Solutions for state and local government.

INSIDE:

Just the Stats
Key takeaways from digital leaders
CIO Moves
Who’s in and who’s out?

YEAR IN REVIEW

PLUS:
Government buys in to the sharing economy
Cloudville, USA

The City of Asheville enhanced its disaster recovery through automated AWS cloud-based fail over. Asheville worked with AWS to extend application protection, enable pay-as-you-go flexibility, and increase geographic diversity – all while reducing costs. The result? Easy, award-winning disaster recovery.

Prepare For The Worst. Ensure The Best.
Amazon Your City.

Tour the other cities on a cloud
http://aws.amazon.com/stateandlocal
December 2015

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Looking Back and Ahead

Welcome to our 11th annual Year in Review issue, where we look back at the events of the past 12 months and attempt to put some context around them. For reasons I’ll get to a little later, I found myself looking back at our first year-end feature from 2004, and I was struck by how some of the challenges highlighted there are still with us today — with a few modern twists.

Connecting communities to the Internet was a big deal then, and it remains a key concern today, although the conversation is less about basic access and more about the availability and affordability of high-speed service. Only a quarter of Americans had broadband access at home in 2004. Today more than 80 percent of them do. That’s progress, but stubborn broadband gaps remain.

The FCC’s 2015 Broadband Progress Report shows that about half of the residents in rural America still can’t get the advanced broadband service that metropolitan areas take for granted. Things aren’t much better for some city-dwellers either. At a recent Government Technology Digital Summit, Los Angeles CIO Ted Ross said that almost a third of city residents can’t get or can’t afford high-speed Internet access.

Given the Internet’s importance to our daily lives, universal access to fast and affordable Web connections will continue to be a serious issue for political leaders and the technology community in the foreseeable future.

Outsourcing was another big concern for states and localities in 2004. Budgets were just starting to bounce back from the dot-com bust, and technology leaders were wrestling with the question of which tasks to keep in-house and which to hand off to a third party. Today, this conversation has been recast around the cloud. Although there are important differences between the two, both the cloud and traditional outsourcing raise the challenge of retaining responsibility for data and processes that may no longer reside in your own facilities.

Growing adoption of hosted services also adds a new dimension to another topic we were talking about in 2004: the role of the CIO. Eleven years ago we noted the emergence of policy-savvy CIOs who were spending more time in the boardroom and less time on back-office IT. Today it’s a given that the job is equal parts policy and technology, but the cloud is prompting people to ask if the CIO ultimately becomes a chief service broker.

And now, back to what prompted this little jaunt down memory lane. After 14 years as editor of Government Technology, I’m stepping aside to take a new job at e.Republic. I’ll certainly be reading it.
A T&T security experts analyze more than 310 billion flow records each day for anomalies that indicate malicious activity. It’s what makes us uniquely qualified to help state and local government agencies address the security challenges they face. Our proactive network-based approach to managed security delivers some of today’s most powerful weapons to combat cyber security attacks – helping to safeguard all the elements of your IP infrastructure. To learn more, download the CIO Security Guide at att.com/govsecurity
Full-Speed Ahead on Public Records

With the release of nine reports, the California Department of Motor Vehicles created what’s likely the first public data set on driverless car crashes in the US. Released in early October, the reports include details such as vehicle speeds, location and the circumstances of each crash. Eight of the nine incidents belonged to Google, which operates the largest fleet of experimental driverless cars in the state, while the ninth belonged to Delphi Automotive. As Google noted in its monthly reports before the data dump, none of the crashes were the fault of the self-driving company. The director of the Google AV program has said publicly that the company is working on making the cars drive more like humans.

Untapping Tech’s Potential

State government IT offices could save $11 billion collectively in the next five years, according to a report issued by the Information Technology and Innovation Foundation (ITIF). But they have to commit. The report, Driving the Next Wave of IT-Enabled State Government Productivity, concludes that now is the time for CIOs to take more seriously the idea that they can achieve the same level of IT-enabled efficiency enjoyed by the private sector.

ITIF President Robert Atkinson said CIOs need to present a better and much broader business case for new technology. In addition, leaders need to acknowledge that automation could lead to staff reductions. “At one level, it’s state CIOs bringing the bullet and saying, ‘We’re going to use technology and it’s going to eliminate head count,’” Atkinson said. “They don’t want to do that. It’s sensitive. But you have to confront that issue.”

While cloud storage looks expensive now, the reality is that it’s going to get a lot cheaper as storage hardware prices continue their downward spiral. The cloud vendors are already offering fixed-price all-you-can-eat deals – ultimately storage will be almost free. The real challenge with all the body-worn video that police departments will be shipping up to the cloud is how to manage it and integrate it with other workflows. As your article suggests, what is needed is some kind of integrated digital evidence repository with efficient workflows and a lot of machine intelligence to help make sense of these unprecedented volumes of complex digital evidence.

Jeff Gould in response to Body Worn Camera Data Storage: The Goal in the Room

In a low-growth to no-growth economy, the traditional IT model in cities, counties and states will not be financially sustainable. Ohio is smart to consolidate its IT infrastructure in a ‘cloud’ data center and encourage counties and cities in the state to colocate there.

Cloudnavigator in response to Data Center Sharing Grows in Ohio

It’s interesting as a secondary form of ID, but I still believe plastic cards are more survivable and likely to remain with victims following crashes or other disasters. I’m also concerned that any database put online is vulnerable to hacking and/or misuse. As a citizen, I’d want to make sure the app does not allow the government to track my location anytime. I display my information so there is a record whenever my ID is being flashed. I support using push technology to enable things like digital renewals of licenses and vehicle registration, location-aware DOD traffic alerts, and announcements of new laws or traffic regulations.

ChrisNovy in response to Iowa Digital Driver’s License Pilot Begins
VARIDESK® sits on top of your existing desk and lets you switch easily between sitting and standing whenever you like – and it only takes 3 seconds! It ships fully assembled and sets up in minutes with no tools required. Models start at just $175. Order online or call 800-979-9713.
Innovation’s Next Phase
Why government managers need to know about machine learning.

In last December’s issue, I predicted that cloud computing, social engagement, government-as-a-platform and the Internet of Things would be drivers of institutional improvement and operational gains in 2015. Government Technology headlines from this year attest to significant advances made by many cities nationwide on these four fronts. The next phase of government innovation will lie at the intersection of these recent advances: To drive technological aptitude forward, municipal governments need to dial down the lag between data collection, analytical output and well-informed action.

To this end, I expect that over the next 24 months there will be substantial advances in the importance of machine learning tools that will become clearer for some of the most forward-thinking city governments across the country.

Since machine learning is a computing technique that adapts itself to changing conditions, its most common application will be to make predictions. As machine learning programs are fed more data, they learn more, and so their predictive models become more precise and produce more accurate results. The concept is not new. Machine learning algorithms, for instance, underlie Google search and Siri voice recognition. But recent improvements in cities’ data aptitude — pioneered partly by a growing cadre of dedicated municipal chief data officers and chief technology officers — have unleashed a previously unimaginable capacity for advanced data analytics. As a result, machine learning is positioned to become a powerful management tool for municipal government.

Consider the current accountability crisis facing police departments across the country. Several high-profile incidents of police violence have eroded America’s trust in law enforcement, but imagine if supervisors could identify officers prone to overly aggressive conduct before a violent incident ever occurs and then use that information for recruiting, training and management purposes. An oversight system using machine learning techniques would make this possible.

The widespread implementation of body-worn cameras in police departments across the nation is producing immense archives of policing footage. While it would be impossible for employees to pore through these files, machine learning could analyze videos in aggregate, learning to detect subtle visual patterns that precipitate aggressive behavior. Combined with data from police reports, some of which inevitably belie implicit prejudices, the system could flag potentially aggressive officers and notify their supervisors. Such a program would automate the first step of better oversight by enabling more preemptive, surgical intervention by those in managerial roles.

Policing, of course, is not the only area of government that can benefit from machine learning. Gartner recently named advanced machine learning as one of the best strategic IT investments an organization can make. Researchers at MIT are currently investigating machine learning techniques that may reduce recidivism by giving parole officers a better statistical profile of repeat offenders. And IBM researchers are using machine learning to develop a system to predict pollution levels in Beijing 72 hours in advance.

Machine learning has its risks. A prediction is only as good as the data it’s modeled on — and if the information is rife with errors or biases, machine learning risks amplifying those errors into misguided future action. But if it’s implemented by intelligent data scientists who understand the social issues at stake, and used by smart managers who understand how the mechanics work, the value that these programs may unlock is immense.
Thinking about implementing a body-worn camera program?

Join the one-third of public safety agencies nationwide that are actively planning or have already implemented an initiative. Many are already starting to see positive results:

- In a year-long experiment, the Rialto, Calif. Police Department saw a 60 percent drop in use-of-force incidents, and complaints about officer conduct declined by nearly 90 percent.
- In Phoenix, information from officers suggested a number of citizen complaints were not pursued because the incident was recorded on video.

Before you begin, your agency needs to carefully consider the policy, technology infrastructure and operational decisions necessary for an effective program. A new Emergency Management and Government Technology handbook, underwritten by Insight Public Sector, focuses on the interplay of body camera policies with technology and operational strategies to help agencies future-proof their body-worn camera initiatives.

Read the handbook to:
- Discover key planning questions agencies should consider
- Learn insights from agencies initiating their own programs
- Find checklists and resources to help further an agency’s exploration in each planning area

Download the handbook now at: www.emergencymgmt.com/body-camera-handbook
How are you using the cloud today and how do you expect that to evolve? Currently, cloud consumption comes from software-as-a-service platforms since a lot of major vendors are starting to adopt that model. The other areas where we can step back and make some smart approaches are around cloud storage. We’re looking at trying to offload some more expensive workloads, pushing those into cheaper storage in the cloud.

Indiana has gotten a lot of attention for the work of the Management and Performance Hub. What’s next for data analytics in the state? Indiana has gotten a lot of attention for the work of the Management and Performance Hub. What’s next for data analytics in the state? We’re going to battle recidivism now and take a look at how we can improve that and manage future populations for our correctional facilities. Other agencies are also starting to get creative and think about what they can do. As the demand rises, we’re going to look at making [data analytics] more of a service offering, similar to how we do some of the other services that we provide for agencies.

What would you recommend to other states looking to get into data analytics? One of the key things is making sure agencies are comfortable with what you want to do with their data. We needed to create an extremely secure environment where we can run the analysis and store the data while we are tinkering and running algorithms over it, so we created a secure area that requires additional checks and balances. Access is strictly controlled and even the individuals who are working with the data are forced to go through additional background verification. Giving them that feeling of comfort has helped a lot with getting over that curve.

As the new CIO, what are your priorities going forward? A couple of my initial priorities are communication and agency partnerships. I’m fortunate that I know most of the agencies that we support intimately from being there a while, so the plan is to re-engage and provide more relationship management, provide liaisons, and do more specific and pointed communication directly for the agencies, so they feel like they’re involved and not just getting bulletins that are meant for the masses. I think that’s going to go a long way to push other priorities like increasing security and doing more strategic cloud moves.

— Steve Towns, Deputy Chief Content Officer
Congratulations to CDE’S 2015 Top 30 Technologists, Transformers & Trailblazers

Each year, the Center for Digital Education recognizes education leaders who are transforming education through the use of technology. The 2015 award winners represent thought leaders and innovators in K-12, higher education and the nonprofit community. By acknowledging the Top 30 Technologists, Transformers and Trailblazers across America, CDE aims to honor pioneers in education technology and showcase the accomplishments and best practices of each award winner. Download a complimentary copy of the digital publication to learn about the 2015 award winners and their recent technology initiatives.

LEARN ABOUT THE 2015 AWARD WINNERS!
www.centerdigitaled.com/paper
The Center for Digital Government, owned by Government Technology’s parent company, e.Republic, conducts awards programs throughout the year that honor state and local governments that are digital leaders. Here are a few key findings from the 2015 Best of the Web competition, as well as this year’s Digital Cities and Digital Counties surveys.

### 2015’S BEST SITES

<table>
<thead>
<tr>
<th>Place</th>
<th>Location</th>
<th>Website</th>
<th>Monthly Unique Visitors</th>
<th>Annual Transactions</th>
<th>Description</th>
</tr>
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<td>1st</td>
<td>ARKANSAS</td>
<td>Arkansas.gov</td>
<td>98K</td>
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<td>in e-gov transactions were completed in 2014, up 13 percent from 2013.</td>
</tr>
<tr>
<td>1st</td>
<td>SACRAMENTO COUNTY, CA</td>
<td>saccounty.net</td>
<td>41K</td>
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<td>parcels’ property taxes were paid online in 2014.</td>
</tr>
<tr>
<td>1st</td>
<td>INDEPENDENCE, MO</td>
<td>independencemo.org</td>
<td>85K</td>
<td>$38 MILLION</td>
<td>in online transactions are completed annually.</td>
</tr>
<tr>
<td>2nd</td>
<td>UTAH</td>
<td>Utah.gov</td>
<td>226K</td>
<td>80+</td>
<td>vehicle licenses were renewed online in 2014, avoiding the need for eight new DMV offices.</td>
</tr>
<tr>
<td>2nd</td>
<td>BALTIMORE COUNTY, MD</td>
<td>baltimorecountymd.gov</td>
<td>229K</td>
<td>50%</td>
<td>sites are included on the county’s interactive Walking Trails app.</td>
</tr>
<tr>
<td>2nd</td>
<td>LOUISVILLE, KY</td>
<td>louisvilleky.gov</td>
<td>1.5 MILLION</td>
<td></td>
<td>of traffic to the site is from mobile devices.</td>
</tr>
</tbody>
</table>

### HOT WEB TRENDS FOR 2015

- **OPEN SOURCE**
  Many successful city and county sites leverage open source platforms, which they credit with helping them develop and maintain innovative features in a cost-effective way.

- **PARALLAX SCROLLING**
  Some winning portals use this Web design technique, in which background images move more slowly than foreground images, creating the illusion of depth.

- **SINGLE SIGN-ON**
  More public-sector sites are adding single sign-on identity management capabilities, which let citizens access multiple secure applications with one login and password.
### The Best Government Websites Are ...

**Responsive**

**Searchable**

**Simple**

**Secure**

**Mobile-First**

---

#### Did You Know?

44% of counties and 32% of cities have a chief information security officer.

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#### Around the Corner for Cities and Counties?

**Edge Computing**

- **Using Now:** 16%
- **Plan to Use:** 8%
- **Thinking About It:** 23%

**Software-Defined Networks**

- **Using Now:** 18%
- **Plan to Use:** 6%
- **Thinking About It:** 36%

**Data Analytics**

- **Using Now:** 32%
- **Plan to Use:** 31%
- **Thinking About It:** 26%

---

#### Did You Know?

61% of city IT leaders and 54% of counties are planning with the Internet of Everything in mind.

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#### CIO Priorities

**County**

2015

1. Cybersecurity
2. IT Staffing
3. Mobility
4. Open Government/Data/Transparency
5. Disaster Recovery/Continuity of Operations

2014

1. Open Government/Data Transparency
2. Mobility
3. Cybersecurity
4. Portal/E-Government; IT Staffing
5. Disaster Recovery/Continuity of Operations

**City**

2015

1. Cybersecurity
2. Open Government/Data Transparency
3. Mobility
4. IT Staffing
5. Portal/E-Government

2014

1. Open Government/Data Transparency
2. Mobility
3. Cybersecurity
4. Portal/E-Government; IT Staffing
5. Disaster Recovery/Continuity of Operations

---

#### Did You Know?

36% of cities have a blanket policy restricting access to social media sites during work hours.

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#### Did You Know?

61% of cities and 54% of counties are planning with the Internet of Everything in mind.
GOVERNMENT IS GETTING SMARTER. That’s one undeniable conclusion from a look back at the big news coming out of public-sector IT in 2015. As government assets go, leaders now realize the tremendous value of the multitude of information they hold: Indiana analyzed 5 billion rows of data to tackle its high infant mortality rate, while Chicago is using a number of data sets to prioritize restaurant inspections in the city. And others are still getting their feet wet in the analytics game. Detroit’s first open data portal launched this year, featuring more than 250 data sets. Cloud technology continues to transform, with adoption rates ramping up across all levels of government, especially as agencies grow more confident in cloud security. Criminal Justice Information Services certifications for Microsoft in a growing number of states signal a sea change even for public safety agencies, traditionally the most reluctant to make the switch. But as police body camera programs take off in more and more jurisdictions, storage needs increase exponentially and the cloud is fast becoming an important part of the storage solution. 2015 saw more movement toward smart cities. High-profile support came in September with $160 million from the White House aimed at boosting R&D and smart city/Internet of Things projects. Carnegie Mellon University, for one, is equipping its campus with sensors, with Google’s help, and plans to eventually saturate Pittsburgh with the technology. San Francisco’s IoT network will be the largest in the U.S., and its partner plans to build nine more across the country. The road to a more digital future is not without its bumps, proven by high-profile data breaches like the U.S. Office of Personnel Management hack in July, which exposed 25 million Social Security numbers, taking a key system offline for a month. And August’s breach of the Ashley Madison site showed that public-sector employees could benefit from some training in cyber best practices, with several thousand exposed user names containing government domains. A bery of surveys this year show that implementing strong cyberdefenses remains a top priority for government CIOs. The future is most definitely a connected one. Both Facebook and Twitter made this official this year by offering verified status for government agencies, so citizens won’t be as easily duped by imposters, well-meaning or otherwise. And some officials, like Peoria, Ill., Mayor Jim Ardis are demonstrating that government has not yet mastered social media, although many now use the tools as effective extensions of their communications programs. The coming year promises more progress on these technologies and others that just a few years ago were considered disruptive, and are now working their way into the mainstream. Here’s a look at our most popular news stories of 2015.
The launch of Google’s Government Innovation Lab grabbed attention in 2015 for its lofty goals and free talent for civic innovation. Led by James Waterman, Google’s regional manager for state and local government, the lab produced a series of tech — and not tech — projects directed at rethinking government services. California’s Kern, Alameda and San Joaquin counties were the first to participate, and the long-term idea is to develop a Google curriculum for all flavors of government.

Chicago CIO Brenna Berman launches a predictive analytics program to decipher which of the city’s 15,000-plus restaurants was due for a health inspection. The pilot program prioritized food vendors using factors like previous poor inspection scores or recent sanitation complaints. The program is intended to be scaled throughout Chicago and replace a system that only evaluated restaurants annually.

A closely watched data analytics study in Indiana leveraged information from a broad swath of agencies to reveal that an absence of recommended prenatal checkups significantly affected the state’s youngest mothers on Medicaid and had major impacts on infant mortality. These younger moms represent 1.6 percent of all births; however, they account for almost 50 percent of infant deaths. Officials at the State Department of Health are using the findings to promote health-care enrollment and schedule needed prenatal visits.

The January preview of Microsoft’s Windows 10 marks both the end and a new start for the company. The launch of the operating system, which officially hit the streets in July, is the final installment of the Windows code name project, which started in 2009. Windows 10 runs across a range of Microsoft devices including home PCs, smartphones, tablets, and virtual machines in the cloud. The January preview of Windows 10, 10, also Apple’s OS X and others, will convert to a constantly updating service. Microsoft markets others, will convert to a constantly updating service. Microsoft markets

To broaden access to services and cut city incarceration costs, New York City Mayor Bill de Blasio started issuing city identification cards through a new program called IDNYC. The $8.4 million undertaking attempts to legitimize undocumented residents who don’t meet typical requirements for identification. Proponents hail IDNYC as a move against inequity, while opponents see it as wasted spending. The IDs can be used to access some city services, and police can use them to avoid arrests of undocumented residents who can now be issued summonses for low-level offenses.

Putting priority on the cloud, Texas partners with Amazon Web Services (AWS) so agencies don’t have to jump procurement hurdles to implement cloud services. In the deal, the Texas Department of Information Resources and Amazon saved agencies arduous tasks like vetting security, privacy, disaster recovery and customer support terms. The partnership represents the first statewide contract for AWS.
The U.S. Department of Justice declares Microsoft’s cloud platform, Azure, compliant with the FBI’s Criminal Justice Information Services (CJIS) standards in California. Security remains a chief concern for agencies entering the cloud, and CJIS compliance puts Microsoft a smidge ahead of cloud competitors, like Google, that don’t have it. At press time, the list of states where Microsoft has CJIS compliance numbered 17.

Social network Nextdoor raises $110 million and earns a valuation north of $1 billion. That’s more than Twitter raised in its series-D funding. Executives estimated the vote of confidence was thanks to the company’s rapid growth, with 5 million messages exchanged daily across 53,000 neighborhoods and 760 government jurisdictions. A government dashboard gains new functionality as sanitation departments, animal control, law enforcement, emergency response and even entire cities, like Philadelphia, seek value in closer community ties.

Like an online retailer version of Babe Ruth, Amazon CEO Jeff Bezos points to the skies as the FAA grants permission for drone testing. Amazon Prime Air promises to someday deliver packages to customers in less than 30 minutes, expediting a same-day delivery service already available in 14 metropolitan regions. A trudging and circuitous regulatory environment, however, leaves transporters of pizza and parcel alike feeling more earthbound than ever.

Consumer advocacy group U.S. PIRG released its sixth annual report ranking states on their financial transparency efforts. While 14 states earned A grades, Ohio led the pack with an A+ on the strength of a new financial portal launched by Treasurer Josh Mandel. At the other end of the pack was California, whose F grade was blamed in part on its data being housed in multiple locations.

With police shootings sparking national controversy, Oakland, Calif., hatched a plan to house terabytes of video data from police body cameras on Microsoft’s Azure Government cloud. Once set in motion, Oakland sees it as the doorway to nearly limitless amounts of video storage capability, coupled with features like transcription, digital signatures and an audit log to monitor changes. With as many as 6,000 of the nation’s 18,000 law enforcement agencies now using police body cameras, the market has seen massive increases, and departments are focused on back-end details, like how long video should be stored, if it’s a public record and how it should be saved.

Detroit CIO Beth Niblock announces the city’s first open data portal, Detroit Open Data. Powered by Socrata, and funded for three years by the company’s philanthropic arm, the Socrata Foundation, the portal contains 250-plus data sets the city couldn’t afford to open alone. As Detroit continues to recover from a collapsed economy and chronic urban decay, thousands of users download city data pertaining to crime, property and transportation.

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The Arkansas Department of Human Services Division of Medical Services contracts Hewlett-Packard (HP) to implement one piece of its $190 million Medicaid Management Information System. HP is charged with implementing the core module of the three-part system — the other two parts are pharmacy and decision support modules. The modular design allowed the state to stay flexible, adjusting quickly to new state and federal policies, while continuing to process daily Medicaid claims.

Through partnerships with NIC, Hawaii and Maine debut online systems to help better track medical and recreational marijuana distribution centers. By embracing digital systems, both states saved hundreds of hours of worker processing, while also slashing fraud and making it easier and faster for medical professionals to consult an official centralized database.

Facebook unveils verified pages for government. Before this, verified status was reserved for large companies and well-known people. The trend toward legitimizing the identity of government agencies on social media was embraced by Twitter too, and in today’s climate of growing cyberattacks and parody social media accounts, verification is as important for government as ever.

Los Angeles Mayor Eric Garcetti announces “the pLAn,” a sustainability road map and data-driven performance metrics website for city operations. Statistics like average daily water use, air pollution and job growth are all easily trackable from the site, with deeper analysis just one click away. The city uses the tool to measure department heads against their goals and provide a benchmark for overall progress.

Despite their initial reluctance to make the jump to cloud-based infrastructure, state CIOs said the need to cut costs and modernize vital systems is making cloud technology an attractive business solution. A number of CIOs at the NASCIO Mid-Year Conference said their plans include an aggressive push to replace traditional data centers with hosted centers within the next few years. While there’s growing interest in moving away from clunky legacy systems, decision-makers are aware of the challenges posed by retraining staff and meeting the network capacity in some parts of the country.

As many parts of the country embrace electric vehicles (EV), Georgia takes a step back in repealing an EV tax credit. Local car dealers estimate the move will lead to a steep decline in EV sales. The 17-year-old alternative fuel credit was originally passed after Atlanta found itself in violation of federal air standards. In part repealed for its generous size, a smaller EV credit may be considered next year.

A three-year, $42 million What Works Cities initiative is announced by Bloomberg Philanthropies, an effort to help U.S. cities with between 100,000 and 1 million residents put their data to work. The program connects 100 cities with expertise from organizations like the Harvard Kennedy School of Government Performance Lab, Johns Hopkins University’s Center for Government Excellence and the Sunlight Foundation to build upon or establish data-driven programs and tech tools that improve quality of life for citizens.
Sharing data across the child welfare and education systems is a key step in breaking down the barriers between foster youth and their education. In California alone, the mobility rate of foster children is roughly four times that of other students. According to a report from the Data Quality Campaign and the Legal Center for Foster Care and Education, states that securely share limited, critical information between schools and child welfare staff can help with timely enrollment and transfer of credits if a school change is needed; identify the need for educational support; work with school staff to address attendance and discipline issues; and assist with transition planning to post-graduation activities like higher education.

President Obama launches the Police Data Initiative to increase law enforcement accountability through the use of data. The program is part of the larger Task Force on 21st Century Policing, announced last year, and will open police data from participating agencies for public use and review. Twenty-one cities across the U.S. are taking part in the program.

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The unsanctioned use of hardware and software by government employees has been an ongoing concern in public-sector IT, but the growing popularity of the cloud has added another facet to security concerns. The potential for data leaks from unregulated systems has administrators worried about sensitive information like Social Security numbers getting into the wrong hands. With staff using so-called “shadow IT” against policy, CIOs have had to look at new ways to manage their data and employees to prevent unauthorized use of technology while not stifling innovative impulses.

The Internet of Things is the tool behind a New Jersey Turnpike Authority plan to collect and use data to better move traffic along the complicated and popular roadway system. With the help of IBM, the agency created the Advanced Traffic Management Program as a centralized command and control system charged with monitoring traffic flow on the Turnpike and Garden State Highway. By leveraging assets like embedded roadway sensors, controllers can monitor slowing traffic speeds.

On building applications for the future:

“We’re still going to have major systems like ERP and MMIS, and those need to be managed as primary systems. But we also want to use platforms as a service—things like Salesforce and GovConnect. We need to fully leverage those where appropriate. Our challenge is making sure we have the right platform for the right thing.”

Tom Baden, CIO, Minnesota

On open data:

“If you look at our hackathons over the years, initially we had individuals who liked tinkering with coding. But our most recent hackathons are a blend of individual citizens and the business community. I think businesses are there for two reasons: They’re trying to be good corporate citizens, but I also think there’s potential for a huge revenue stream.”

Stephen Elkins, CIO, Austin, Texas

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“If you look at our hackathons over the years, initially we had individuals who liked tinkering with coding. But our most recent hackathons are a blend of individual citizens and the business community. I think businesses are there for two reasons: They’re trying to be good corporate citizens, but I also think there’s potential for a huge revenue stream.”

Stephen Elkins, CIO, Austin, Texas
Automated license plate recognition systems have gained recognition from law enforcement agencies nationwide as a valuable tool in the fight against crime. From locating stolen cars to helping solve murders, the technology is loved by some but raises privacy questions for others about how long the information is kept and who has access to it. A number of states have either legislated use of the systems or were working to create legislation in the 2015 session.

Chicago’s Department of Finance put a new tax in place in June that applies to cloud-based services like Netflix, causing outcry from critics who say that only elected officials can levy new taxes. The department is pushing into new legal territory — one observers expect will end up in court — but it’s not alone. The Washington state Legislature, along with the Michigan Department of Treasury and Alabama Revenue Department, have also attempted similar taxes.

As IT staffs age and the competition for young blood in the private sector heats up, public CIOs are turning to outside help to pick up the slack. CIOs at the Texas Digital Government Summit said they’ve outsourced functions such as data center services and hired third-party contractors to augment permanent staffs. Meanwhile, the Texas Workforce Commission has set up an internship program to help draw in younger employees.

After starts and stops, North Carolina first responders finally have access to Band 14, a frequency earmarked for public safety use. In addition, police and fire agencies in the state will have the ability to share information with personnel in the field through the use of upgraded 4G devices, allowing for greater access to GIS mapping systems and crime analytics programs. Officials had some reservations about relying on private-sector partners, but ultimately said the costs of a government-owned system would have far exceeded the current arrangements.

Transportation officials unveil preliminary plans to rework a 200-mile stretch of Missouri’s Interstate 70 in the hopes of claiming the title of America’s first smart highway. I-70 is a vital roadway for businesses in the state, and more than 31 million tons of freight, valued at $59 billion, travel the route each year. The Missouri Transportation Department called for residents, industry and entrepreneurs to submit ideas for what they would like to see in the initiative, named the Road to Tomorrow.

Where does the future of government portals lie? The ongoing debate between mobile apps and mobile-responsive websites may lead many decision-makers to take a moderate approach, where both strategies are employed to meet the needs of the populace. While each method has strengths and weaknesses, the hybrid approach to reaching an increasingly mobile-dependent audience has proved to be the best bet for many organizations.

The Federal Emergency Management Agency releases an updated version of its open data in the form of an interactive disaster map. The comprehensive online tool chronicles man-made and natural disasters throughout the U.S. and breaks the types and numbers of incidents down by state and county. Though the information was already released by the agency, the new map format makes it easier for users to access data.

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After hackers stole more than 25 million Social Security numbers from the databases of the U.S. Office of Personnel Management (OPM), the office shut down its background check operations for the U.S. Navy. OPM closed the system, called Electronic Questionnaires for Investigative Processing, to beef up the program’s security. Stakeholders in the system said it might mean disruption of an already-backlogged maintenance system. OPM got the program up and running again in about a month.

A new partnership between the National Fusion Center Association and FireEye is providing new insights into cybersecurity threats, informed by the company’s intelligence on international hackers and politically motivated groups like Anonymous bent on attacking IT assets. Part of a growing attempt to share cyberthreat information across sectors, the company will also partner with six regional intelligence centers in California to share information and streamline operations using technology.

On innovation:

“When you see disruptions happening around you—which are generally signaled by customers knocking at your door asking for something you’ve never heard of—you need to lean in and ask them, ‘How can I help you?’ instead of saying no. You can’t predict the future, so the next best thing is to be able to adapt quickly when change finds you.”

Steve Nichols, CTO, Georgia

On open data:

“Until we understand and analyze our own data, we’re going to waste money and time at the agency level. So it isn’t just about citizen engagement or valuable research around our data that can benefit society. But also this idea that by bringing our data together and sharing it with each other we can save staff hours and get more done for the state.”

Janet Gilmore, digital government director, Texas
A national campaign to boost the research, development and deployment of systems to support smart cities and the Internet of Things got a $160 million investment from federal agencies in mid-September. As part of the initiative, 20 cities are partnering with local higher education institutions to tackle different issues. The MetroLab Network will act as a national structure through which city officials will share problems they have in common and the solutions they’re hoping will solve them.

Building on the experiments of private-sector companies like Zappos, a group of 10 employees in the Washington Technology Solutions office began working in a non-managerial system in February. The holacracy pilot project involves people essentially managing themselves by choosing workflows and sharing responsibilities. So far, one participant says, it’s going well: Employees seem to be enjoying the work. The office started expanding the system to include 100 employees this summer.

Looking to bring an innovative spirit to government and a public service mindset to entrepreneurs, President Obama solidified the Presidential Innovation Fellows Program on Aug. 17. The program, which began as a yearlong process, will now continue indefinitely as a partnership where private-sector tech entrepreneurs are paired with federal employees to work on public projects. In its first year, the partnership created open data portals to release information on adverse medical events, medication error reports, officer-involved shootings and more.

A hack led to the unveiling of 32 million user profiles on the affair-facilitating website Ashley Madison — much of which was fake, according to the hackers who published the data — people began to dig through the information and noticed that many of the profiles were created using email addresses associated with the U.S. government and military. Among the agencies involved were the U.S. Army with 6,768 Ashley Madison users, the Navy with 1,665 users, the Federal Bureau of Prisons with 88 users, the state of Kentucky with 73 users and the White House with 44.

Carnegie Mellon University’s Human-Computer Interaction Institute is looking to first outfit its campus with sensors, then the rest of Pittsburgh. The researchers want to see the resulting Internet of Things not only offer convenience — coffee beginning to brew as a driver parks, for instance — but also collaboration to encourage innovative uses. Eventually they want to see millions of sensors installed around Pittsburgh.

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GOVERNMENT TECHNOLOGY
There are three ways to deal with impersonation accounts on social media:
ignore them, embrace them or go on the offense. Peoria, Ill., Mayor Jim Ardis took serious issue with a parody Twitter account, having the account creator arrested and his computer systems seized. A lawsuit claimed the account creator’s First and Fourth Amendment rights had been violated, and the city eventually settled the case for $125,000. Media attorneys say sometimes the best response is no response; Ardis turned a forgettable situation into a firestorm.

When the United Nations met in New York City, it agreed to nothing less than the end of extreme poverty by 2030. It also vowed to eradicate AIDS, eliminate sex trafficking and establish proper nutrition for everybody in the world, to name a few. In the face of daunting demands, a global network of public and private organizations has convened with the goal of making it happen through data. Part of the idea behind the Global Partnership for Sustainable Development Data is to ensure that the world can track progress on the far-reaching goals.

Michigan announced Sept. 16 that it’s suing HP for the company’s alleged failure to meet the contract requirements of a $49 million IT modernization project. Michigan issued a termination letter to HP on Aug. 28, stopping work on an endeavor to replace the secretary of state’s mainframe systems. The state claims that HP failed to meet its deadlines and that the department must continue to rely on its mainframe systems, built in the late 1960s.

On broadband:
“An intelligent community is built on broadband. Now we’re talking about the Internet of Things and there will be more intelligent devices than people in the world. You have to have access. We need bandwidth; speeds have to be better. The Internet of Things is going to change our world.”
Gary Cavin, CIO, Columbus, Ohio

On workforce diversity:
“We have some focused initiatives on recruiting a diverse workforce and more importantly on retaining a diverse workforce. We’ve had some diversity at the lower level jobs, but we haven’t had the diversity that we’d expect at the management-level and the higher-paying jobs. We’re working really hard to address that.”
Anne Roest, CIO, New York City
Although broadband Internet service has expanded over the past few years, there are still millions of Americans for whom a fast connection to the Web remains unavailable or unaffordable. Earlier this year the FCC reported that 17 percent of the U.S. population — 55 million people — lacks access to advanced broadband, which the agency defines as providing download speeds of 25 Mbps and upload speeds of 3 Mbps. And this isn’t just a rural issue. Los Angeles CIO Ted Ross said almost a third of residents in the nation’s second-largest metropolis don’t have broadband Internet in their homes.

The biggest Internet of Things project in the U.S. to date will call San Francisco home. Working with SIGFOX, which plans to add networks in nine other American cities, the San Francisco Department of Technology will attach sensors to public libraries and other municipal properties. While no specific plans to use the network were announced, the city views it as another valuable amenity for residents and businesses.

Oct. 1 marked the official shift in liability for credit card fraud from banks to merchants not meeting the standards set by Europay, MasterCard and Visa, and that includes governments accepting debit and credit card transactions. Operators must either replace magnetic payment terminals with more secure chip-enabled systems or risk being held responsible in the event a card is used fraudulently. Some say the risk of fraud is lower for government transactions, casting doubt on whether the public sector will be quick to invest in newer card processing technology.
The Digital Cities Survey, conducted by the Center for Digital Government, recognized dozens of U.S. cities as the most strategic, efficient and innovative users of public-sector tech. This year’s top winners have developed a mature infrastructure that lets city leaders experiment with projects that are molded in the image of the average citizen’s lifestyle. Divided into four population categories, the first-place winners were Philadelphia; Alexandria, Va.; Avondale, Ariz.; and Shawnee, Kan.

As part of Boston’s effort to change its reputation with citizens, numerous updates have been made to the city’s permits and licensing platform including new functionality that allows users to apply for multiple permits simultaneously, and build a team of project partners, homeowners and contractors needed to advance the process more quickly. Incremental improvements have been made to the system over the last year, said CIO Jascha Franklin-Hodge, and new features will continue to be rolled out in 2016.

On citizen engagement:

“"The key services that agencies can deliver through citizen engagement are all of them. Whether it’s emergency management, access to better student loan information, veteran’s health. You run down the gamut of public services and there are none that can’t be improved with better engagement.

Justin Herman, SocialGov Lead, U.S. General Services Administration

On millennials:

“"The millennial workforce that is coming up needs to be challenged. They’re looking for new approaches and the technologies that they bring. Municipal IT will no longer be focused just on internal support. We’re reaching out into the community more often.

Bryan Sastokas, CIO, Long Beach, Calif.

Faced with a steady stream of cybersecurity breaches, IT professionals are participating more in threat intelligence exchanges, according to the Ponemon Institute. Its report found that 47 percent of the 692 IT professionals surveyed had experienced a material cybersecurity breach in the past two years. To help mitigate those attacks, the majority of respondents, 81 percent, are enlisting threat intelligence. In addition, more IT professionals are sharing details about cyberthreats — the exchange of intel through peer-to-peer networks grew from 57 percent in 2014 to 62 percent this year.

It’s predicted that 700,000 unmanned aerial vehicles (UAVs) will be sold this holiday season, and all those drone owners will have a new protocol to follow. In response to several near-misses between UAVs and regular air traffic, the FAA announced that it will require drone owners to register devices with aviation authorities. The FAA said pilot sightings of UAVs have doubled since 2014 and there have been issues with private drones interfering with response to wildfires.

Twitter announces plans to roll out a public polling feature, saying the anonymized voting system would let users weigh in on the topics that matter most to them. The tool provides the public sector with a new means of directly connecting with citizens, especially for agencies that have already amassed a large social media following.

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This was not the year that IT stood still. 2015 saw a big shakeup of technology leadership at all levels, but the swearing in of 11 new governors contributed to numerous CIO changes at the state level. And the C suite continues to evolve as roles around data, privacy and innovation are found increasingly throughout the country. Another trend seen consistently in 2015 — that may cause a ripple effect at the state and local levels — is the White House’s focus on bringing experts from Silicon Valley and other tech-savvy hubs to help transform federal IT. Here’s our recap of the major career changes of 2015.
Moving from Minnesota Department of Human Services CIO to state CIO, Tom Baden transitioned to his new role to build upon an employee and IT consolidation effort that began in 2011. Baden adds his 30-plus years of experience that included work as the state’s chief enterprise architect. He replaces former state CIO Carolyn Parnell, who retired last December.

When Maryland Gov. Martin O’Malley left to launch his presidential campaign, so did a trio of state IT officials. Chief Innovation Officer Mike Powell, CIO and Secretary for the Department of Information Technology Isabel FitzGerald, and Director of Cybersecurity Elliot Schlanger made a joint exit from their state positions. The three did not say if the change of leadership was a factor in their decisions.

After the retirement of Karen Robinson in December 2014, Todd Kimbriel was named interim executive director for the Texas Department of Information Resources. Kimbriel previously served as the department’s deputy executive director, its chief operations officer and its director of E-government and IT Services. Former Illinois CIO Sean Vinck agreed to assist Oregon this year with what could be called an IT intervention. After a failed state health-care exchange and messy lawsuits with Oracle as fallout, Vinck now serves as Oregon’s enterprise IT transformation director.

Arkansas Mark Myers now holds the titles of chief technology officer and director of the state’s Department of Information Systems. Appointed by Gov. Asa Hutchinson, Myers plans to focus on broadband development and technology services for education and economic development.

In 2015 the White House brought in a spate of Silicon Valley experts. Among them, D.J. Patil, LinkedIn’s former head of data products, and Tony Scott, an executive at VMware. Patil serves as the White House’s first chief data scientist and has focused efforts on developing the data science behind precision medicine, an initiative to cultivate medicines and therapies customized to individual genomes. As federal CIO, Scott replaces Steve VanRoekel, and acts as an administrator for the Office of Management and Budget’s Office of Electronic Government and Information Technology.

The Texas Department of Information Resources lost Brian Engle, who served for nearly two years as the state’s chief information security officer and Texas cybersecurity coordinator. He departed to work for a nonprofit specializing in retail intelligence.

Sam Nixon, director of Virginia’s Information Technologies Agency, left the post to be chief administrative officer at the State Corporation Commission, an entity handling state regulatory issues. Two of his accolades included creating a cross-agency identity management platform and rescuing a mired $2.3 billion IT outsourcing deal.

In February Rob Mancini quietly wrapped up a 12-year run in government, with his final four as Washington, D.C.’s CTO. Under Mancini’s leadership, the city doubled its fiber network from 350 miles to 700 miles and became the first jurisdiction in the capital region to construct a state and local cybersecurity operations center.

President Obama named David Recordon, an engineering director from Facebook, the nation’s first director of White House Information Technology. Already a consultant to the U.S. Digital Service, the appointment made Recordon a permanent fixture in the administration’s expanding innovation corps drawn from the private sector.

Maryland Gov. Larry Hogan appointed David Garcia the state’s newest secretary of the Department of Technology. Garcia is known as a customer-centric innovator and entrepreneur, having founded one of the nation’s fastest growing private companies, NMK Consulting.

MARCH //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

2014 Government Technology Doer, Dreamer and Driver Tony Encinas’ seven years as CIO of Pennsylvania came to an end in March. Notable achievements include advances in cybersecurity, hardware and contract consolidation, and a nearly $700 million contract for hybrid cloud services with Unisys, one of the largest cloud contracts yet seen in state government. Just a few days after his resignation, a replacement was announced in John MacMillan, a three-decade IT veteran with experience in both the public and private spheres.

April 2015

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Library
CIO MOVES

The General Services Administration lost CIO Sonny Hashmi in March to a managing director position at file sharing and cloud management company Box. Hashmi was replaced by GSAS David Shive, a former District of Columbia CIO. The designation of Ian Kalin as the U.S. Department of Commerce’s first chief data officer is a sign of the times. The department’s 47,000 workers gather more data than ever, and the former Socrata open data director and presidential innovation fellow was tapped by the feds in an effort to get organized. Washington, D.C., launched a Technology and Innovation Hub, and hired two new officials. Tony Saudek leads as chief performance officer and director of CapStar, the district’s cross-agency accountability initiative, while Tegene Baharu serves as chief technology officer. A partnership through the hub between D.C. and Howard University directs university resources to support local, middle- to late-stage tech startups. In May, Matt Bailey joined the team as the district’s first director of technology innovation.

APRIL

The New Hampshire Department of Information Technology nabbed longtime private-sector IT pro Denis Goulet for his commissioner slot. Goulet plus a “people and process” approach to technology as the state leads programs like Live Free and Start, a startup incubator. After a five-year run as Nevada’s CIO, David Gustafson resigned. Notable achievements during his time with the state include the launch of a statewide cybersecurity program that included live attack monitoring.

Illinois found a new state CIO in Hardik Bhatt, an IT manager who once served as CIO of Chicago. Before his appointment by Gov. Bruce Rauner, Bhatt spent five years with Cisco, where he specialized in bringing Internet of Things (IoT) technology to local governments around the world. The Texas Department of Information Resources promoted interim CIO Edward Block to full-on CISO. Block gained his interim status following the departure of Brian Eagle. Hawaii Gov. David Ige named Todd Nacapuy the new state CIO, a musical-chairs replacement to Keone Kali, who replaced Sonny Bhagowalia in an acting capacity in 2014. Nacapuy’s private-sector experience prior to joining the state includes stints at Microsoft and Electronic Data Systems. Corpus Christi, Texas, CIO and 41-year public-sector veteran Michael Armstrong retired, citing health reasons. A Government Technology Top 25 honoree in 2003, Armstrong managed one of the nation’s largest Wi-Fi networks in Corpus Christi while leading data center operations, cloud computing and mobile efforts. Philadelphia created a new position – the digital government service architect – and filled it with former Code for America fellow Mjumbe Poe. The new addition works alongside Chief Innovation Officer Adel Ebeid, conceiving new ways for the city to serve its citizens. Washington Gov. Jay Inslee named Alex Alben the state’s first chief privacy officer. Recommended for the post by CIO Michael Cockrill, Alben is a former congressional candidate and technology consultant charged with examining the evolving technology landscape and the privacy challenges that surface as a result. Massachusetts made Katie Stobins its assistant secretary of innovation, technology and entrepreneurship. Bringing significant economic development experience to the role, Stobins describes her task as keeping the state’s technology, economic development and political agendas bound together.

MAY

Steve Reneker, Los Angeles Information and Technology Agency general manager, announced his resignation effective May 1 to return to his former role as CIO of Riverside County, Calif. Under Reneker’s leadership, L.A. was recognized in Government Technology’s Best of the Web competition for initiatives like its expenditure portal, the 311 service platform and the deployment of a Cyber Intrusion Command Center. May 8 marked Chief Technology Officer Kishor Bagul’s final day with the New York Office of Information and Technology. The CTO had logged three years with the public agency and pushed to introduce cloud technology in the state, but Bagul said he had his sights set on entrepreneurship, the cloud and IoT. The White House announced the appointment of Princeton professor Ed Felten as the deputy U.S. chief technology officer on May 11. Felten is best known for his role in the 2005 Sony copy protection scandal and the discovery of security flaws in the Diebold Election Systems voting machine with the help of his students. Chris Cruz, formerly with the California Department of Health Care Services, was appointed as the Department of Technology’s chief deputy director by Gov. Jerry Brown. Cruz replaced Ron Hughes, who
Bryan Sastokas was announced as the new director of technology and innovation for Long Beach, Calif. Prior to taking this position, he served as Oakland, Calif.’s first CIO and sought to walk a fine line between keeping the city’s IT infrastructure up and running, and taking steps to innovate. Sastokas was recognized as one of Government Technology’s Top 25 Doers, Dreamers and Drivers this year for leading what some consider a tech renaissance in Oakland.

Virginia Gov. Terry McAuliffe announced the appointment of Nelson Moe to the state’s CIO seat following Nixon’s departure in March. Moe served 17 years in the U.S. Navy, was the CIO for the House of Representatives and has a background in network engineering in the private sector.

Will Pelgrin, president and CEO of the Center for Internet Security (CIS), retired on May 31 after a long and influential cybersecurity career. The cybersecurity advocate also served as the national leader and chair of the Multi-State Information Sharing and Analysis Center. Jane Holl Lute took the helm of CIS, bringing a resume packed with high-ranking government roles to her new position as CEO. She most recently served as president and CEO of the Council on CyberSecurity, which integrated with CIS in January.

Susannah Fox was named as the replacement for U.S. Department of Health and Human Services CTO Bryan Sivak, who was known for being a thought leader in open data disruption and out-of-the-box procurement methods, and left the agency in late April. Fox formerly served as entrepreneur in residence at the Robert Wood Johnson Foundation and spent 14 years at the Pew Research Center. She plans to focus on open data, cross-agency collaboration and civic engagement.

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Bryan Sastokas moved to southern California, leaving Oakland’s Long Beach’s Technology and Innovation Director.

Nebraska Gov. Pete Ricketts appointed Ed Toner to the state’s CTO role on June 9. Toner replaced Brenda Decker, who served in the position for 10 years and helped the state build a broadband network with the lowest Internet costs in the nation. Prior to the governor’s appointment, Toner was IT director of global payments company First Data Corp.

Gail Roper, CIO of Raleigh, N.C., announced her resignation in early June. Roper, who was named one of Government Technology’s Top 25 Doers, Dreamers and Drivers for her work in Kansas City, Mo., had been with Raleigh since 2006. She took a job directing technology strategy for the St. Joe Company in Watersound, Fla.

Michelle Gore was named Colorado’s chief data officer. In addition to leading the state’s open data efforts, Gore has also assumed leadership of the Government Data Advisory Board, which develops data strategy and policy. The data officer had previously served as the senior manager of business intelligence and analytics for Denver Public Schools.

News traveled fast when NASCIO reported the retirement of Massachusetts CIO Bill Oates via Twitter on June 30. Oates took on the role in January 2014 after serving as the CIO of Boston for seven years, where he said he fostered a culture of innovation “enabled by IT tools.” He continued that line of thinking at the state level, with the launch of several recent initiatives, including a smart streetlight program and a data dashboard called the Massachusetts Technology Talent and Economic Reporting System.

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Virginia Gov. Terry McAuliffe announced the appointment of Nelson Moe to the state’s CIO seat following Nixon’s departure in March. Moe served 17 years in the U.S. Navy, was the CIO for the House of Representatives and has a background in network engineering in the private sector.

Will Pelgrin, president and CEO of the Center for Internet Security (CIS), retired on May 31 after a long and influential cybersecurity career. The cybersecurity advocate also served as the national leader and chair of the Multi-State Information Sharing and Analysis Center. Jane Holl Lute took the helm of CIS, bringing a resume packed with high-ranking government roles to her new position as CEO. She most recently served as president and CEO of the Council on CyberSecurity, which integrated with CIS in January.

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CIO MOVES

AUGUST

Davood Ghods, a public-sector employee for 25 years, retired as leader of California’s Office of Technology Services. In his year-and-a-half tenure, Ghods sought to focus the office more on customer service and increase the number of people using the state’s private cloud project, CalCloud.

The First Responder Network Authority, which is in the process of setting up an interoperable nationwide public safety network, created the positions of CEO and president and filled them both on Aug. 17 Michael Poth, who has worked in Oregon and Arizona police departments, as well as at HP Enterprise Services, took the CEO job, while FirstNet Acting Executive Director TJ Kennedy stepped in as president.

Jacksonville CIO Usha Mohan resigned abruptly on Aug. 21 soon after a new mayor took office. Mohan served as CIO for three years and helped the city save $200,000 annually with a gigabit fiber network. During her tenure, Jacksonville also launched an open data website, Jaxscore 1.0.

After 18 years as the CIO of Las Vegas, 2008 Government Technology Doer, Dreamer and Driver Joseph Marcella retired in August. Marcella’s major goal during his career was to integrate city offices and make them work more seamlessly together — much in the same way the controls of fighter jets he used to fly work together.

On Aug. 26, Baltimore Mayor Stephanie Rawlings-Blake hired a startup entrepre- neur to help launch a citywide broadband plan. As broadband coordinator, Jason Hardebeck is tasked with extending the city’s existing fiber-optic network. Hard- ebeck is managing partner of the social network company WhGlue and of the makerspace Baltimore Machine Works.

Illinois left its CSIO position open or occupied part time for three years before hiring Kirk Lomboa, who is leading a statewide cyberstrategy transformation. Before joining as CSIO, Lomboa served for more than five years as CIO and chief of technology for the Illinois Emergency Management Agency.

SEPTEMBER

Jeff Mowry left his role as CIO of Cuyahoga County, Ohio, on Sept. 25 to return to his roots in the Detroit automotive industry. Starting with Cuyahoga County in 2011, Mowry was previously the CIO of Broward County, Fla., and spent 20 years in the private sector with automotive giant Chrysler as an IT executive. Before his public-service career, Mowry got to drop “interim” from her title on Oct. 8

Shannon Rahming got to drop “interim” from her title on Oct. 8 when she became the official replace- ment for Nevada CIO David Gustafson. Having served as interim CIO since March, Rahming is leading big proj- ects across the state — including the launch of a multiyear modernization for several criminal justice systems — and looking for chances to collaborate.

Arizona filled its CIO post, naming Morgan Reed the permanent replacement to Aaron Sandeen, who left the state in November 2014. Reed brings private-sector IT experience at a number of companies to his new role, most recently as data center services director at travelers site Expedia.

Charles Thompson stepped down from his post as CIO of Houston and accepted the same position with the Port of Houston Authority. With the city since early 2012, Thompson focused on IT governance and upgrading several large systems, including an updated CRM system.

NOVEMBER

Missouri CIO Tim Robyn stepped down in mid-November after working with the state since 2005. Named a 2015 Government Technology Doer, Dreamer and Driver, Robyn recently embarked on a major modernization effort to replace the state’s workers’ compensation, offender manage- ment, tax collection and unemployment insurance systems. Robyn was replaced by Rich Kliethermes, previously the IT director for the Missouri Department of Economic Development. Having served as Utah’s CIO since 2012, Mark VanOrden retired in mid- November. Prior to leading the state’s Department of Technology Services, VanOrden spent six years as IT director for the Utah Department of Workforce Services. Recent accomplishments include the launch of an open data portal on Jan. 1, and VanOrden was aiming to push a big data initiative into this year’s budget cycle. Gov. Gary Herbert announced in October that Gary Herbert announced in October that Mike Hussey, an IT manager and technolog- ist who worked at the University of Utah, would take on the role of state CIO. Hussey helped create the largest CD-ROM database network in the U.S., a central component of the University of Utah’s research efforts.

Raleigh, N.C., named a new CIO to replace Gail Rooper. D. Darnell Smith will leave his position as vice president of Group IT for the Raleigh-based Elster Group to be at the city’s IT chief in early 2016.
A GROWING NUMBER OF CITIES ARE DIRECTLY BENEFITING FROM THE SHARING ECONOMY.

When Hurricane Sandy hit the northeast coast in 2012, thousands were displaced from their homes by the flooding and power outages. In response, a woman in New York City who was an Airbnb host listed her loft at no cost to anyone who had become temporarily homeless because of the storm. Eventually more than 1,400 hosts did the same as the devastation spread.

The act of generosity caught the attention of Airbnb, which launched a disaster relief initiative in 2013, making it easier for hosts to provide space to people who need it when an emergency strikes. The initiative also caught the attention of government emergency management officials in several cities, leading to agreements that help cities identify hosts willing to share their lodgings during an emergency.

While some cities have characterized Airbnb as an unregulated hotel operation and have fought it on those grounds, others have recognized the room-sharing concept as having value when it comes to disaster relief. One of the more powerful features that a peer-to-peer service such as Airbnb has is rapid communication. The company can identify which hosts are willing to offer space during an emergency and facilitate notification of an emergency when it occurs, so the hosts are prepared in advance.

The sharing economy isn’t just rooms. It’s also about sharing rides, goods and services. Public officials are trying to determine how an unregulated business model can operate in regulated markets, like taxis and hotels. But as some cities have discovered with Airbnb, it’s possible to use the sharing economy for public good. The idea is still relatively new, but a few interesting examples have emerged.

It’s too soon to say just how much the sharing economy could benefit local government, but there are some who believe it could generate significant gains in efficiency. Right now, about 90 percent of government operations involve the acquisition of resources, whether they are trucks, buses or computers, said Kevin DeSouza, an associate dean for research at the College of Public Service and Community Solutions at Arizona State University. Not only are those resources costly to acquire, but they also are expensive to maintain. “The more cities spend on acquiring assets, the less they have to innovate,” he said. When a local government rents a service or some goods, it can improve how government designs and manages public resources.

This report will examine some ways that local governments are using the sharing economy and what it will take for cities to benefit from the full value of sharing resources in the public sector.
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HOUSING

More than 160,000 shelter stays were provided during and after Hurricane Sandy by a range of organizations, according to the American Red Cross. A lot of people also took care of themselves, with many staying in rooms at local hotels and motels. But as Sandy proved, cities can be caught off guard by the severity of a disaster, overwhelming relief efforts including places to stay during and after the emergency.

That’s why Portland, Ore.’s Bureau of Emergency Management struck an agreement with Airbnb in 2014 to help streamline disaster response in an emergency (the city has passed legislation allowing short-term rentals).

During an emergency, the Red Cross provides food and shelter to displaced people and families, said Dan Douthit, the bureau’s public information officer. “People will also find shelter on their own, usually at local hotels and motels.” But the lodging industry may not be enough to meet demand. “This agreement adds potential capacity,” said Douthit.

The agreement calls for Airbnb to identify hosts who are willing to help and to share that information with the city. The company will also help hosts prepare for emergencies through training and will act as an information hub, using its mobile software to notify hosts and guests about possible emergencies. In return, Airbnb will waive its service fee to hosts who offer their lodgings for free.

So far, there’s been no emergency in the Portland area that has triggered the need for shelter from Airbnb hosts. Douthit believes an earthquake would be a likely scenario, but a flood or major fire could also put the agreement into play. Besides Portland, San Francisco’s Department of Emergency Management has a similar partnership with Airbnb.

Several cities have also expressed an interest in working with Nextdoor, a social networking site for neighbors who want to communicate and interact around topics like crime, safety services and disaster preparedness. Nextdoor is currently available for free in nearly 53,000 communities, but use is restricted to specific geographic locations.

Seeing a demand for communication between local governments and Nextdoor communities, the company has launched a new version that allows cities to exchange information with online communities within the network. While Nextdoor isn’t a room-sharing network, it’s similar to Airbnb in that it has the infrastructure and communication capabilities to deliver citywide alerts, crowdsourced reports and crisis maps that connect residents to resources during an emergency or disaster.

For example, Nextdoor works with the Houston Office of Emergency Management to alert residents when safety issues occur in their neighborhoods. “The platform at its core is well positioned to help with emergency response,” Kelsey Grady, head of communications at Nextdoor, told Government Technology last year. Formal agreements between a city and a sharing economy provider, such as Nextdoor, can get more accomplished, she added.

GOODS

Government has a lot of stuff. In state government, individual agencies often have stuff, such as utility or construction equipment that sits around unused in one part of the state while it’s badly needed in another. To solve this imbalance, departments in charge of equipment have resorted to using white boards to tally what’s available and then exchange emails and phone calls with other depots and departments to see who needs what and when.

Besides being cumbersome, it’s not very efficient, according to Alan Mond, the founder and CEO of MuniRent, an online goods sharing service. Government equipment sits idle as much as 70 percent of the time, according to Mond. Despite this problem, states...
and localities continue to buy and rent expensive equipment. His solution, similar to other goods-sharing services, is to provide a special online forum for large state agencies to share surplus goods and equipment, instead of renting or buying it from the private sector. “A sharing service like ours can reduce an agency’s equipment rental costs by 10 percent annually,” he said.

Government agencies pay MuniRent a monthly fee to list, reserve and loan their surplus equipment, which can be anything from dump trucks and excavators to front loaders and guardrail cleaners. One of the biggest users is Oregon’s Department of Transportation, which has been able to boost the use of some of its idle equipment by hundreds of hours since it started using MuniRent. Another 24 state agencies and local governments are subscribers or have plans to join the equipment-sharing service.

“There are a lot of agencies out there that realize they have a problem with surplus equipment,” said Mond. His service leverages the sharing-economy concept for a specific government need. “What we do is create a network so that one department within a state agency can borrow a piece of equipment from another department,” he said. “We can call it an internal sharing and scheduling platform.”

Besides large state agencies, the sharing platform is well suited for localities, over 200,000 in population — any city that has multiple equipment yards, which makes it hard to keep track of trucks and machines. According to Mond, fleet management systems, which can be found in just about any public works or transportation department, are good at keeping track of equipment maintenance and the number of parts required, “but they are not very good at scheduling who gets to use a piece of equipment and when.”

On Nov. 3, San Francisco voters rejected a measure designed to restrict short-term room rentals by capping the number of nights a room could be rented. Advocates for the regulation said that the city, already one of the most expensive to live in, was losing affordable housing to tourists and others who rely on Airbnb’s online sharing system for lodging.

Called Proposition F, the measure is just one of many that city voters and officials have either proposed or enacted to manage and regulate the fast-growing sharing economy. Nearly two dozen states are grappling with the legalities of room sharing, according to the American Hotel and Lodging Association. California’s Legislature has introduced a bill that would require rental websites like Airbnb to collect a rental or lodging tax.

The most resounding — and negative — reactions to the sharing economy have come from cities where the legacy lodging and taxi industries are large, well-entrenched and politically active. Coverage by the media has painted a picture of cities that, for the most part, are quick to pull the trigger when it comes to regulation. But when you step outside the 10 or 15 largest local jurisdictions, the picture is not so black and white. The National League of Cities released a report in June with results from a survey of its members that found 71 percent of cities support the growth of the sharing economy.

The concerns cities have are tied to public safety, not to protecting existing businesses, with 61 percent worried about issues tied to lack of insurance and general safety concerns, while only 10 percent cited the need to protect traditional service providers, and 9 percent suggested noncompliance with current standards as a problem. Most importantly, a majority of respondents — 54 percent — don’t want any regulation on the overall sharing economy, while 59 percent said there should be no regulation of ride sharing, and 58 percent said home sharing should not be regulated.

The survey found that city leaders are open to integrating sharing economy services more fully within their communities, and they want to capitalize on the opportunity. Asked to identify the greatest benefit of the sharing economy, 22 percent of city leaders identified improved services; 20 percent favored increased economic activity; and 16 percent cited increased entrepreneurial activity.

“Our survey shows that city leaders are becoming better prepared to successfully navigate the ever-changing developments that continue to change the course of our shared urban environments,” said Brooks Rainwater, director of city solutions and applied research at the National League of Cities.

The dividing line between heavy and light regulation of the sharing economy may depend on the level of technology innovation in a city, according to Kevin DeSouza, an associate dean for research at the College of Public Service and Community Solutions at Arizona State University. “In places where you have a high-tech mentality, and there’s less existing infrastructure to meet the needs, you will see jurisdictions innovating faster,” he said. “But in large cities where the infrastructure is well entrenched and has political clout, it’s less likely that government will collaborate openly with the sharing economy.”
Fleet management is designed for fleet managers, he added. “The MuniRent platform is designed for the crew and supervisors who are out in the field and who have to deal with equipment on a day-to-day basis,” Mond explained.

TRANSPORTATION
Uber, the popular ride-sharing service, has taken major cities by storm. Despite pushback by taxicab companies and regulators, ride-sharing services have continued to grow in popularity and has led a small number of cities to figure out how to make the idea work in ways that directly benefit taxpayers. The San Diego Association of Governments has proposed a research project around the idea of on-demand mobility services. Borrowing the idea of app-based ride sharing that companies like Uber and Lyft have popularized, the association wants to explore whether ride-sharing services could be expanded and developed to aid “increasingly more tech-savvy” seniors in getting around, according to Lyndon Dacuan, a content manager with Otvia, a business intelligence and analytics firm that serves the public sector.

The association wants to study the suitability of smartphone apps as the primary dispatching method and the willingness of seniors to actually use the services, based on comfort, safety and available payment options, such as a cashless method. Dacuan reported in a company blog post. “The association also wants to consider the types of trips people would take, how the method would apply to individuals with disabilities and incorporating the ride-sharing services into the existing specialized transportation network.”

Other cities, such as Fort Collins, Colo., and Winston-Salem, N.C., are conducting research and investing funds to study how ride-sharing models can help the cities become more innovative in terms of transportation. Ride sharing also has been touted for helping the environment while reducing congestion. According to a 2010 report from the University of California at Berkeley, every ride-sharing vehicle in operation can remove nine to 13 cars from the road.

Then there are some local governments that want to work directly with Uber. Macomb County, Mich., located north of Detroit, has turned to the ride-sharing company to provide door-to-door transportation for residents who receive a summons for jury duty.

The pilot project, launched in July, provides each juror with an Uber code that covers a $20 ride to the county courthouse. Jurors receive the code and a link to Uber’s account via email, and can use it to request a ride on the morning of jury duty. County Clerk Carmella Sabauah said the service gives

/ IDENTIFYING GOVERNMENT SHARING OPPORTUNITIES

With the sharing economy expected to generate global revenues of $335 billion by 2025, the direct and indirect impact on government is expected to grow as well and has sparked questions around some key issues: What could governments be doing to help the sharing economy? How should governments address such issues as public safety and security?

The Ontario Chamber of Commerce and PricewaterhouseCoopers of Canada issued a report that identified a number of opportunities, including a handful that directly involve government:

✓ Identifying government-focused sharing opportunities to create efficiencies, such as the use of extra public-sector building space or fleet cars, and their potential to decrease costs and increase revenues for the province.

✓ Encouraging employees to use sharing platforms within and across public-sector organizations to create a better understanding of the impact, risks and potential of a sharing economy.

✓ Working with economic development agencies, municipalities and different levels of government to coordinate an approach that fosters the sharing economy while minimizing the associated risks.

✓ Helping encourage the creation of new insurance products (and/or) remove the regulatory impediments that might exist to ensure drivers and passengers, hosts and guests, and other types of providers and users understand how they are covered in the case of accidents or other issues.

✓ Examining mechanisms to ensure sharing economy participants understand their tax obligations and are compliant.
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jurors a safe ride to the courthouse and helps them avoid congestion and the hassles of limited parking in the area. “It also creates opportunities for county residents who are Uber drivers, so I think it’s good for the whole economy,” she said.

Local taxi companies expressed concern about competition from Uber, but none were willing to offer free rides. Since 2004, the county has offered jurors free bus tickets for rides to the courthouse, but public transportation is somewhat limited, according to Todd Schmitz, deputy county clerk, making the Uber option a potentially useful and convenient way for jurors to travel.

The juror ride-sharing program is believed to be the first of its kind in the country. Depending on its success, the program could be continued beyond the trial period in Macomb County and expand into other counties in Michigan, Michael White, general manager for Uber Michigan, told the Detroit Free Press.

Another example of ride-sharing services that involve local governments directly or indirectly is paratransit and ride options for disabled travelers. In July, Uber launched in Austin, Texas, UberACCESS, a pilot program that adds wheelchair-accessible vehicles to its on-demand transportation services. Similar programs operate in New York, Chicago, San Diego, Philadelphia and Portland, Ore.

Meanwhile, Seattle has passed an ordinance creating a 10-cent surcharge on every ride originating in the city with the several ride-sharing firms that operate there. The money will be used to defray the cost of owning and operating a wheelchair-accessible taxi, according to the Shared Use Mobility Center.

Less understood is the potential impact of the sharing economy on public transit. So-called microtransit operations have popped up in some of the nation’s largest cities. These operations have been described as smaller than running full-sized buses on fixed routes, yet they involve the use of large vans (and, in some cases, actual buses), usually equipped with Wi-Fi and a certain number of fixed pickup and drop-off locations, typically located between two key demographic areas.

Bridj, an on-demand bus service, first started operations May 2014 in Boston. This past spring, it began a trial program in Washington, D.C. Like Uber, Bridj uses an app to show riders where the service area is on a map and allows them to book a ride from selected pickup locations. And like Uber, Bridj doesn’t have a set route and schedules. Its on-demand bus service is unique. The company is offering up to 10 free rides during its trial run, but will charge $5 per ride during normal business operations, which are currently during the morning rush hour.

Advocates of microtransit say the service could help bridge the gap between someone's home and the start of government-funded public transit, such as a bus, train or subway line — the so-called first-mile, last-mile problem that can keep many people from using public transportation. But in order for that to happen, microtransit companies would have to coordinate as well as collaborate with public transit. Bridj says it shares data with public transit officials in Boston and Washington, but it’s not entirely clear how far their collaboration goes.

Bridj is also a member of the American Public Transportation Association. Not all microtransit ventures have tried to partner with local governments, nor have they all succeeded. One notable flop has been Leap Transit, which launched in 2013 as a luxury bus alternative to public transit in San Francisco. Leap tried to take an aggressive approach to its role, criticizing the city’s transit system, yet requesting access to its bus stops. Ultimately, however, it was done in by the fact that it couldn’t make money on what it charged its riders (who were few in number anyway). That’s a problem any city running public transit is familiar with.
While ride sharing has generated a good deal of debate, the concept of bike sharing has been accepted with open arms in most cities. Unlike Uber or Lyft, which compete with legacy taxi cab companies, bike-sharing operations represent an entirely new market for urban mobility.

Bike sharing gives cities another transportation option and has been known to promote tourism. Most important, perhaps, they typically don’t cost cities much, with a large portion of the funding provided by federal and state grants, while operational costs are often borne by a private firm that manages the bikes and related equipment.

Yet the most successful bike-sharing programs are the ones that work closely with city government. Dallas is one of the most recent cities to launch a bike-sharing program. Working with Downtown Dallas Inc., the city plans to put 400 rentable bikes at 40 stations throughout downtown. While a little late to the game, Dallas hopes it gets it right by looking at what has worked and what hasn’t in other cities.

Placing bike stations near transit stops is one way to make them work. Public transit passengers can use bikes to ride to destinations outside the rail or bus corridor. Los Angeles, which expects to roll out a 1,100-bike share program next year, plans to place many stations near its transit stops.

The next phase in the bike-sharing experience is to integrate bike rental payments with public transit fare systems as a way to get more people to use both. That’s the “Holy Grail,” Cara Ferrentino, a Philadelphia transportation official, told The Dallas Morning News.
SHIFTING TO OUTCOMES

In 10 years, the global sharing economy is expected to be generating $335 billion in revenue, according to auditing and consulting firm PriceWaterhouseCoopers. That’s a huge jump from today’s estimated $15 billion in revenue the various sectors of the sharing economy now generate. But as this report shows, the amount of direct government activity with the sharing of rooms, rides and goods is just a trickle.

There’s no question it will grow, but will local governments take the necessary steps to benefit from what the sharing economy has to offer? The challenge will be changing the traditional mindset that calls for acquiring goods and services in order for government to deliver public services rather than rent services to get the job done.

For that to happen, “governments need to focus on outcomes rather than outputs,” said Arizona State University’s DeSouza. “That’s hard to do because measuring outcomes is quite challenging. Everything in our current local government processes is output driven, because government is used to asking for resources that meet certain outputs not outcomes.”

To turn that idea around, local governments will need to make some fundamental changes. First, their contracting and requisition process needs to be more agile. Currently it’s hard for local governments to contract for services in an innovative way because of all the built-in inertia with the existing process.

Fortunately IT has taken a lead on this problem as it pushes to rent cloud computing services rather than purchase computing hardware and software. Moving IT from a capital expense to an operational expense provides a model for other agencies to follow when it comes to renting goods and services provided by the sharing economy.

Second, local governments need to revisit the concept of regionalism. At first glance, the sharing economy presents some easy, short-term solutions: share a ride for jury duty; share a backhoe for a construction project. That kind of sharing is beneficial, but it’s not transformative. Eventually local governments will need to focus on what they do best and then figure out how they can collaborate with other local governments to get the other jobs done. “We need to think more holistically about how to ensure that the taxpayer gets the greatest experience regardless of who is actually provisioning that public service,” said DeSouza. Only when that happens can local governments begin to reap real value from the sharing economy.

Once again, the IT sector has tested the regional waters with a variety of projects that include 911 technology, IT infrastructure and data centers as ways to reduce acquisition costs. Hopefully these and other models will emerge, opening the door to a more direct partnership between local governments and the sharing economy.

PUBLIC LIBRARIES: ARCHETYPES FOR SHARING

The sharing economy seems so new and revolutionary, yet there’s a place where the concept of sharing has been going on for more than a century. The local public library, run by government, has been a model of how to share rather than own resources. With more than 16,000 public libraries (including branches) in the U.S., this public institution is pervasive, yet is often taken for granted in terms of its position as a role model and incubator for the sharing economy.

It’s important to remember that sharing by libraries differs from the sharing economy in two ways. First, there’s no money involved in what gets shared (outside of overdue fines). Second, libraries are inclusive: Anyone can walk into a library and borrow a book or share a computer. That’s not the case with the private-sector sharing economy, where the cost to rent is a barrier for some.

Does the public library present a new model for the sharing economy? It certainly has the infrastructure and knowledge that could help sharing spread in new forms and reach new users. Already a number of public libraries have expanded their services to include repair cafes, garden sharing and makerspaces, where patrons can learn how to build things using 3-D printers and other tools. Some libraries even share appliances for patrons who don’t have the ability to buy them; others have hosted health awareness programs as a way to share resources critical to the public’s well-being.

Libraries also have a big intangible: trust. The public has come to rely on libraries to provide resources and the professional assistance needed to understand how to use them. That’s important if the sharing economy is going to expand beyond renting rooms and rides.

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Open Data Grows (But Not Enough)

2015 was a year of progress for government transparency — however, there’s still much work to be done.

As 2015 winds to a close, we can look back on a year of successes and failures when it comes to transparency in government. At the start of the year, the federal government began releasing its enterprise data inventories — comprehensive indexes of the data sets it collects — to the public. The move, which came in response to a Sunlight Foundation Freedom of Information Act (FOIA) request, was a major victory for government transparency. By making the indexes publicly available, we’ll have a better picture of what data and information the federal government collects and maintains, and it opens the door for further investigation and analysis by Congress, journalists and citizens alike.

But there’s still some information missing, particularly around data sets that are withheld from the public, and some federal agencies like Homeland Security, Justice and NASA have yet to comply. It’s important to note that sharing an agency’s enterprise data inventory won’t expose any information that should reasonably be withheld from public view. It would, however, make it easier to understand the government’s justification for the decisions it makes in determining whether to disclose or withhold certain data sets. And it would give a more comprehensive overview of what exactly these agencies have.

The open data executive order that called for the creation of those inventories aimed to enable and encourage informed debate about what data should be made public, and in order to have that debate, we must know the extent of the data the government holds.

A troubling revelation came to light in March 2015 when it was revealed that while she served as secretary of state, Hillary Clinton used a personal email account and a private email server to conduct official business. While Clinton has turned over a trove of emails (that her staff unilaterally deemed to be personal) and access to the private server, (which security experts have demonstrated had significant vulnerabilities) the move sets a dangerous precedent. Federal law governs how official records, including email, are managed to ensure that public records are preserved, and helps to make sure that our freedom of information and other accountability laws reach official communications. The apparent intentional disregard for the spirit of the law is certainly concerning.

We’ve seen some positive developments in Congress, which is slowly embracing openness and modern technologies to make government more accountable. Gates is a thought leader in the fields of democratic theory and practice and civic engagement.

And while there’s much more to be done, there are two things Congress could do right now to improve transparency and accountability: prioritize FOIA reform and require Senate candidates to electronically file their campaign finance reports. Reform through the FOIA Improvement Act would require agencies to update their regulations in a timely fashion, codify the presumption of openness, improve public digital access to records released under the FOIA and strengthen the Office of Government Information Services.

But there’s still some information missing, particularly around data sets that are withheld from the public...

And while House and presidential candidates are already required to e-file campaign reports, the Campaign Disclosure Parity Act would bring the Senate — which still delivers reams of paper to the Federal Election Commission every quarter — into the 21st century.

As we enter the new year, I hope that the president and members of Congress continue to build upon the victories we’ve achieved and set the stage for the next administration to improve where we’ve fallen short.
Real-Time Data Reigns
Why states should kill the annual report.

Government websites are drowning in annual reports. Almost every agency, no matter its size, publishes a yearly report about its activities. These documents supplement the annual reports of specific government programs within agencies. To take just one example, a search for “annual report” across all of New York state’s websites produces approximately 38,000 results, including around 8,000 PDFs, covering everything from the State Liquor Authority to the Division of Forest Protection. While these reports are a useful tool for providing insight and accountability on public-sector operations, such relics of a paper-based world are no longer the best option for an increasingly digital government. Instead, agencies should begin replacing annual reports with dynamic dashboards that provide real-time information on government programs.

One of the main problems with annual reports is that, by definition, they are only published once per year, so the information they provide is not timely and only captures information on government programs at a single moment in time.

Therefore, when it comes to management and oversight, they are a relatively poor tool. It’s much more useful for legislators to learn about a program that is over budget and underperforming one month into the project rather than at 12 months. Receiving information sooner can ensure programs stay on track for success and ultimately save taxpayers money.

The private sector is already moving away from the idea that once-a-year reporting is a useful management strategy. In recent years, a number of major companies, such as Accenture, Deloitte, GE and Microsoft, have announced that they are ditching employee annual performance reviews in favor of more frequent feedback between employees and managers. Moreover, the rise of the Internet of Things and wearable tech is creating a new culture that thrives on instant feedback — the success of companies like Fitbit comes from telling people how many calories they have burned each day, not at the end of the year.

Dashboards offer an alternative to annual reports because they provide users access to the most recent information on government programs and allow them to explore and analyze the data available. For example, the federal government used dashboards to provide the public transparency on federal spending that took place as part of the American Recovery and Reinvestment Act, as well as the distribution of federal funds following Hurricane Sandy. Many of the most prominent examples of dashboards in state government today are still works in progress. For example, the Texas Education Agency established the Texas School Accountability Dashboard to provide the public access to state, district and school performance data, but the information is only updated annually.

At their best, dashboards are not just tools for publicly reporting some data, but rather internal performance management tools that the government makes public. The Washington State Transportation Improvement Board developed its performance management dashboard after realizing that oversight had been so poor that the agency had awarded grants for more projects than it could fund. The dashboard, now in its fourth version since its 2003 launch, tracks and measures the board’s performance, such as delays in projects and payments, providing the public the same level of detail available to agency staff.

State CIOs can provide the technical building blocks for agencies to implement dashboards. For example, the UK has launched more than 800 dashboards to showcase how well government services are performing by creating a well-documented process that explains to agencies how to both measure performance and publish the data. Indeed, a side effect of building dashboards is that it forces agencies to think more about how they measure performance. CIOs can also provide guidance on best practices for data visualizations so that dashboards present information in the most user-friendly way possible.

Eliminating annual reports will not happen overnight. Some are mandated by law, and replacing them with dashboards may require legislative action. But a good start would be a simple dashboard showing the number of annual reports published by the government. Hopefully this figure will soon be trending downward.
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The R11 rugged tablet PC is a heavyweight that’s light on its feet. The GammaTech Durabook R11 rugged tablet PC is drop, shock and spill resistant. The display is sharp and crisp, and its virtual keyboard is easily accessible. Glass covers most of the front surface, setting the tablet apart from other, more rubberized models. It includes Intel HD graphics at 1366 x 768 resolution. The four resolution options include VGA (640 x 480), SVGA (800 x 600), XGA (1024 x 768) and native. It’s enabled for 3-D video as well. The tablet contains an Intel Haswell i7/i5 series chipset, one DDR3L socket for 4 GB/8 GB memory and an M2-SATA solid state drive with 64 GB/128 GB. The sleek R11 contains a 2-megapixel front-facing camera, a 5-megapixel rear camera with auto focus and 1500 mcd LED flashlight, and optional support for geotagging. A magnetic stripe reader with a smart card reader is also optional. It has a built-in G sensor, gyroscope (Win 8 only) and a compass (Win 8 only). The tablet’s ambient sensor detects the available outdoor, indoor or low-light conditions in the surrounding environment. The LCD capacitive touch display supports an optional digitizer for use with a digital pen.

The tablet is a comfortable size, measuring 11.75 inches x 7.56 inches x .79 inches, with an 11.6-inch screen, and is lightweight at 2.73 pounds. It’s designed to withstand a 4-foot drop to plywood over concrete (MIL-STD 810G). It can operate at -10 degrees Celsius to 55 degrees Celsius, at 5 to 95 percent humidity and is also designed to withstand dusty conditions. The R11 features a barcode scanner, two USB 3.0 ports, SDHC and SDXC memory card slot, and SIM card slot for wireless Internet access. It contains a lithium-polymer battery designed to last for seven hours of operation. An external WWAN antenna allows connectivity to the Internet via mobile or cellular data networks via the AirCard WATCHER application. The audio combo jack lets users connect to a headset or microphone. The unit has a 70 decibel speaker. Users can connect USB devices such as a mouse, keyboard, printer, digital camera or external hard disk drive. A vehicle and office dock are available options. The R11 starts at $2,100 at various resellers.
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Tech for Social Good

A new pairing of tech tools could change the way deaf individuals communicate with the hearing world. Through the combination of augmented reality and speech-to-text systems, a group of New York City teenagers is creating a platform that converts audio into text that’s shown on a wearable display that connects to any pair of glasses. The Live Time Closed Captioning System, currently seeking funding on Indiegogo, consists of a clip-on heads-up display, smartphone-sized microcomputer and a clip-on microphone. The tech-savvy teens want to help users engage in naturally flowing conversations.

SOURCE: INDIEGOGO

POWER UP: The same technology that captures energy from braking in electric and hybrid vehicles is being tested on a much larger scale: London’s Tube trains, which transport 13 billion passengers per year. The tech, called regenerative braking, recovers “waste energy” when the trains brake and send it back as electricity. London Underground reported that over the course of a week on one of its transportation lines, the system generated 1 megawatt hour per day — or enough energy to power 104 homes for a year.

SOURCE: TREEHUGGER

The speed at which a new robot, created by the Skype co-founders, travels on sidewalks to deliver goods like groceries. The concept by Starship Technologies is a new take on local delivery services: Clients request a delivery via a mobile app and the robot independently traverses a neighborhood at the speed of a brisk walk.

SOURCE: ENGADGET; IMAGE SOURCE: STARSHIP

Send Spectrum ideas to Managing Editor Elaine Pittman, epittman@govtech.com, twitter @elainerpittman

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2016: The Year of Government as an API?

Going to where the people are in ways that are invisible, ubiquitous, productive and pleasing.

The new year will mark the dawn of the third decade of e-government. It comes as citizen and business expectations of government are being shaped by their digital lives — that is, the way they find information, buy things and request services in the wider economy. Think of the companies that connect with you regularly in a rich and contextual way and there are probably application program interfaces (APIs) working below the presentation layer, connecting two or more discrete apps to create a better, fuller, more rewarding experience for the person looking to get stuff done. Moving money and permissions reflect much of what government does, including core functions such as providing public assistance, licensing and the full spectrum of regulation. These are more effectively done in a bit-based world than an atom-based one. Open data makes these government actions more transparent, while throwing off data exhaust that is fueling the creation of useful things through the fledgling civic startup space and its nonprofit counterparts in the civic hacking space.

Whether doing routine transactions at scale through online self-service or enlivening civic life through social citizen engagement, e-government is inextricably linked to surfacing and connecting previously isolated data and hidden content. The first wave of e-government focused on the buildout of Web portals as virtual city halls, county seats or state capitals. Then came the iterative development of online applications to streamline complex bureaucratic processes and shift routine workload to servers who liked such tasks, thereby freeing up public employees to do higher-value work.

Government is now at a place where the value of its applications (and the automated processes behind them) are being realized through integration with third-party solutions. It flips the relationship in the citizen’s favor. Rather than petitioning the government for service or redress on the government’s terms, government is now becoming available on a device and as part of an experience designed for (and sometimes by) the citizen herself.

Bill Eggers and other authors have argued the merits of a more invisible government, where the public sector is embedded more or less seamlessly in applications provided by other players in the economy. Take, for example, the car buying experience in which a prospective buyer now researches, shops, configures, finances and insures a new or used vehicle online. Related government services — verifying driver status for insurance purposes, recording emissions certifications and registering the vehicle — are also digital processes but often divorced from the rest of the process.

Enter the API. Governments regularly consume public APIs, including those for mapping and payments. They also provide private APIs to connect applications within the government ecosystem. Looking forward, government-provided public APIs play a key role in helping to complete the e-government experiment.

Individual APIs are increasingly being succeeded in enterprise architectures with an API integration layer that takes the pressure off disparate legacy systems. Mike Reich, a civic startup veteran most recently with Seabourne, sees huge untapped potential in making the vast amounts of authoritative content government holds available via public APIs. They “allow you to create an application that leverages the work of others to make your product better” and focus on building out features unique to public service. APIs are the glue that makes the Internet friendlier — first for applications needing a structured way to understand information that’s missing from the Web, which in turn speeds and improves people’s experience in getting stuff done. Real people getting stuff done with — not despite — government has measurable economic and social benefits. The Information Technology and Innovation Foundation estimates that there are $11 billion on the table over the next five years.

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Delivering a State of the City (or County) address to the public is an annual expectation of elected leadership. It’s their time to talk about major successes and opportunities for their community over the past year. As we look to the end of 2015, what better time to explore the current state of government social media and how it continues to evolve?

Social Networks Embrace Government

It is exciting to see that social networks are beginning to recognize government as both a big player in the game and valuable to their future. Facebook has an internal government team headed by Government Outreach Manager Katie Harbath. Twitter has a large politics team, and LinkedIn is ramping up government efforts as well. In addition, Nextdoor, the private social network for neighborhoods, has invested in a major product dedicated to helping governments interact with their communities called Nextdoor for Public Agencies.

Who Manages Social Media?

As social media is now mainstream for most public-sector entities, it’s interesting to note what roles are involved in managing the platforms on the agency’s behalf. In 2015, it is still not the norm to have full-time staff members with titles such as “social media manager” or “social media coordinator;” although we’re seeing it happen more often than in previous years. What we do see are roles like “public information officer” or program managers encompassing more and more social media responsibilities.

Platform Experimentation

While governments continue to struggle with the sheer number of social platforms and trying to determine where best to spend time and energy, many entities are on board for experimentation. Snapchat is now being embraced by various agencies like Las Vegas, the Utah Division of Emergency Management and the White House. And several agencies are now experimenting with live-streaming apps such as Meerkat, Periscope and Facebook Mentions.

Citizen Expectations Are Shifting

Citizens now not only assume that government will be on social platforms, but also expect quick response times. The average person now looks to social media as a satisfactory outlet for complaining or requesting customer service. Agencies are struggling with how to handle social media inquiries during nonbusiness hours.

Law Enforcement Perception Challenges

In 2015, law enforcement in particular has been plagued with negative perception challenges, offline and online. There has never been a more valuable time to understand the nuances of embracing tone and managing citizen satisfaction on social media. New live-streaming apps also have caused challenges for public safety entities. On the one hand, they allow officers to share real-time updates. On the flip side, these platforms have many implications for the safety of officers and the public during real-time, unfolding events where the apps could inform fugitives of law enforcement’s next move.

What’s Next?

As we look to 2016, it’s becoming more acceptable to not only spend ad dollars on social media campaigns, but also to hire staff members specifically for the purpose of managing social media profiles. Public agencies are digging deeper into analytics to ensure best practices, prove value to agency leadership and determine whether to continue on current platforms or redirect efforts to new ones.

Over the next year, a couple of government-related social media associations are slated to launch. This is an exciting step toward encouraging a strong learning network for public-sector social media managers.
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