	2
<i>Xerox</i>	160	208,219	207,801	418	153	7
Total	2,307	4,143,132	3,963,371	179,761	1,917	390

*The two tables above represent Countywide activity detected through the County network. This was not collected as part of the Asset Inventory. Devices and activities disconnected from the County network were not included.

ASSESSMENT CONCLUSION

To efficiently manage IT assets, County agencies and offices must work with BOT to improve the quality and accuracy of IT asset inventories and ensure that proper software and hardware lifecycle, patching, and management standards are maintained. For its part, BOT has published a Software Asset Management policy and deployed software and hardware monitoring tools to improve Countywide IT asset management. BOT recently hired an IT Asset Manager to assist in the implementation of an efficient Countywide IT Asset management regime.

The new IT Asset Manager, Serafin Chavez, is currently writing a framework that will establish organizational structure and long-term strategic management of incoming technology-related equipment within BOT. This includes planning, monitoring, and recording hardware/ software license assets to ensure compliance within BOT/ Cook County procedures.