eDefender, eMitt and The Year of the Bus

eDefender Goes Live
The Cook County Public Defender just got a new case management system that improves the handling of case initiation, subpoena management, investigations, case scheduling, managing expert witnesses and dispositions. “We want to make sure assistant public defenders can effectively manage their case loads as well as ensure that case information is stored electronically in a secured environment,” said Cook County President Toni Preckwinkle. “This new system will also generate important information that will allow better office efficiency and attorney assignments.”

What is this “bus”? Recently, Cook County’s justice agencies got a new “bus” – not the kind with four wheels, but a system to allow the various agencies to cross the digital divide with long-needed modernization. In 2015, the Cook County Board approved the $2.3 million purchase of an Enterprise Service Bus (ESB) to facilitate communications between the different software applications used by each of the County’s justice agencies: Chief Judge, Clerk of the Circuit Court, Public Defender, Sheriff, State’s Attorney and the Bureau of Technology.

eMittimus Goes Live
When a judge makes a decision about charges against a detainee in Cook County Jail, as of Dec. 18, the information will travel electronically from the Clerk of the Circuit Court to the County Sheriff’s Jail Management System using the bus. The record of the decisions, known as the Mittimus, provides a list of charges and the Judge’s disposition, or ruling, on each.

Automated Court Reminder System
Cook County Courts now have a reminder system to place automated calls reminding defendants of their upcoming court dates. The system uses the bus to take data from Courts and set up a queue of calls from the County’s Interactive Voice Response (IVR) System. Calls have already begun, and text message reminders are coming in February.
GIS Day Map Contest
The Cook County Clerk's Elections Department won the 2017 GIS Day Map Contest with their map showing the “number of same-sex couples by state of residence who were issued marriage licenses in Cook County, 2011-2016.” Jessica Rinks, photographed, created the map to highlight geographic diversity.

DCIO Judges Hackfest
Cook County Deputy Chief Information Officer Tom Lynch helped judge the 2017 Chicago Hackfest held in November. The winners, pictured with the judges above, created the Illinois Student Assistance Council Chat Bot. The Council helps students and parents navigate the college readiness and application process. The team created a custom chat bot by using their FAQ.

County GIS Launches “Cook Central” Map Hub
Cook County just unveiled “Cook Central” – a mapping and geographic data hub for sharing information with the public. Cook Central is a one-stop shop for the County's Department of Geographic Information Systems (GIS).

Cook Central was unveiled at Cook County's GIS Day celebration. “When people think about maps they're usually focused on getting from point A to point B,” said Cook County Board President Toni Preckwinkle. “GIS Day is a reminder that mapping can help us get to point B in many more ways than providing driving directions.”

“For example, at Cook County we use GIS mapping applications such as Connect to Cook to provide business owners, residents and entrepreneurs with free access to critical information to help them open a business or relocate to Cook County.”

Available data include map layers such as transportation infrastructure, recreation, housing, business and manufacturing locations. Many other interactive maps are available on Cook Central. The new hub is also home to GIS open data.

Visit: cookcountyil.gov/CookCentral
ERP Joins BOT in FY2018

Effective Dec. 1, 2017, the Office of Enterprise Resource Planning (ERP) will join BOT as its newest Division. Also beginning Dec. 1, ERP Director Tom Lynch will become Deputy Chief Information Officer.

Lynch will oversee Enterprise Application Services, ERP, Geographic Information Systems and the Project Management Office. To avoid project disruption, ERP will remain focused on leading the ongoing STEP ERP project, with no change in operations or location.

This move will align all applications within a common group, which will allow for greater synergies across development platforms, application support processes and project management methodologies.

Birth and Death Data
The Cook County Department of Public Health has released a comprehensive data set of births and deaths in suburban Cook County from 2000 to 2014 through the County’s data portal. The public health information, now posted at data.cookcountyil.gov, is broken down by age, ethnicity and other factors. This data was compiled using information from the Illinois Department of Public Health Vital Statistics.

Public Defender Website
The Cook County Public Defender’s office launched a new website this quarter with the help of the Bureau of Technology. The new site — cookcountypublicdefender.org — reuses the same Drupal core as cookcountyil.gov, cookcountystatesattorney.org, cookcountyboardofreview.com and not-yet-released new site for the County Clerk.

Information Technology Asset Strategy & Report
As part of the FY2018 Budget process, BOT delivered its first-ever Information Technology Asset Strategy and Report. BOT collected technology hardware and software inventories from offices throughout the County and produced a report outlining the strategic vision for technology at Cook County.
New County Change Advisory Board (CAB)

Cook County’s technology teams have created a new Change Advisory Board (CAB) that meets every Wednesday. The goal is to prevent unintended consequences down the line as a result of making adjustments to software or hardware.

As Cook County moves along the path of modernization and integration, our technology is making us increasingly interconnected. This lets us operate more efficiently and offer better service to County residents, but it also introduces the risk that seemingly small changes can affect others in unexpected ways.

CAB has representation from the Assessor, Board of Review, Chief Judge, Clerk of the Court, County Clerk, Forest Preserves, Health and Hospitals System, Sheriff, State’s Attorney, Recorder of Deeds, Treasurer’s Office and Bureau of Technology, which is an Office under the President. Each County technology area will also be represented: applications, data center, Enterprise Solutions, Geographic Information Systems, network, security, project management and telecom.

Proper change control ensures that updates or modifications in interconnected systems are recorded, evaluated, authorized, prioritized, planned, tested, implemented, documented and reviewed in a controlled manner. To make the new policy successful, all parties must agree on a zero tolerance policy for unplanned changes.

The new standard procedure for requesting permission to make a change will take advantage of the County’s current help desk ticketing system. Requestors will describe what they want to do, why and when. At the Wednesday CAB meetings the whole group reviews and approves each change or request for modifications.

In an emergency, the group will expedite the procedure via email review. CAB will also be able to pre-authorize routine changes.

There’s No Such Thing as a Technology Project

By Simona Rollinson, CIO

To say “there is no such thing as an IT project” may sound ridiculous, but it’s all in how you look at it. For instance, a new case management system for the Department of Animal and Rabies Control is much more about the business/operations of Animal and Rabies Control than it is about technology.
This same principle extends to infrastructure projects. Broadband cables, network switches, security systems, Wi-Fi hotspots, etc. don’t exist for their own sake. Infrastructure projects are really Administrative Hearings projects, Public Health projects, Veterans Affairs projects, and so on.

Unlike new applications, infrastructure projects are seldom requested by employees from the County’s many offices. They are viewed as “IT Projects.” I challenge you to look at it from a different perspective. When a department needs a new application, the application will require a well maintained and regularly upgraded network, adequate disaster recovery measures, security measures, storage and bandwidth.

The Office of the President wants to accurately show taxpayers where their money is being used. In the FY 2018 Budget we are proposing to shift the cost of eight BOT-managed contracts out of the Bureau of Technology’s budget and into the areas of operation where they are used. These eight include widely-used contracts such as Microsoft and Adobe licensing. This number of contracts will grow in 2019 and beyond. I strongly believe that all of us who deliver Information Technology should always serve in a fiduciary capacity, continuously working towards cost transparency.
1997 Bureau of Information Technology and Automation (“BITA”) was formed in order to provide “users with integrated and automated systems and services that could assist them in performing their daily tasks more efficiently”. BITA initially consolidated Geographic Information Systems (“GIS”), Management Information System (“MIS”), and Office Automation (“OA”) functions. Shortly thereafter, Central Services (“CS”) was consolidated into BITA “due to the synergies involved regarding telecommunications and the incoming Wide Area Network (WAN).”

1998 The newly consolidated Enterprise GIS dept. issues an RFP to develop a comprehensive repository of mapping files and data.

1998 BITA begins to form the Countywide WAN.

2002 Cook County Board of Commissioners passes an ordinance creating a GIS Fund pursuant to the Illinois Counties Code. The Fund is supplied by document recording fees.

2002 Cook County Board of Commissioners formally establishes the Cook County Integrated Criminal Justice Information Systems committee, charging the committee with the creation of an integrated criminal justice strategic plan.

2008 BITA rebranded as Bureau of Technology

2008 Bureau of Technology certified by Illinois Commerce Commission to provide telecommunications interexchange carrier services (“IXC”) and local exchange carrier services (“LEC”), allowing us to put fiber-optic cable in the ground to build the County’s 10-gig broadband backbone.

2011 Cook County Board of Commissioners passes Open Government ordinance, requiring County agencies to make open data available to the public. BOT launches County Open Data Catalog to house County data in an open and freely accessible format to the public.

2013 Cook County Board of Commissioners passes resolution requiring the BOT Chief Information Officer to pursue the development of an automated, integrated criminal justice information system.

2014 Cook County Board of Commissioners passes ordinance requiring BOT to concur on all technology-related procurements.

2015 Cook County Board of Commissioners passes ordinance requiring the County Board President to appoint a Chief Information Officer with the advice and consent of Board Commissioners.
BOT 20th Anniversary (Cont.)

2016 Cook County Board of Commissioners passes ordinance requiring BOT to analyze and report on annual software and hardware asset inventory submissions from all County agencies.

2017 Big things are underway at BOT. We began work on the Countywide Voice Over Internet (VOIP) communications system. We have completed the biometric Time and Attendance system rollout for all offices across the County except the Office of the Assessor.

In 2017 we completed the first data exchange on the Countywide Integrated Justice Enterprise Service Bus (ESB) system in January. We rolled out the Integrated Tax Processing System in May, also.

It's going to be a busy year, but it's nice to take a moment to look back at where we were to really appreciate where we are now and where we're going.

Contact Us

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What is Voice over Internet Protocol (VoIP)?
We will soon be modernizing the County’s phone system with a new Unified Communications system. Voice over Internet Protocol (VoIP) is a method for using a group of tools to deliver audio or multimedia communications over Internet networks.
You may have heard of Broadband phone service, which is a type of VoIP communication. VoIP can be used for audio, video, text messages or even faxing.
The experience of making a phone call via VoIP is the same as any other type of call for the average person. The difference is behind the scenes. Instead of being transmitted over an old fashioned circuit-switched network, your voice is transformed into digital information, which is collected into “packets.” These packets pass securely alongside all the other data traversing the County network.
Cook County’s new VoIP solution will enhance collaboration opportunities, reduce costs and ensure compliance with Federal and State laws. It also provides disaster recovery capabilities. The new system will use up-to-date and technologies that enable new application development and allow for future growth. The new VoIP system will integrate with the Countywide automated voice response system that answers and directs calls. It will also integrate with the County’s 911 system.

Why is VoIP Important for Cook County?
• It allows us to consolidate our telecommunications and data infrastructure, instead of using separate lines and switches for each.
• It connects your phone, email and other reception points together in a unified system. Users can check voicemail from their email inbox.
• It allows us to manage communications systems the way we manage software.
• It streamlines the County’s telecommunications operating model so that we only provide support for a single, enterprise-wide solution.
• If an employee has to move to a new desk, instead of telecom workers re-provisioning the phone number to the new desk, the employee can just plug in the phone and immediately receive calls.
• The County’s current aging phone system is near the end of its useful life. To prevent expensive maintenance work and avoid increasingly frequent outages, the time has come to modernize.
Meet Jorge Gutierrez: Employee of the Quarter

Cook County CIO Simona Rollinson has selected Jorge Gutierrez to be the Bureau’s Employee of the Quarter to celebrate his ingenuity in problem solving and his commitment to great customer service. “Jorge is a great ambassador for the Bureau of Technology,” said Rollinson. IT Service Desk employee Jorge Gutierrez has been with the County since December 2015, “and in that time he has established himself as an outstanding employee,” said IT Service Manager Luigi Pezzarossi. Human Resources Professional Development Specialist Erica Ally recently said, “Jorge has outstanding customer service skills and has come to our rescue numerous times.” She added, “I know I’ve sung his praises before, but he is consistently positive and willing to go above and beyond.”

App Modernization Strategy: COTS & Cloud

Modernization, for us, means more than simply getting new technology. We are strategically moving away from customized solutions toward commercial off the shelf (COTS) products. New standards for content management have also helped guide us in our strategic planning. Cook County also has a cloud-first policy. In 2014 fewer than 5 percent of Cook County’s applications were in the cloud; now 25 percent of our applications are there, and that number is growing. Cook County is exceeding most all governments of our size in cloud services adoption.

New Collaborative Tech Coming to Cook County

OneDrive

OneDrive is a cloud-based file storage and sharing solution that will replace local network file shares (Your “H:" Drive). This allows you to easily access your files from anywhere, as well as securely share your files with others for collaboration. OneDrive is coming soon to Offices under the President.

Groups

An Office365 Group is a team site that has a shared email distribution list and calendar. Groups, though, are more than just mailing lists. They also come with file sharing and a place to share notes and other communications. Using Groups, you can keep files, notes and communications for everyone on the same page.

SharePoint

SharePoint will soon become your new home for information at work. SharePoint will house a new County Intranet, as well as departmental team sites for inter-departmental sharing and collaboration. SharePoint is a browser-based collaboration and document management platform from Microsoft.
What exactly is a modern application?

The job of the Bureau of Technology is to maintain and modernize applications and infrastructure. So, what does a modern application look like?

- **Design**: Application design is about more than looking slick. Minimalist websites such as [gov.uk](http://gov.uk) taught a new generation of government IT employees that building good applications is about the experience of using an application. There is an increased focus on bringing in the people who will ultimately use the app and letting them try things out to provide feedback, AKA “user-centered design.”

- **Iteration**: Another feature of modern application development is constant improvement. An often-heard criticism of government applications is that by the time they’re finished, they’re out of date. The only way around that is constant improvement: either by using a non-customized product that a vendor is committed to improving (think cloud email), or by using modular, adjustable apps.

- **Elasticity**: Modern applications most often live in the cloud or in hybrid-cloud environments. Though there are many advantages to building applications that live in the cloud, one of the main advantages is that the size of the back end — the data and processes happening behind the scenes of what you see on your computer screen — can grow or even shrink as needed.

The First Year of the BIG FOUR +1

Year 1 of the Big Four +1 is in the books. Where are we?

- **Integrated Revenue**: A centralized collection of revenue has been established for Animal and Rabies Control, the Law Library, the Medical Examiner and the Criminal Apprehension Booking System (CABS).

- **Integrated Property**: The team has completed the inventory of current processes. In FY2017 they are moving on to define the new system and determine how iasWorld will be tailored to handle the operations of Cook County. Then, in the second half of 2017, development and testing will begin.

- **Enterprise Resource Planning (ERP)**: The ERP Dept. within the Bureau of Finance is rolling out core financials Countywide in Q1 of FY17. BOT is supporting the application after roll-out as the ERP Dept. continues working toward the next wave of the project.

- **Cook County Time (CCT)**: The time and attendance project continues its Countywide roll out to the remaining agencies in Q1 of FY17. BOT provides support for the application and timeclocks post-launch.

- **Integrated Justice Enterprise Service Bus (ESB)**: The first data exchange will be completed in Q1 of FY2017, automating the transmission of charging data.
What is Blockchain and What's The Plan?

Cook County Recorder of Deeds recently announced that they are experimenting with Blockchain technology for transferring and tracking property titles and other public records. What is Blockchain and why is it important?

A Blockchain is a distributed database that maintains a continuously growing list of ordered records called blocks. Each block contains a timestamp and a link to a previous block. By design, blockchains are inherently resistant to data modification; once recorded, the data in a block cannot be altered retroactively. This increases security.

The Recorder of Deeds is working with the State of Illinois to explore practical applications of this technology for the deed recording process.

Building and Zoning Online Permitting

In order to improve customer service and efficiency for businesses and residents who reside in the unincorporated areas of Cook County, the Department of Building and Zoning, working jointly with the Department of Geographic Information Systems (GIS), has launched a new online permitting system [cookcountyil.gov/buildingzoning](http://cookcountyil.gov/buildingzoning).

“I am pleased that this new solution to permitting is being offered by Cook County as it improves an existing service, one of our governing principles,” Cook County President Toni Preckwinkle said. “In addition to being an important management tool, the online application will allow businesses and residents in the unincorporated areas to receive permits faster and more efficiently.”

The permit tracking application has automated the entire permitting process from beginning to end and adds much more than a public interface. The new application also streamlines the workflow for staff. Highlights include an intuitive user interface, online permit status tracking and 100% paperless transactions. Applicants no longer have to come downtown to do paperwork.

The Art of Vendor Management

The Bureau of Technology is bringing forward and managing more contracts than ever – 75. Getting the most value from those contracts is key for the County’s tech strategy. BOT’s Contract and Vendor Manager’s role is more important than ever in this environment.

By carefully reading the fine print and comparing each contract to industry standards, BOT has realized significant savings. Here are some examples:

- **Microsoft Licenses** – Approximately $1M in various types of software licenses.
- **Microsoft Premier** – $180K reduction over next three years and rate lock for expert-level support
- **Sentinel** – Reductions in rates for Network Control Center personnel, Cisco equipment and maintenance $75K/year

The f-shaped image to the right is the pattern the human eye follows when it needs to scan through information quickly.

Unfortunately, most people are too busy to thoroughly read all the emails they receive each day. To avoid key information being missed by folks you email, there are a couple of general rules of thumb that will seldom steer you wrong:

1. Get to the point in the first sentence: who, what, when, where and why. What action is needed?
2. Keep your sentences short. Humans, like computers, use memory to process complex input. A shorter sentence is much easier to process.
The Center for Digital Government (CDG) named Cook County one of the Top 10 Digital Counties with a population of 500,000 or more. The award was announced at the National Association of Counties (NACo) annual conference in Long Beach, CA. The CDG’s Digital Counties Survey provides an annual measure of performance and innovation by counties throughout the U.S. in using technology. In this 14th annual survey, the CDG and NACo were looking for counties which align technologies with their governmental goals; which save tax dollars through newfound efficiencies; and which boost transparency, cybersecurity and engagement, as well as innovate through unique and exciting projects. In 2015 Cook County invested more than $150 million in IT innovation, modernizing aging software and infrastructure for offices throughout the County. Its “Big Four” technology projects – Integrated Justice, Integrated Revenue, Integrated Property and Enterprise Resource Planning – helped set Cook County apart from its peers. “The Big Four projects represent an unprecedented leap forward for Cook County,” said Cook County Board President Toni Preckwinkle. “These major projects, and many others under way throughout the County, are providing residents with a much more efficient, transparent and responsive government.” In announcing the recognition, CDG said, “Pushing past the mantra of e-government, (Cook) County is focused on smart government that combines transparency, department integration and cybersecurity.”
Shared services and collaboration are at unprecedented levels in Cook County. From infrastructure to applications, IT departments from elected offices across the County are working with the BOT to increase efficiency and adopt forward-looking solutions.

**CIO Roundtable**: Each month all the County Chief Information Officers meet to discuss shared services and coordinate with each other. This type of organizational structure provides each CIO with flexibility and independence, but allows for the coordination necessary to facilitate shared infrastructure and combined purchases for negotiating power and economies of scale.

**Technology procurement**: BOT is required to concur on all technology procurements across the County. Using the concurrence process to establish Countywide technology standards improves technology investments. Newly added IT Vendor Managers also bring value in economies of scale.

**Cloud-based email**: BOT has migrated the County’s legacy email system to a modern, shared service system for all agencies. Currently all but three elected offices are on the shared system; however, one of these three will come online soon.

**Application development**: Cook County is in an important phase for collaboration and shared services in applications. Four major initiatives – Integrated Justice, Integrated Property, Integrated Revenue, and Enterprise Resource Planning are unprecedented collaborations across County offices. Three of four will launch in Q4 of 2016.

**Networking**: The Bureau of Technology maintains the Countywide Wide Area Network (WAN) and broadband backbone. In addition to maintaining the network and its equipment, in 2016 the Bureau of Technology will complete the Countywide 10-gig broadband network. In 2016 BOT equipped all courthouses with free juror Wi-Fi.

**Telecommunications**: Today, BOT provides shared phone and voice-mail services for nearly 30,000 users in all County agencies. In FY2017, BOT will begin replacing the 15-year-old telephone system with a unified communication system.

**Business continuity and disaster recovery**: BOT is consolidating satellite data centers into the new County Core Data Center (CCDC) at 118 N Clark. In 2017, BOT will roll out additional disaster recovery procedures and solutions.

**Mainframe and midrange** hosting is also consolidated Countywide. By 2020 we will finally be able to retire the vintage mainframes.
A major update to Cook County’s main website, unveiled this summer, will enable visitors to www.cookcountyil.gov to more easily connect with the County services they need, said County Board President Toni Preckwinkle. “Government websites have a reputation for not being very user friendly,” Preckwinkle said. “With our new website we put the user first.”

The old school way of designing government websites was to build an online copy of what existed in the physical world – a page for each office, agency and elected official. The new County website still has these pages, but its focus is on the services the County provides. With sections focused on residents, businesses and numerous subcategories, Cook County aims to simplify the process and connect residents as quickly and easily as possible.

The new website is based on the open-sourced Drupal platform, which is used extensively in federal and state websites. It is designed to scale for any sized screen, which means it works just as well on a smartphone as it does on a desktop computer.

Cook County used Smart Chicago’s Civic User Testing Group (CUT Group) to test different ways of organizing the site during the design phase. The results should reduce the amount of searching visitors need to do to find what they want.

The content management system that County employees use to populate the site is also designed to be user friendly, which lets the employees of each department maintain their own areas and make quick updates.

A website is never done. The Bureau of Technology (BOT) is collecting public comments and suggestions through a menu item titled “feedback.” The BOT will use the feedback to improve the current site content and gauge public interest in new features.

The next phase of the website project will include better integration of online mapping applications, video and forms. Several behind-the-scenes upgrades will also improve the way County staff input information.

Responsive Design

A recent trend fully embraced by the Bureau of Technology is responsive design. If you build a web-based computer application that scales to fit onto screens of any size, then you don’t need to build separate apps for iPhone or Google’s Android phones.

"App fatigue is a real problem," said County Director of Application Development Derrick Thomas. "People don’t want to download an app for every little thing they do," he explained.

The new www.cookcountyil.gov is only one example of responsive design that Cook County is rolling out in 2016. The new ArcGIS Online mapping system that the Department of Geographic Information Systems (GIS) is launching will work on phones and tablets as well as computers.
The Team That Makes The Bills Run On Time

Mike Ropa will be the first person to tell you that everything we do in the Bureau of Technology involves a great deal of teamwork. This summer Ropa, Director of Platform Computing, is retiring, and over his 30 plus years of service, he and his team have logged a lot of big accomplishments. Ropa is known for being the Director under whose watch the County tax bills have never once been late — and that’s just one example of the advances put in place by him and his team. Other accomplishments during the last three years of Ropa’s tenure include:

- Completing 10,600 Service requests
- Completing over 70,000 print requests, which added up to 45 million pages
- Folding/inserting 4 million documents
- Eliminating third shift and weekend work hours while handling the same volume of work
- Reducing overtime pay 21% during tax bills printing
- Reducing the Bureau’s cost of printing tax bills to 3/10ths of a penny per bill
- Reducing compensatory time 98%
- Reducing printing 16%
- Reduced paper expenditures 28%
- Reducing head count 12%
- Reducing payroll and increasing staff cross training and responsibilities

In customer satisfaction surveys, Platform Support gets the highest possible score (5) 92 percent of the time and have never received lower than a (4).

Make Maps with Your Data Using ArcGIS Online

The Department of Geographic Information Systems (GIS) is now using ESRI’s ArcGIS Online cloud mapping platform to transform how data can be presented throughout Cook County Agencies. This software allows County employees to easily create and share maps throughout the organization and with the public. This allows access to critical location information from your desktop, browser, tablet, or smartphone, anytime, anywhere.

Mapping can empower County employees to perform analysis to identify and quantify the implications, consequences, and impact of their decisions. The system also allows users to take advantage of web mapping tools that are compatible with ArcGIS to produce professional maps and graphics.

County employees will be able to learn how to create spatially intelligent web applications to share with the public or other agencies. All of this takes place in a secure system with controlled access that can be modified with specific permissions for users and groups.

GIS will provide users with tools for their ArcGIS Online account to address any departmental needs. Currently the Cook County GIS staff is in the process of collaborating and training agencies within the organization on the new platform.

Origami Risk Management Comes to Cook County

The Risk Management Department is responsible for the development and administration of programs and procedures relating to employee benefits, workers’ compensation and liability programs. The Origami Risk Management Information System (RMIS) is a web-based claims management system for the County which supports Risk Management’s workflows. Origami improves case management, allows for document storage and provides operational visibility into County claims data. Since launching in April of this year, staff has noted a reduction in processing time and paper use.

Jurors Get Free Wi-Fi

Thanks to the Bureau of Technology and the Office of the Chief Judge, jurors coming to the Circuit Court of Cook County will now have access to free Wi-Fi. People reporting for jury service can access the Wi-Fi access while they wait to find out if they will be considered to serve as jurors for a trial. Have no fear, though — jurors will not be surfing the web during the trial.
BOT WELCOMES NEW DEPUTY CIO

The BOT is excited to announce that we have a new Deputy Chief Information Officer - Arba Houlden. Houlden joins us from the Chicago Police Department (CPD), where he served as IT Project Manager for Public Safety. At CPD he developed and managed the Project Management Office for the Public Safety Information Technology Application and Development Team. Prior to CPD, Houlden served as Deputy Commissioner for Health Information Technology at the City of Chicago’s Department of Innovation and Technology. Houlden is a Six Sigma Black Belt with invaluable skills in both leadership and process improvement. He has an MBA from Capella University and a BA in Computer Science and Information Systems from DePaul University.

Houlden has extensive experience with a shared services model, which makes him an excellent fit for Cook County. He also has extensive experience driving adoption of cloud-based technologies for both business continuity and operational efficiency. At the City Houlden managed the architecture that enabled backoffice modernization for Enterprise Resource Planning (ERP). He also managed the Health Alert Network, which provides the Chicago Department of Health with the capacity for quick, efficient, reliable and secure web-based communication with staff, healthcare providers, laboratories, first responders and other agencies. Prior to government work, Houlden served as the Executive Director of the American Brotherhood of Contractors. He also worked for several years at Sun Microsystems, where he developed business plans and conducted financial analysis as a Senior Program Manager.

2016 APPS STRATEGY

In 2016 the rubber is hitting the road. 2015 was a year of large technology procurements. Cook County awarded more than $154 million in IT contracts in FY2015. FY2016 will also have some major new contracts, but overall this is a year for implementation and modernization. The hard work of bringing these major projects to fruition and making the leap towards modernization is upon us.

Application modernization is a key priority for Cook County. App modernization begins with the oldest technologies residing on legacy platforms which are expensive to maintain. Through new applications, we will transition away from predominantly manual and paper-centric business processes and into the digital realm.

Modern frameworks increase operational transparency, regulatory compliance and provide greater flexibility for users. They can trigger a shift from handling work as discrete transactions to handling work more holistically to optimize outcomes within a dynamic environment.

Cook County’s Big Four initiatives (Continued on page 2)
A Day in the Life

Tom Quinn is a Telecom Electrician General Foreman who has been with the County for just a few months short of 30 years. Telecommunications is a branch of BOT that sometimes gets overlooked, but taking a look at their hard work behind the scenes illustrates how much planning and expertise it takes to keep even mission-critical parts of our IT infrastructure working smoothly.

Quinn’s day begins at 7:00 a.m. at the Cook County building at 23rd and Rockwell. The first thing he does is make sure all the foremen have their work orders. Once the game plan for the day is laid out, they head off to their work sites. Then, Quinn starts putting together all the materials for the upcoming shifts: wire, jacks, phones, patch cords and lots of other things.

After 9:00 a.m. the meetings start. Recently Quinn was heavily involved in preparing for a power shutdown at the jail. This critical operation affected dozens of buildings, and it went off without a hitch, but required extensive planning and coordination. After morning meetings, Quinn goes out to inspect the progress at major jobs. After checking on jobs, he comes downtown to meet with his techs. He then stops by the Network Control Center (NCC) to pick up switches and access points needing installation.

After that, Quinn takes materials and paperwork back to 23rd and Rockwell, and he stages the equipment for the next morning. Then deliveries come in: more wire, jacks, phones, timeclocks and other tools of the trade. Quinn checks all items in and puts them away. When 3:30 comes, it’s time to go home.
The days of paper paystubs and sign-in sheets to track employee attendance are about to end. With the rollout of the Employee Self-Service (ESS) portal, Cook County will no longer print and distribute paper paystubs to its 23,000 employees. The environmental impact of modernization here will be huge, not to mention the convenience of being able to log in from anywhere and have that information at your fingertips.

ESS is a web-based system that offers a single, secure source for the County employees to view their personnel and payroll information from any computer with an internet connection and browser. As of Dec. 1, 2015, County employees will get their information from the new system, except the Forest Preserves. The BOT projects savings of over $20,000 per year.

ESS gives employees the power to view and print paystubs electronically. It also lets employees provide or alter their direct deposit instructions. It allows employees to view and print W-2 tax forms, benefits information and leave balances.

Cook County is also installing biometric time clocks, which are expected to cut payroll-related costs by minimizing payroll errors that occur with the time-worn manual process, and eradicating abuse by introducing better controls. Clocking in with a paper timecard or filling out a daily timesheet will ultimately be eliminated under the time and attendance project. A proximity card along with a biometric authentication will be used by employees each day to “sign” in and out.

**BOT Strategy**

The addition of timeclocks fits in to the larger BOT strategy of reducing paper-based processes and finding economies of scale. Platform Services had 19,991 print requests and printed 15,301,760 pages in FY2015. Through reforms and innovation we expect to print approximately 13,400,000 pages in FY2016, which is a 20.1 percent decrease from 16,776,631 in FY2014. Saving 3,376,631 sheets of paper will add up to 675 boxes, which weighs an astonishing 13,500 pounds or 6.75 tons. Being able to automate and integrate time tracking for the County’s approximately 23,000 employees across more than 100 locations will improve efficiency, streamline operations and increase accountability and transparency. Thanks to this and other efforts, Cook County is projecting $14,600,000 in overtime reduction across all funds in the upcoming budget year.

Happy New Year!
Open Government Through Open Data

The Bureau of Technology oversees the County’s open data catalog — data.cookcountyil.gov — that was established under the 2012 Cook County Open Government ordinance. The open data catalog provides the public with a wealth of information in the form of data sets from various systems and sources throughout the County.

While the original ordinance included the establishment of the open data catalog, it also stated that other key areas of open government be adopted by County agencies. These include:

- Creation of a data inventory of all data sources (open or internal);
- Creation of an open data catalog that allows the public to easily access data and for agencies to add to this catalog with data sets found in their data inventory;
- Creation of an Open Government Plan by each agency that would describe how the agency will enhance and develop transparency, public participation, and collaboration.

Open Government Compliance Plan

In an effort to help agencies better understand the original Open Government Ordinance requirements, BOT has developed a compliance plan that is intended to not only inform agencies of those requirements, but also guide them through the process of achieving compliance. The plan will also create an opportunity to identify outdated data sets and assist in making them current. We are also working on putting in place automation processes to help keep data current easier and less manual. The plan is starting pilot testing with select departments in early Q1 and will be moving to all Offices Under the President by early Q2, with additional outreach to Elected Official offices. We are also working with the Performance Management Office to track compliance by all agencies. If you have any questions about Open Data in Cook County, please feel free to email: Open.Data@cookcountyil.gov

Fun Facts

- Did you know that there’s one area of unincorporated Cook County that’s surrounded on all sides by the City of Chicago? Mount Greenwood Cemetery!
- Did you know that 21 percent of Cook County residents were born outside the U.S.?
- The homeownership rate for Cook County is 58 percent, and 73 percent of Cook County residents drive to work.

For a treasure-trove of interesting facts see the GIS Maps and Data page at cookcountyil.gov/maps-and-data. GIS recently celebrated International GIS Day. An e-book with all the maps from the competition will be available shortly.

GIS Puts Reentry Services on the Map

Cook County Geographic Information Systems (GIS), in partnership with the Sheriff’s Office Department of Corrections, created an application that allows former detainees released from the custody of the Sheriff to find helpful services in their communities on an interactive map. The Reentry Assistance Network map application provides locations of service providers and makes them searchable. The application can also create a list of service providers based on a buffered distance from any address, which can then be printed out or saved for reference. The app can also provide directions to the service providers. The map will work on computers, tablets and mobile devices, allowing former detainees to access this information from any location. To view the map, type cookcountyil.gov/sheriffreentryassistance into your browser and explore.

GIS Puts Reentry Services on the Map

Photo Credit: David B. Gleason on Flickr https://www.flickr.com/photos/mindfrieze

Open Government Through Open Data

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When it comes to where its data and applications live, Cook County is lifting off to the clouds. One of the biggest tech buzzwords of 2015 is “cloud,” but what does that mean?

Moving something to the cloud just means that it lives in someone else’s data center. Since its home is elsewhere, it commutes to work via broadband internet.

In the past, everything—data and applications—lived on servers on premises in County buildings. Then, large corporations with bigger, better and faster data centers began to rent some of their space.

Big names such as Microsoft have also begun to offer web-based applications and online file storage, which provides access to users where ever they might be by moving everything to the cloud.

Why choose to move to the cloud? Cloud solutions can offer the ability to deploy and scale on-demand applications, 24-hour monitoring of the environment and faster, seamless upgrades without downtime.

When evaluating whether to move something to the cloud we have to look at the total cost of ownership and weigh that against benefits. BOT is designing a comprehensive strategy that will provide significant improvements in how we support our data needs.

For the foreseeable future, some things will continue to live in-house. Some applications and data from the public safety and justice agencies of Cook County are legislatively mandated to remain in-house. Also, the funds and resources needed for re-engineering certain systems for new cloud-based architecture will mean that cloud technologies will have to be phased in over the coming years.

We recognize that the cloud is a means and not an end. It is a means for expanding modernization, collaboration, shared services and innovation. We look to the cloud as we zoom skyward to the future.
Provident Gets 10 Gig Broadband

The BOT is excited to announce that Provident Hospital is now connected to Cook County’s 10-gigabit fiber broadband network. The fiber optic cable connection will allow the transfer of digital communications—including internet, phone and video—at much faster rates than currently available at Provident.

The high-speed, secure connection will increase speed by which doctors and specialists can access medical records, test results and radiology reports. It also allows remote viewing of radiology records by the medical staff.

The Cook County broadband network is the result of an intergovernmental agreement with the Chicago Transit Authority (CTA). The agreement allows Cook County to extend the fiber optic lines that follow CTA tracks to County network core sites. From the core sites, the network then extends to dozens of County facilities throughout the region.

“Connecting Provident Hospital to the County fiber network is an important step in building a strong broadband infrastructure for the 21st century,” President Preckwinkle said. “The Cook County-CTA collaboration is a committed partnership and will provide a positive impact for residents.”

Cook County Commissioner Jerry Butler (D-3rd), whose district includes Provident Hospital, said, “I am proud to see that we continue to invest in technological advancements to support high quality, advanced medical care.”

The new fiber optic cable will help in network and data center administration, including electronic medical records, health information exchange and tele-medicine.

Mary Jo Horace Receives GIS Achievement Award

Cook County Deputy Chief Information Officer, Mary Jo Horace, was awarded the Dahlberg Distinguished Achievement Award by the Illinois Geographic Information Systems Association (ILGISA) at their Annual Conference in Springfield this September.

The Dahlberg Distinguished Achievement Award is presented to an individual who has made a significant contribution to the development and advancement of geographic information systems. Only one such award is made each year.

Mary Jo has been the champion of collaborative GIS in Cook County since the 1980’s. In 1996, Mary Jo was a leader in the procurement of funding to build the county-wide GIS system. Mary Jo put together a countywide GIS steering committee to collaboratively decide future county GIS projects and to promote the use of GIS in improving government transparency and efficiency.

Recent achievements include the mobile enabled Tax Increment Finance Viewer, Unincorporated Land Viewer and Tax Delinquent Parcel Viewer developed for Local municipalities.

Also, Cook County GIS Manager Amber Knapp was nominated and elected to the ILGISA Board of Directors at the meeting.

Nov. 17 is County GIS Day

Cook County is celebrating GIS Day on Tuesday, Nov. 17. Join us from 9:30 a.m. to 12:00 p.m. in the 69 W. Washington Lower Level Conference Room. BOT will have presentations, contests and opportunities to learn more about GIS.

Office365 Rollout

BOT’s rollout of Office365 is nearing completion, with over 13,000 users now migrated to the new cloud-based system.

Wi-Fi Upgrade

This month BOT is kicking off wireless surveys of all County buildings as a first step in a countywide Wi-Fi upgrade.
The Bureau of Technology is approaching a momentous phase in the County’s efforts toward modernization, innovation and increased collaboration. We call these “the Big Four” because four new digital universes are being created, each with a huge scope and numerous benefits of integration.

This summer we will be coming before the Board for approval of four integration initiatives of unprecedented proportions in Cook County. The benefits of these initiatives are as monumental as their scope.

These four major initiatives – Integrated Justice, Integrated Property, Integrated Revenue, and Enterprise Resource Planning software for the whole County, including Cook County Health and Hospitals and the Forest Preserves – have been planned for a long time, but this summer we are bringing them forward.

Once these unified systems come online, we can exponentially increase the value of County services for its citizens. These integrated systems will also dramatically increase the efficiency with which we operate. Programs like these will pave the way for new technologies which can be built on these firmer foundations. Not only do the Big Four deliver mission-critical modernization, they promise to revolutionize how Cook County does business.
processing land services as they travel between each agency.

Integrated Revenue
The Integrated Revenue project brings together diverse tax types within a centralized and modern administration system. The system will streamline and automate many processes, improving efficiency and accuracy.

Integrated Justice
The Enterprise Service Bus is an overarching system that facilitates communication among diverse software applications at different agencies. Integrating these systems improves communication processes between the justice and public safety agencies, as well as ensuring quality, accuracy, accessibility and timeliness of criminal history information.

Enterprise Resource Planning
The Enterprise Resource Planning (ERP) System will operate County-wide to manage business processes. The system allows the County to collect, store, manage and interpret data across all aspects of County operations, allowing the County to manage all its resources efficiently and cost effectively. The functional scope for this project includes Financials, Supply Chain Management, Human Resources and Payroll and Reporting Analytics. The project includes both configuration and implementation of the software as well as the technical support through ongoing managed services.

A major building block for the ERP system, which is a County-wide digital universe in its own right, is a new phase of pilot group testing this summer — Time and Attendance.

This solution will streamline how time and attendance reporting works across Cook County government. The solution will significantly reduce manual time-keeping processes ensuring improved payroll processes, labor allocation, cost control and data reliability.

The system will accurately track and report time for the County’s roughly 24,000 part- and full-time employees across approximately 100 different locations. Having this data flowing at full speed across the County network will be a key element for the County’s ongoing mission critical modernization projects. It’s an exciting time for Cook County tech.

County-Wide Interactive Voice Response System
BOT is excited to announce that the new Interactive Voice Response (IVR) system to answer phones County-wide is live.

The new system replaces several older automated systems and consolidates multiple County agencies onto a single platform. The system also provides new IVR service to several offices, including the Clerk of the Circuit Court and the Social Service Department under the Office of the Chief Judge.

“This is a way for Cook County to ensure that even those without access to the internet are able to take advantage of automated 24/7 services,” President Preckwinkle said. “This system will also increase productivity as County employees will no longer need to redirect phone calls to other departments. Callers will be connected to the proper person automatically, which will free up employee resources for other tasks.”

The IVR system is expected to handle around seven million calls per year.

The new system has the capacity to speak several languages. It can also be programmed for new functions and will be able to integrate with future technology.

Another advantage of the new IVR system is that it operates on modern server technology which is faster, more agile and increases overall system reliability. In the event of an outage, a backup system at an off-site Cook County Data Center will instantly take over, and callers will not experience any gap in services.

BOT has migrated more than 10,000 County employees to Office365, and that number continues to increase. Office365 is bringing County employees state-of-the-art cloud-based email, which is safer and more stable, and also comes with improved functionality and reduces County infrastructure costs.

One of the most popular features of the Office365 migration is that it comes with Home Office Suite licenses for every participating County employee to download free copies of Word, Excel, PowerPoint and more for home use. Employees get a total of 15 licenses – 5 desktop, 5 laptop and 5 mobile/tablet – and will usually only need to use two to three for their work computers. The remaining licenses are theirs to use on their own devices. When an employee leaves the County their network account is deactivated, and the free copies immediately revert back to the County. Employees are responsible for the support and backup of information on their personal devices.

This is a way for Cook County to ensure that even those without access to the internet are able to take advantage of automated 24/7 services.

Coming Soon…
Legislative Corner
BOT is preparing an overview for Commissioners of technology issues and regulations that affect government tech information.