50% of surveyed legislators say their state has an inadequate number of cybersecurity personnel.

Download the Cybersecurity Policy Guide at: governing.com/cyberguide
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This year’s group includes technology leaders at all levels of government, along with those bringing about transformational change through their work in the private sector.

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A detailed examination of the state of the public-sector cloud market.

Tangible Tech
Sometimes small changes reap big rewards. We look at lightweight IT initiatives.

(Digital) Story Time
How government is putting data to work with visualization tools.
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Leaving a Legacy

We talk a lot in this magazine about modernizing legacy systems, replacing old technology that has outlived its useful life. Such systems become increasingly difficult to maintain, are tough to integrate with newer technology and don’t offer nearly the functionality of more up-to-date solutions. And then there’s finding the staff to work on them, which becomes a bigger problem as programmers with those skill sets start to hit retirement.

But this issue focuses on the definition of “legacy” with more positive connotations. Our annual Top 25 Doers, Dreamers and Drivers is once again an inspiring look at what’s right in the public sector. The legacy they’ll leave — and thankfully, nearly all have plenty of time to add to it — is one of big ideas, bold thinking and skillful execution on the potential of truly digital government.

As always, the list is peppered with a healthy supply of CIOs in local and state government. You’ll also find public-sector leaders serving in a variety of other roles, whose work impacts the way that technology is used to improve outcomes. Others in the Top 25 are making significant impacts on how government does business in their roles outside of government. Many commonalities run through this year’s honorees.

They think big. In Buffalo, NY., Director of Citizen Services and Chief Service Officer Oswaldo Mestre Jr. isn’t constrained by traditional ways of doing things. Among his many accomplishments are standing up a 311 system that not only makes the city more responsive to constituents but has also reshaped city planning. Also in New York, Westchester County CIO John McCaffrey supports a culture where employees are encouraged to challenge convention to improve operations.

They seize opportunity. NIC CEO Harry Herington leads a company that has completely transformed how government services are delivered online. The gov tech market is represented on this list (see pages 18 through 21) by smart investors who recognized a chance to contribute to better functioning communities. They and many others like them play a critical role in nurturing good ideas into transformative tools for the public sector and the citizens it serves.

They collaborate. The leaders on the pages that follow want the best ideas to rise to the top, even if they come from a neighboring jurisdiction. Indiana CIO Dewand Neely works to make sure other states can benefit from his state’s leading analytics work and wants to help local governments shore up their cybersecurity stances. Travis County, Texas, CIO Tanya Acevedo is dealing with the onslaught of digital evidence by working with neighboring counties on an online case management system accessible to multiple agencies.

As the saying goes, nobody has a monopoly on good ideas. Our 2017 Top 25 Doers, Dreamers and Drivers offer a fresh set of stories that are filled with them.
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Privacy by Design

After several months in its beta phase, the state of Washington's Privacy Modeling Tool officially launched Feb. 3. Chief Privacy Officer Alex Alben said the tool has undergone some refinements since its beta launch in late 2016, but is now largely ready to stand on its own. The application is built around a four-step process, which requires an organization to select its reasons for using data (e.g., law enforcement, etc.), the types of information being leveraged (e.g., Social Security, gender, etc.) and the intended uses before being given results. The results tell the user where the program might run afoul of state or federal laws. When the Web-based application launched last year, Alben said that the modeling resource was not so much an end-all legal authority for agencies as it was a starting point for the larger conversation around data use and constituent protections.

EYE ON THE MARKET

After more than two years and 200 customers, Vendor Registry is ready to hit the accelerator. The company, which is aiming to modernize and simplify the procurement process with a focus on smaller local governments, closed on a $1.8 million seed round at the end of January. The round, which five investors participated in, was oversubscribed by about $300,000. The firm has essentially set up a registry where vendors and government entities can set up profiles. Governments can send out bid notifications, keep track of who’s responded and facilitate conversations between departments. For vendors, the idea is to set up easy cross-registration with multiple government entities and communicate more easily with public officials.

Accurate Assessment

The number of homeless people in Aurora, Colo., just rocketed up — and that’s a good thing. January’s annual Point In Time census, required by the U.S. Department of Housing and Urban Development, identified 526 homeless individuals. That’s up from 420 in last year’s count. It’s not that the homelessness problem has spiked. Rather, city planners adopted new technology for this year’s count and got more accurate information. The city deployed teams of volunteers — 40 people riding in eight vans, all equipped with cellphones bearing Esri’s Survey123 tool. In addition to streamlining a paper-based survey process, the new tool gave the city deeper geospatial insight into the nature of the homelessness problem.
Help Wanted
Five steps to recruit tech talent to your city.

City officials intent on using technology to improve the way they operate face a range of obstacles in convincing talented data analysts, systems architects and coders to come work for them. How can a city compete with tech giants like Google or Facebook that can offer much larger salaries, access to trendy products and stylish work environments?

Based on my experience in city government, as well as many conversations with mayors, department heads and chief data officers, I’ve learned that improving communication to job-seekers and creating a more tech-friendly city environment can go a long way toward appealing to the best of the IT world. Here are five steps cities can take to make their data and IT offices a hub for tech talent:

Create attractive job descriptions and post them in the right places. In an Internet-driven job market, the first line of communication for an employer is often a general job site, which means local governments need to write engaging job descriptions to distinguish themselves from thousands of other listings. Cook County, Ill.’s Bureau of Technology has invested in its job listings, rewriting descriptions to appeal to private-sector employees and combining formerly separate jobs, which creates more substantive opportunities and frees up funds to increase salaries.

It’s also important that cities advertise their openings in places where job-seekers are likely to go looking. In addition to prominent sites like Indeed.com and Monster.com, cities should post jobs on tech-specific sites like Dice. In an effort to make postings more accessible and signal tech savvy to prospective employees, cities like New York have also revamped their job sites. NYC Tech Jobs boasts open source code and a polished UX, and includes detailed job descriptions and videos from current employees.

Develop partnerships with universities. Officials can also increase awareness of tech jobs by boosting their cities’ presence in academic institutions. A number of schools now offer dual degrees in tech and policy, for example the University of Chicago’s Master of Science in Computational Analysis and Public Policy. By organizing internship programs for credit in such programs, facilitating casework as a part of classes, or simply by holding info sessions and job fairs, cities can display the value of working in local government and attract talent.

Partnering with schools in a research capacity can also help cities locate and hire talent. At Harvard, to support the Ash Center’s Civic Analytics Network — a network of data officers from around the country — we have placed fellows in a number of city data offices. Harvard’s Government Performance Lab also places fellows in cities to galvanize talent. At Harvard, to support the Ash Center’s Civic Analytics Network — a network of data officers from around the country — we have placed fellows in a number of city data offices. Harvard’s Government Performance Lab also places fellows in cities to galvanize outcome-driven policy. These partnerships can provide the prestige and resources to appeal to tech job-seekers, many of whom can continue to work in city government after experiencing municipal work firsthand.

Offer substantive internship opportunities. Providing more appealing internship experiences may also create a pipeline to bring talent to city tech jobs. Boston designed a slick website to advertise its internship opportunities, which allows applicants to designate areas of interest like “helping people find affordable places to live,” ensuring meaningful placements. Boston gives stipends to its interns and provides them with experience in creating innovative solutions to municipal problems. These types of experiences show interns the excitement and purpose involved in resolving city problems, which encourages them to pursue municipal work down the road.

Create tech-savvy work conditions. Cities should streamline the hiring process, abandoning entrenched and systematized city hiring practices that discourage talent from applying or following through with interviews. If it is clear that you have a tech all-star after two interviews, hire him or her before another company does. There’s no reason why cities cannot post a job for 30 days, hold interviews a week later and make a decision within six weeks. As tech companies offer more and more money to prospective employees, cities need to be increasingly strategic in their efforts to recruit talent. Cities’ ability to create appealing tech jobs and advertise them effectively will have large implications on the future of civic tech talent — talent that cities will need to enhance government’s digital capabilities.
City Corporation operates Russellville Water and Sewer System, providing service for nearly 30,000 residents in Russellville, Ark. When it was time for City Corp. to choose a new system for human-machine interface (HMI) and supervisory control and data acquisition (SCADA), it worked with system integrator Brown Engineers to come up with a solution.

City Corp. chose Ignition by Inductive Automation®. Ignition is an industrial application platform with fully integrated tools for building solutions in HMI, SCADA, and the Industrial Internet of Things (IIoT). “We have to have faith in the software,” said Steve Mallett, general manager of City Corp. “Ignition has worked perfectly for us, and we’ve had no issues.”

Brown Engineers is such a strong believer in Ignition, the firm is a certified Ignition Integrator. “We went live with the Russellville upgrade in mid-2015,” said Dee Brown, principal and co-founder of Brown Engineers. “Ignition is helping run and control the water treatment plant and the water distribution system with pump stations and tanks. It’s also on the sewer treatment plant and sewer collection. So it’s a fairly large system. They also have radio and cellular telemetry sites that have been added.”

City Corp.’s SCADA system has nearly 38,000 tags. That includes data from a variety of PLCs and controllers installed at various times over the years. The system includes two HMI servers per plant in a master/backup redundant configuration. Ignition controls digestion blowers, clarifiers, sludge pumps, and more. It also provides alarm management and reporting functions.

Big Improvement
Mallett said the Ignition platform is more flexible than the utility’s previous system. And it provides a lot more data, which can be seen by more people. “That is critical,” said Mallett. “It provides information we need to make daily decisions, and it keeps us from having to go out to our sites. It drives costs down.”

Cost was a big factor in choosing Ignition. Its unlimited licensing model is an important benefit. “The software we had before charged by the number of tags,” said Mallett. “So if you wanted to upgrade, you’d have to pay more. Our system is growing, so that was a critical consideration. With Ignition, we never have to worry about any additional cost for adding tags.”

There are other savings as well. “The yearly maintenance costs are much lower with Ignition,” said Mallett. “So it was an easy decision to go with Ignition.” And the transition was easy. “We stayed up and operating during the entire process,” said Mallett. “The switchover was a smooth one.”

City Corporation has continuously expanded its use of Ignition.
to Ignition was quick and painless. That’s what mattered to us, and we appreciate Brown working with our staff to make sure that it went smoothly.”

**Faster Process, Less Paper**

City Corp. also found a non-SCADA use for Ignition, one which saves time and makes it easier to report data to the Arkansas Department of Environmental Quality (ADEQ). Seeking a more efficient process for tracking and reporting sanitary sewer overflows (SSO), Mallett asked Brown Engineers to create a mobile system that would cut down on paper and speed up the process. Brown leveraged Ignition to deliver exactly what Mallett envisioned.

The SSO Mobile application allows City Corp. to create field assessments on mobile devices, using standard Internet technologies. The other part of the system, the SSO Workstation app, provides tools for managing the data and reporting it to ADEQ. Field crews now use tablets and smartphones instead of paper and pencils. “We were able to make the process more efficient on several levels,” said Julie Halford, GIS/CAD Technician for City Corp. “The reporting, the calculations, making sure there were no mistakes. It all goes much faster now. And we found the new system to be extremely user-friendly for our field crews.”

City Corp. is so happy with the solution, it may adapt it for other uses. “With the success of the SSO Mobile app, we’re looking at possibly creating an app for hydrant flushing,” said Mallett. “It would allow us to get all the data from the hydrants and develop a database, versus the way we’re doing it now, which is with a pen and pad. And that could develop into an asset management system that we could use for all of our facilities.”

**Improving Cybersecurity**

In November 2015, Brown helped City Corp. replace a failing PLC with a new controller from Bedrock Automation. Bedrock™ controllers provide groundbreaking cybersecurity at the hardware level. City Corp. is so impressed with the performance and security of the controller, it’s planning to replace all its controllers with Bedrock. “It gives us peace of mind, knowing we have that hardware layer of protection,” said Mallett. “We sleep better at night.”

Brown Engineers is also impressed with Bedrock. “We’ve been working with City Corp. to develop a PLC upgrade and control strategy that would include cybersecurity for all their facilities,” said Brown. “And it appears that Bedrock will be the platform of choice.”

Watch the case study video online at: bit.ly/ia-Russellville
How does the change in your job title and role reflect a larger evolution in Albuquerque’s perspective on digital government?

It’s an acknowledgment of the evolution that’s happening before our eyes. These are fantastic times. We started with the Web and moved on with social media, and shortly after apps [came] open data.

Miguel Navrot
Digital Engagement Manager, Albuquerque, N.M.

Miguel Navrot’s 10-year career and rise through the ranks at the city of Albuquerque in some ways follows the emergence and growth in significance of municipal government driven by IT, data-driven results and social media communication.

A former military affairs reporter for the Albuquerque Journal, Navrot joined the city as a technical writer, then served as its website managing editor before becoming the first-ever digital engagement manager in August 2015.

“It’s a shift that I think perhaps better encapsulates what we’re trying to do,” said Navrot, whose position encompasses website management and Web content specialist. “It’s beyond working on a specific tool or platform, but looking at what can we better do to reach our audience and better communicate with people through the digital world.”

How has the digital engagement manager title influenced or shaped your work?

Part of the job is staying abreast of emerging trends, and it’s just not enough to focus on the website and worry about our next content management system upgrade. It’s also trying to be more attuned to what other governments our size and larger are trying to accomplish in the digital world and make sense of it. It’s also serving in an advisory role to other departments. There are also elements of marketing in this as well.

How do you promote cross-departmental/inter-service engagement?

The current mayor, Richard J. Berry, was quick to start a roundtable of all the communications officers in the city. Once a month, we sit down and talk about what every department is working on. It gives me an idea of what I can help promote on the website or social media. About four years ago, we started a social media meet-up. We put together a monthly get-together for different departments to discuss best practices, tools and tricks for best facilitating social media. It allows folks in different departments to get beyond the silos and have conversations with each other.

How do you help city departments identify and understand their audiences?

The first step is just sitting down and trying to identify, what is our message? Going back to the old Dr. Spock book on child-rearing, it opens up with “You know more than you think you know.” We have our own back-end analytics that we can look at. In a way, it’s being attuned to the information we already have as well as sitting down and trying to understand, almost from a marketing standpoint, who do we want to contact? And, of course, having a website that was responsive to all devices.

The next step is interesting. Are we going to bots? That’s certainly something we’re looking into — say, Facebook Messenger or Alexa. We try to be as responsive and accessible as we can to as large an audience as possible with the finite resources that we have.

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— Theo Douglas, Staff Writer

April/May 2017 // www.govtech.com
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IDEAS WELCOME

Government Technology’s Top 25 Doers, Dreamers and Drivers honors people inside and outside of government with a grand vision and the grit to execute on it. These are the people who aren’t afraid to bring a new, transformative idea to the table, and oftentimes, that spirit is contagious. Top 25 honorees also tend to foster that way of thinking in their teams. Here are a few hints at their philosophies and priorities that have landed them on our list for 2017.

WHAT THEY SAY

“I DON’T NECESSARILY BELIEVE IN THE STATUS QUO.”

“We try to recognize more overtly in our community that government is a partnership between citizens and their representatives.

“TRULY THE ROLE OF THE CIO IS A COMMUNICATOR, A CATALYST, A CHANGE AGENT …”

“If I only have eight hours to work every day, I’d rather spend my time working on something hard. I like the challenge of hard.

“In government, you’re really focused on being a public servant first.

“AT THE END OF THE DAY, YOU NEED TO PROVIDE VALUE TO YOUR CUSTOMERS AT A REASONABLE COST.”
Top 25 Doers, Dreamers & Drivers 2017

What They Do

Think big
Bust silos
Rethink assets
Facilitate digital government
Collaborate on best practices
Think like a startup
Modernize systems and practices
Convene problem-solvers
Improve service delivery
Share services
Challenge convention
Foster responsive government
Reshape the mission
Focus on citizens
Harness data’s potential
Pivot toward the future

Who They Are

Alex Alben, Chief Privacy Officer, Washington
Anne Roest, CIO of New York City, Commissioner of the Department of Information Technology and Telecommunications
Anthony Fox, Former Secretary, U.S. Department of Transportation
Beth Blauer, Executive Director, Center for Government Excellence, Johns Hopkins University
Cathy Cleek, CIO, California Franchise Tax Board
Capt. Chris Hsiung, Investigations and Special Operations Division, Mountain View Police Department, Calif.
Christopher Hughes, Assistant Director, Utah Division of Purchasing
Dewand Neely, CIO, Indiana
Gerald “Jay” English, Public Safety Program Manager, National Coordinating Center for Communications, U.S. Department of Homeland Security
Harry Herington, CEO, NIC
James Keene, City Manager, Palo Alto, Calif.
Jason Allison, Former CIO, Florida
John McCaffrey, CIO, Westchester County, N.Y.
John Miri, Chief Administrative Officer, Lower Colorado River Authority
Lauren Lockwood, Chief Digital Officer, Boston
Leigh Tami, Chief Performance Officer, Cincinnati
Oswaldo Mestre Jr., Chief Service Officer and Director of Citizen Services, Buffalo, N.Y.
Rebecca Woodbury, Senior Management Analyst, San Rafael, Calif.
Rita Reynolds, CIO, County Commissioners Association of Pennsylvania
Samie Saini, CIO, Atlanta
Tanya Acevedo, CIO, Travis County, Texas
Ted Ross, CIO and General Manager, Los Angeles Information Technology Agency
TEAM MISSOURI
Rich Kletthermes, Acting CIO, Missouri
Michael Reiling, CISO, Missouri
Steve Siegel, Deputy CIO for Operations, Missouri
TEAM TUMML
Clara Brenner, Co-Founder
Julie Lein, Co-Founder
TEAM URBAN US
Shaun Abrahamson, Co-Founder
Stonly Baptiste, Co-Founder

WHAT THEY DO

Think big
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Share services
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Foster responsive government
Reshape the mission
Focus on citizens
Harness data’s potential
Pivot toward the future
This year, we welcome 22 more individuals and three teams into the ranks of Government Technology’s Top 25 Doers, Dreamers and Drivers, bringing the total number of honorees to more than 400 since the program’s inception 16 years ago. In that time, we’ve recognized change-makers inside and outside of government who have proven what a valuable tool technology can be in making the promise of responsive, customer-focused government real.

The 2017 group includes CIOs, of course, complemented by others in the public sector enabling transformation at all levels of their organizations. Equally important are partners from outside the halls of government who are bringing investments and solutions to bear that help public sector leaders better serve their constituencies — whether they’re the agency down the hall, the neighborhood down the block or the public at large. We hope you enjoy the stories of the class of 2017.
It’s fitting that John McCaffrey started working for Westchester County, N.Y., on shared services day, during which agencies set up booths to present what’s available for other local governments.

McCaффrey, who started as deputy CIO in 2011 before transitioning to the role of CIO the following year, credits the county executive with focusing on shared services. But the tech available to municipalities and school districts in Westchester County is McCaffrey’s domain: records management and training, a criminal justice investigative tool and cybersecurity, to name just a few.

“Everything that we do, we look at it and say, ‘Is there potential here for shared services?’ — even in contracts that we sign,” said McCaffrey, adding that two of the county’s recent contracts can be used by any local government in New York.

McCaффrey’s work in Westchester County fits all the go-to tech boxes and is paired with a healthy quest to innovate. Meetings and even some reporting structures have been reorganized to give IT staff members the opportunity to be more “bimodal,” as he called it. Everyone is encouraged to bring up their ideas, and if the proposal won’t work, a legitimate reason is given beyond just “no.”

McCaффrey and his team are working on implementing next-generation 911 for the 43 police agencies the county supports, as well as a $30 million project to replace public safety radios. In addition, work on a social services app and a single point of access for mental health have drawn interest from other governments that would like to see them become hosted platforms or cloud applications.

“We don’t introduce and we don’t develop technology for technology’s sake,” McCaffrey said. “We try to look at it as the investment of taxpayer dollars toward the end of delivering value to and for community stakeholders through innovative information and business systems.”
Indiana CIO Dewand Neely’s predecessor Paul Baltzell cast a long shadow. In fact, we recognized Baltzell along with former Gov. Mike Pence and Office of Management and Budget Director Chris Atkins for their leading analytics efforts with a Doers, Dreamers and Drivers award in 2015. But in the year and a half since Neely has held the top tech spot, he’s more than proven himself as a capable technologist with a firm grasp on the fine details and a simultaneous appreciation for the long view.

Since the game-changing analytics work the state embarked upon in reducing infant mortality, Neely has helped direct equally influential efforts in applying data from multiple agencies toward other problems that aren’t unique to Indiana: recidivism and opioid addiction.

Pivoting away from what he describes as more “grandiose” analytics efforts that marked the state’s early successes, Neely’s focus now is on incorporating data-driven thinking into everyday operations across the state. Included in that is performance measurement, assigning scorecards and visualization tools like dashboards to help decision-makers more easily identify areas needing attention.

At the top of Neely’s list of risks is cybersecurity. The state’s multi-jurisdictional Information Sharing and Analysis Center (IN-ISAC) formed in 2015, facilitates information and strategy sharing between state agencies, law enforcement, academia and the private sector. Praising the efforts to date, Neely also sees a responsibility to help local governments with cybersecurity too.

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Five years in, the civic-minded startup accelerator Tumml is stronger than ever.

In 2016, one of the accelerator’s startups, Chariot, was acquired by Ford Motor Co., which described the purchase at the time as the “cornerstone” of its international shuttle business. Another, Valor Water Analytics, aimed at helping maximize water efficiency, raised $1.6 million in seed money last June. A third, LED production lighting
company Hive Lighting, raised more than 12 times its capital goal on Kickstarter.

All told, the Tumml portfolio boasts $190 million in enterprise value across 38 startups — the majority of which are run by women or people of color. They have the gap-bridging work of Tumml founders Julie Lein and Clara Brenner to thank. When the pair graduated from the Massachusetts Institute of Technology and founded Tumml in 2012, they quickly adopted an analytical approach to understanding the market. Through research, they identified an unmet demand for early stage capital among high impact, urban-focused startups, and seized the opportunity by leveraging funding from nonprofits and corporate partners. They’ve been helping those startups find new ways to use technology to improve cities ever since. The accelerator works by providing startups $20,000 in exchange for a 5 percent equity stake. Among their companies is Parko, a platform to help cities simplify vehicle parking; HandUp, which enables donations to help the homeless; and Simpolfy, which aggregates and analyzes legislative data to better inform users about which elected officials represent their interests. Then there’s Neighborly, a community investment platform; Hitch, which matches ride-sharing drivers with multiple riders; and Forensic Logic, a data search engine for law enforcement.

The contents of their portfolio translate to a fair amount of interaction with government. As Lein said at Government Technology’s State of GovTech event last October, “It pays to work with government and work collaboratively.”
Cities have complicated challenges, which get more complex as they grow. So Urban.Us thinks cities need to get more creative with how they solve those problems. The investment fund, which focuses on early stage companies, is about much more than just money. It’s a network of people with varying skills, all working together to build out promising startups. When Urban.Us invests in a company, it’s providing money, business knowledge and relationships with cities geared toward innovation and specialized expertise.

Behind the effort is founder Shaun Abrahamson and principal Stonly Baptiste. Starting in 2013, the pair launched two funds focusing on four kinds of challenges cities face: mobility and logistics, the built environment, utilities, and service delivery. The portfolio involves some heavy-hitters: SeamlessDocs, which digitizes government forms, has raised nearly $17 million; and Rachio, which sells smart water technology, has racked up more than $10 million in capital, including an investment from Amazon’s Alexa Fund.

Since Urban.Us focuses on “urban tech,” its investments swing between consumer, business-to-business and government sales. But a few focus directly on government: Citymart offers a problem-based procurement platform to help cities find creative solutions to specific problems. LiveStories is all about making sense of government data. And Mark43 is a cloud-based records and information management system for law enforcement.

For their part, Baptiste and Abrahamson are focused on making solutions happen — investment just happened to be the path they chose toward that goal.

“We actually didn’t start with the intention of being venture capitalists,” Baptiste said at a
In July 2016, the U.S. Department of Homeland Security awarded a $650,000 grant to the Lower Colorado River Authority (LCRA) to look into better sensor technologies to aid in flood management. Up until that point, sensors cost anywhere from $25,000 to $75,000. John Miri, chief administrative officer for LCRA, knew they could do better.

“To me, an electronic device that costs $25,000, that only does a few things, is almost morally offensive,” said Miri. After sending out notices for potential partners, LCRA began working with a startup creating the same type of sensors that cost $200 to $2,500. While the tests are ongoing, the potential savings would be significant. This could free up funds for a more robust sensor network, providing better information, and ultimately better equipping the LCRA to protect the public.

Miri has always been interested in creating a better solution so long as it leads to a tangible improvement. “I always liked this idea of discovery, but only in the sense that the discoveries could be leveraged to improve people’s lives and provide better services.” That attitude led Miri to help start six high-tech startups.

“Starting your career in startups, you’re kind of ruined for life,” said Miri in explaining why he’s never satisfied with the status quo. And being on the maker side of many software tools taught him that each tool is created by someone just like him. “It gave me a taste that anything is possible. You can solve some really hard, really expensive problems with technology if you have the courage to break open the box.”

Miri has built his career, which included several leadership positions at the Texas Department of Information Resources, on breaking open those boxes and continuing to innovate wherever possible in order to help people, reflecting a steadfast commitment to the end game of public service. “If a piece of technology is whiz-bang, but it doesn’t do anything for anyone, is it really a tool?”
There are few people who know the inner workings of California’s Franchise Tax Board better than its CIO, Cathy Cleek. That’s the upside of working at a place for 33 years. Cleek has seen it all as the tax board has moved away from paper-based processes in favor of all-digital workflows, online self-service for customers and business intelligence to improve the collection of 17 million tax returns each year. As the tax board’s CIO for the last 11 years, Cleek’s leadership and vision has been integral for success.

“The problems I like to take on are our hardest and biggest problems,” she said. “I like the challenge of hard. If I only have eight hours to work every day, I’d rather spend my time working on something hard that we’ve wanted to solve for a very long time.”

In 2006, Cleek and her 1,000-person staff finished what could be their toughest task to date: a business process improvement effort called Enterprise Data to Revenue (EDR). The ambitious project created an enterprise data warehouse, instituted predictive analytics, created digital images of paper tax returns and modernized legacy systems. Elected officials have called EDR a template for doing a big project the right way. The five-year initiative came in on time, on budget and has helped California collect an additional $3.3 billion of revenue thus far.

The project is a capstone for Cleek, a sixth-generation Californian who grew up on a farm and started working for the tax board as an auditor after she graduated college with an accounting degree. She went on to serve in different positions across most of the tax board’s business lines: collections and tax return filing, recruitment, and the call center.

That wide view gave Cleek a unique perspective about how technology can help make the state government more efficient and improve service delivery to customers.

“I really see myself as the solution provider for IT’s problems,” Cleek said. “I just happen to use technology to get everyone to work together,” she said.
If you want to understand how and why the government IT department is changing, talk to Anne Roest, CIO and commissioner of New York City’s Department of Information Technology and Telecommunications (DoITT). The days when hardware, software, and networking had to be acquired piece by piece and custom assembled are over.

Roest, who became commissioner in 2014, is in the midst of reshaping DoITT’s mission. “We are working on becoming more of a broker, rather than a services provider,” she said.

Roest has had a long career in technology, first as a programmer and analyst in the private sector and then with the state of New York, where she rose through the ranks and presided over a number of game-changing IT projects, including the overhaul of the state’s tax systems and a multi-agency tech upgrade for public safety. But now she is undertaking one of her most challenging projects: guiding the nation’s largest local government IT agency to become an organization that is fast, flexible and adaptive to customer needs.

What is considered successful in IT hasn’t changed, according to Roest. “At the end of the day, you need to provide value to your customers at a reasonable cost.” But how you get there has changed. Instead of building monolithic IT systems that cost millions of dollars and take months to complete, IT departments are now focused on how to deliver more value, faster. “You need to build things in a different way, so the system can be more flexible and dynamic,” she said.

Thanks to the cloud and agile development, projects can get done faster and there’s opportunity to build better, higher-quality solutions. “But they are not necessarily easier to build,” she added.

But Roest has never avoided tackling the tough problems, and she uses her leadership skills with her managers to help DoITT pivot toward the future. “I’m making sure I have the right people in the right seats on the bus and we know where the bus is going. That’s when I let my people do their job.”
She speaks data fluently, but Cincinnati Chief Performance Officer Leigh Tami is quick to point out that it’s her adopted language. “Full disclosure, I am a lawyer. Data is my language by trade,” said Tami, who studied public finance and education law in law school. But less than two years after joining the city in April 2015 as a data analyst, she’s risen to become its second-ever CPO — working with City Manager Harry Black to write data-based performance agreements with department heads, and spearheading the December 2016 launch of CincyInsights, a new portal with 15 dashboards.

At a cost of around $55,000, the dashboards let Cincinnati residents track everything from emergency medical responses to trash collection, updated every 10 minutes, and snow removal, updated every three minutes. From the portal’s debut on Dec. 7 to Jan. 31, it received almost 26,000 views. Dashboards on snowplow progress, the visualization of the month and the heroin epidemic were among the most popular.

Those views, Tami said, are proof City Hall is on the right track in trying to harness data’s potential. “I think data is great, it’s a really important movement. We’re not just releasing paper, we’re not just releasing information,” she said. “People consume information in the form of data, and I think the fact that government is trying to adapt to that is really significant.”

Significance aside, the Cincinnati CPO’s office still operates lean, with just five full-time staffers — Tami, the chief data officer, an innovation manager and two full-time analysts. But Tami credits the city manager, mayor and City Council with empowering her office to meet the challenges of big, open data. In her case, she said, the conversation about data began during the interview process. “Once I realized there was interest in that here throughout the entire city, I realized it was a major opportunity for us,” said Tami, who reports to Black, a previous Top 25 honoree. “I believe what we’ve been able to accomplish here in Cincinnati would, if at all possible, take eight to 10 years in other places.”

THEO DOUGLAS
What is the purpose of local government? Is its primary responsibility to deliver services? Or should it do something more, such as convene and facilitate with the people and businesses that make up the community? That latter point fits the philosophy of James Keene, city manager of Palo Alto, Calif. “We try to recognize more overtly in our community that government is a partnership between citizens and their representatives,” he said.

In public service for many years, Keene’s ideas remain fresh and thoughtful. Last year, he and his CIO Jonathan Reichental wrote an article that criticized local government’s traditional mindset about information technology. City managers don’t usually take a public stand on IT. But Keene and Reichental spelled out five key problems and offered solutions.

The problems, ranging from traditional big-bang development and bureaucratic centralization to federalism and hardware ownership, are not new. “Part of the problem is the practical issue of operating and maintaining IT as a business,” said Keene. “It’s beyond government’s capacity to do all that — buy, develop, apply, maintain and secure.”

Keene would like to see local governments move to the cloud, use agile development, and create opportunities for more collaboration with the private sector and private citizens. At the same time, he believes cities must rethink their assets, from streetlights to parking meters, which can be turned into digital tools.

But a city doesn’t become innovative and more effective by changing how it obtains and uses technology. You have to build trust and think like a startup, according to Keene. “That’s the mindset we need to have, so we can scale up solutions that not only make our city a better place, but help make other cities better as well.”
ALEX ALBEN
CHIEF PRIVACY OFFICER, WASHINGTON

If you ask Alex Alben whether he sees himself as working for the government or the people, he’ll tell you that, for him, there is no difference. As Washington state’s first chief privacy officer, it’s his job to serve as a resource, moving between the often-disparate worlds of state bureaucracy and the daily lives of Washingtonians. “I don’t really draw a distinction. I feel that I’m doing public service. Public service to me means making sure that the government is working most effectively on behalf of citizens.”

It’s obvious in even the briefest of conversations with him that Alben is invested in the work his team does protecting information with the Office of Privacy and Data Protection. Though his post was only created in April 2015, the CPO has already launched tools to guide agencies in protecting and using their data within the bounds of Washington state law.

The Privacy Modeling Tool is the perfect example of how Alben innovates around challenges. In the beta stages in early 2017, it provides a framework for agencies to design programs around privacy protections and state law — what Alben calls “privacy by design.” As government becomes more reliant than ever on customer data, Alben argues that the privacy and safety of data stores must be an evolving consideration.

“With the proliferation of new technologies, including cloud computing and big data analytics, we’re getting into a realm where the old models of government data management don’t apply anymore. It might be a cliche, but I really do think that we need to reinvent the data model for government, particularly in light of the evolving security and privacy environment.”

For lawmakers, the privacy point man is also helping guide legislative decisions around data. Most recently, he advised lawmakers on the challenges and opportunities around biometric identification. While he said there are a number of benefits to the quickly improving technology, the data also carries hefty risks worth careful consideration.

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Capt. Chris Hsiung's career in law enforcement spans 22 years, but five years ago, his focus turned online — and he hasn’t looked back. At the time, he was in charge of special operations, focused on tasks that allowed him to be forward-looking. That combined with an interest in how technology could make the Mountain View, Calif., Police Department more efficient led him to dive into social media.

Specifically, Hsiung was interested in moving past the prevailing view at the time that social media was a one-way communications tool. A 2012 social media conference offered a message about how to reach customers and develop brand loyalty, and it resonated with him.

Although we don’t have a product per se that we sell, we actually do, and that’s our service,” he said.

Mountain View PD started tweeting about incidents in almost real time and revealed to followers where officers were “hiding” for traffic enforcement. Today the agency is a social media leader in the public sector. For Hsiung it’s about depositing positives into the bank of community trust. “Each time you interact online, even if someone is leaving a negative comment and you write them back and you interact, you’re transparent, those are all little deposits,” he said. “Over time that creates a nice balance for you to draw from in case there’s ever an crisis.”

In 2014, those efforts paid off when an officer on the force was arrested. The department posted an open letter to the community on Facebook and faithfully replied to each person who commented. Social media has also changed the agency’s relationship with the media and the public information role, placing a premium on the speed and accuracy of information that goes out.

Hsiung also pays attention to the element of fun because, as he said, “it’s about being memorable and sharable.” The evidence is in the stats: A recent Star Wars-themed video about DUIs was viewed more than 20,000 times on Facebook alone — an impressive number for the city of 77,000 people.

Rita Reynolds has been working to help Pennsylvania localities implement technology and enhance IT operations since 1988 — back when tech in government was just getting off the ground. She set one of the smallest counties in the state up with a new electronic accounting system, and word about her services got out — she ended up working in 35 different counties setting up the QuickBooks-based fiscal tracking system that she designed and created, troubleshooting computers, and setting up an application to track statistics on adoption and foster care. The state saw what Reynolds had designed and purchased it from her, so that all but a few Pennsylvanian agencies could start using a standard system.

A professional connection Reynolds made through her work with the counties took a job at the County Commissioners Association of Pennsylvania (CCAP). “And he invited me to the family dinner and said, ‘You need to apply for this job and we’ll let you do what you’re doing now.’”

It was an offer Reynolds couldn’t refuse. And after a few years, she took on the director of technology/CIO position, where she’s been ever since.

Over these 18 or so years, Reynolds has created and led a first-of-its-kind criminal justice case management system for the courts, which other states are starting to emulate, and she led the formation of PA Cyber Safe — which began as a support group of sorts, for cybersecurity. It has since grown into a formal meeting in which CIOs and security officers meet to discuss cybersecurity issues and solutions, and even includes security training and a reduced rate on phishing software that is shedding new light on vulnerabilities.

As for what Reynolds considers her greatest accomplishment during her tenure at CCAP? Definitely the County Criminal Justice Unified Case Management System. “It is a one of a kind,” she said. “What we’ve accomplished by creating a solution on Microsoft Dynamics that unifies offender data and adult probation and district attorney offices — it doesn’t exist anywhere else that we’re aware of.”
As the CIO for one of the fastest growing areas in the U.S., Tanya Acevedo is working to meet the increasing demand for IT services in Travis County, Texas. One way to keep up with the need for tech-driven solutions is through shared services, which she said have become the “go-to way of doing things.”

One recent example is Travis County’s partnership with three other Texas counties to establish a Web-based case management system for law enforcement to directly upload digital evidence into a platform accessible by both prosecutors and defense attorneys. The need was born out of the growing amount of data from devices like in-car video systems and body-worn cameras. Travis County went live with the system in November 2016, and it’s now being piloted by local law enforcement agencies. “It’s already seen some quick wins and will really help automate and speed up this process,” Acevedo said, estimating that it will be used to its full capacity by May.

Acevedo was named the county’s CIO in 2013 after serving as its interim IT chief. She previously worked for the CIO of Orange County, Calif., in the private sector as a consultant, and got her start in IT working with casino systems for an Indian reservation. “We joke that we’re all sales support in the private sector, but in government you’re really focused on being a public servant first,” she said. “That means you’re making sure you’re finding the best use of our limited technology resources and investments.”

Her focus spans all areas of IT, looking at where tech can make the biggest impact while keeping an eye out for what’s next. From a paperless ticketing process that integrates with the court system to connected sprinkler systems that detect rain and adjust watering schedules, the combination of these efforts creates real change. Acevedo called the sprinkler example a “small yet big thing” — one that illustrates the thinking that will propel Travis County to its next tech-driven innovation.

Missouri has made significant strides tech- and cybersecurity-wise in recent years, and it has three individuals in the C suite to thank: Acting CIO Rich Kliethermes, Deputy CIO Steve Siegler and CISO Michael Roling. For starters, Missouri received one of the few A grades in the Center for Digital Government’s 2016 Digital States Survey, which acknowledged its tech initiatives in public safety, emergency management, criminal justice and corrections, many of which have collaboration and data sharing at their heart.

Michael Roling
Deputy CIO (Middle)
Steve Siegler
Acting CIO (Right)
Rich Kliethermes
The state is also working to create a portal that will make it easier for local and municipal governments to understand and comply with state and federal environmental laws, rules and regulations. But it’s not doing it alone — Missouri IT and environmental officials are working with counterparts in Arizona to ultimately create architecture that other states can use.

The cloud-based portal is currently undergoing testing and should go live this spring.

With so many technology projects happening across the state, the role of the CIO at the center is critical. Kliethermes told Government Technology last September that chief among his responsibilities is to act as an agent of change. “Truly the role of the CIO is a communicator, a catalyst, a change agent, asking hard questions on both sides — with vendors, with the business side, with our internal staff — giving them time to communicate their issues, their concerns, their ideas.”

As Kliethermes’ deputy CIO, Siegler — who has spent more than 25 years serving Missouri — is crucial in managing operations of the enterprise network infrastructure, and in overseeing the daily operations of the state data center, as well as the networks and telecommunications teams.

As for cybersecurity leadership, Roling is the go-to guy in Missouri. He’s been CISO since 2009, which means his tenure has far outlasted that of the average government chief information security officer. As such, he is frequently cited as a leader in cybersecurity, and was one of the first CISOs to implement a comprehensive cybertraining program for internal staff, a practice rapidly gaining ground across the country. And while he acknowledges the challenges of competing with the private sector for talent, over the last seven years, there has been zero turnover for Roling’s cybersecurity staff.

Roling credits a job rotation program, which guards against burnout and helps accelerate onboarding. “That has been a key factor in keeping our retention as high as it is.”

JESSICA MULHOLLAND
Anthony Foxx  
FORMER SECRETARY, U.S. DEPARTMENT OF TRANSPORTATION

Growing up in the shadow of two major Charlotte, N.C., freeways shaped how Anthony Foxx, former U.S. secretary of transportation, viewed infrastructure: both its power to connect communities to job centers and education and the danger it held to segregate communities. It became clear to him that the decision to route the freeway through his community was intended to carry people through the neighborhood, but not to his neighborhood. That early observation influenced Foxx’s thinking about the power of infrastructure.

Foxx got his start in politics at the local level, serving as a City Council member and later as the mayor of Charlotte. When asked by President Obama to head the Department of Transportation (DOT), Foxx recognized the opportunity to shift the paradigm in transportation, embracing technology to maximize infrastructure’s capacity to serve communities.

“I have made it a leading priority to ensure that we are using transportation in ways that connect historically underserved communities and people with opportunities, jobs, education and more,” Foxx said in his farewell message earlier this year.

Evidence of this commitment can be found in the 2014 DOT Ladders of Opportunity grant program, which awarded funds to local transit agencies, prioritizing connecting disadvantaged and low-income individuals with job and educational opportunities, health care, and other vital services.

But there’s more to it than building more roads and freeways. Foxx has championed the idea of embracing breakthroughs in technology to create a multimodal transportation system that works for everyone.

Under Foxx, the U.S. DOT released the Federal Automated Vehicles Policy, which outlines how autonomous vehicles can be safely integrated into the market, while citing the potential for driverless vehicles to increase mobility options for the aging, disabled and otherwise underserved.

During his tenure, the department also recognized the potential for vehicle-to-vehicle communication to reduce roadway accidents. The department’s Smart City Challenge, a $50 million competition aimed at getting local governments thinking about smart, integrated transportation systems, also benefited from Foxx’s leadership. The winning submission from Columbus, Ohio, included provisions for self-driving cars, connected vehicles and integrated smart sensors. But the 16 other cities that competed in the challenge advanced their plans for smart infrastructure too, exploring opportunities and forging new partnerships to develop next-generation transportation systems. And that was exactly the point.

HARRY HERINGTON  
CEO, NIC

Where would the state Web portal be without NIC?

It’s been 25 years since the company won its first contract, with its home state of Kansas, to offer government services through a website. Today, NIC dominates the market — in fact, it built more than half of all state Web portals online today.

A key piece of that success is the company’s revenue model, which asks for no up-front money from the state. Instead it finances itself by charging fees when citizens pay for things like permits and vehicle registrations. Harry Herington has led NIC as its CEO since 2008, but he’s been involved in the company since 1995 — right as it started picking up real steam.

“They were a dial-up business, and I said, ‘You need to take what you’re doing now and take it to the World Wide Web because that’s where everyone’s going to be going,’” he said. Herington said he sees the work as a public-service mission — in fact, he walked away from the legal profession because he saw digital government as a clear means of helping society. Attitudes have largely shifted in the public sector as well. In the past, much of government feared new technology. Now, it embraces it.

In recent years, the company has started edging into new markets. When Oregon voted in 2014 to legalize recreational marijuana use, NIC was there to offer a solution to handle the licensing of the new businesses. When Amazon started selling the Alexa digital home assistant, NIC partnered with Utah to deliver a driver’s license practice exam using the technology.

Between artificial intelligence, virtual assistants, automated driving and the ubiquity of cellphones, Herington said he thinks government is at a defining moment where it can start harnessing technology to better serve citizens.

“I’m having more fun now than ever,” Herington said.
Rebecca Woodbury thinks employees of the city of San Rafael, Calif., should have tech tools that inspire creativity and innovative thinking in order to serve their community. She knows that’s not necessarily government’s strong suit, but she doesn’t accept that it can’t be, which explains her recognition as one of 2017’s Doers, Dreamers and Drivers.

Woodbury started her career with San Rafael eight years ago as an intern and now serves as a senior management analyst. The Bay Area city of nearly 60,000 recently set out to develop an action plan for community engagement. A couple key digital projects rose to the top of the priority list in the process—an updated city website and the city’s first customer relationship management (CRM) system.

She assembled a diverse group of internal stakeholders to ensure a breadth of interests and opinions were represented as they defined the scope of these projects. In looking for vendors, Woodbury made a conscious effort to avoid making the list of requirements overly prescriptive. Opting for an RFI rather than an RFP, she still had to coax some companies into responding. Getting involved with government can be a hard sell.

“I was really looking for partners that were going to help us achieve our goals: to engage better with our community, to provide tools to our community that they’re looking for,” she said. “When I worked with that kind of value-driven process … the vendors that rose to the top were the ones that shared the same passion we have to provide these services to the community.”

She wasn’t necessarily looking to work with startup companies on the projects either. That’s just how it worked out. Both the new site and the integrated CRM system launched last December to rave reviews. And that’s just the beginning of San Rafael’s journey to more effective citizen engagement.

“What we’re focused on in San Rafael is modernizing the way we do things and really trying to create an innovative culture,” she said. “Whether that’s through technology or just plain creativity, we’re really trying to inspire all levels of the organization.”
Atlanta is big into data. In addressing the challenges of a rapidly increasing population, the city is trying to work smarter, not harder, and CIO Samir Saini has taken the lead in that effort. It’s not enough to do pilot projects for the sake of demonstrating what’s possible, Saini said, but to really focus on understanding what solutions will work.

To understand those issues in depth, Atlanta’s IT department has been gathering big data in order to run advanced analytics. In part out of necessity, the city is transforming itself to be smarter by leveraging data to be descriptive, prescriptive and predictive.

An obvious outcome from an increased population is more traffic congestion on roads and freeways. Atlanta is working on a project that leverages machine-learning algorithms to create a safer environment for drivers. By combining more than 10 data sources covering 140,000 accidents, the program aims to predict traffic patterns, and to give a good idea of where an accident will happen and how severe any injuries may be.

The city also is targeting water main breaks and predictable crimes through looking at patterns in the data. “But we can’t do it alone,” said Saini. “We have partnered with Georgia Tech to provide the data science resources to do the big data analytics and machine-learning work to develop the algorithms.”

All of this work would not have been possible without the whole team in the Department of Information Management, said Saini. The city’s IT has been consolidated since he was brought on board in July 2014. “We built the right structure to support the city,” he said. “We have had to come up with a way to stitch it all together at all layers.” By centralizing resources, Saini and his team created common security information protocols and moved several services to the cloud.

One project that Saini beamed with pride while discussing was ConnectHome, a federally backed program that spurs Internet equity for residents in assisted housing units. Atlanta brought connectivity to more than 1,500 children who previously had no Internet access at their homes in 2016 and is on target to connect 5,000 by the end of the year. “This is easily the most meaningful,” said Saini.
It seemed like the start of a promising, somewhat modest career as a lawyer working at the World Trade Center in New York City. But on Sept. 11, 2001, Beth Blauer’s life changed dramatically. Following the tragedy and without a job, she returned to her home in Maryland where she ended up working for the state in juvenile probation services. Helping children and, by extension, their families, gratified Blauer’s desire for public service. But she was also frustrated by the lack of information she needed to make important decisions. “I realized we were contributing to worse outcomes because we weren’t coordinated [with other departments],” she said. “That’s when I became an advocate for information sharing in state government.”

The timing couldn’t have been better as newly elected Gov. Martin O’Malley launched StateStat, a new methodology for data-driven performance, and named Blauer to lead it. “I fell in love with the process, how agencies could work together,” she said. “It made me realize how important data was and the need to bust silos to accelerate outcomes.” Blauer eventually left state government, worked for a while at Socrata, the open data platform firm, and in 2013 was named executive director of the Johns Hopkins University Center for Government Excellence. While her focus on data-driven results remains relatively the same, she now works with cities and counties, helping increase their capacity for data management. “We’re helping them make the connection between data and outcomes.”

The work has as much to do with management and governance as it does with technology. “I’m very interested in technology and the impact it can have on government, but I’m also very critical of the role technology has played in getting government to where it is now,” she said.

A key tech problem, according to Blauer, is proprietary enterprise systems, which make it difficult to extract good data in a cost-effective manner. What’s needed is a shift in priorities, away from technical solutions and toward an emphasis on connecting data to outcomes. “We’re seeing that shift, and I hope it continues,” she said. “It takes practice, but those routines are going to sustain data-driven work in government and influence what it looks like going forward.”

TOD NEWCOMBE
Boston’s newly redesigned website may have officially left the beta phase when it launched in July, but to Chief Digital Officer Lauren Lockwood, its entire working life will be spent in development.

“The launch is really the beginning,” said Lockwood, who was hired in December 2014 to improve how Boston provides digital services and citizen interactions. The former Morgan Stanley investment banker has led the redesign of Boston.gov and brought in an array of tech talent including developers, a project manager, an engagement strategist and a team of tech recruiters. Two years, they’ve helped other departments report their information available is not the same thing as making them accessible. That sort of thing has carried through everything we do,” said Lockwood, also a Harvard Business School graduate. Staffers chose updated colors and type fonts, and rewrote text to make it less impenetrable and academic; and, most importantly, elevated key functions — letting residents sign up for snow emergency alerts, pay parking tickets and report 311 issues all on the website’s front page.

The experience taught Lockwood that most people interact with Boston digitally, and that websites need to be mobile responsive for residents whose only computer may be their cellphone. One future initiative is making the application process truly virtual — updating at least 344 PDFs of forms or applications that now must be downloaded.

“I think with the people we work with and process around how we document all the different types of data sources we have. That way, we can expose the data to spur all sorts of innovation, both in the public and private sector.”

In February, Allison announced that he was leaving state service to take on a public affairs role with a law firm. “We have such an opportunity to transform how technology delivers services to the citizens of our great state,” he said before resigning, “and I’m proud of the work we’ve accomplished.”

When Jason Allison stepped up to lead Florida’s Agency for State Technology, he was signing on to lead an organization with a tumultuous past. Funding starts and stops had put the agency into unfamiliar territory. But during his short tenure as interim CIO, Allison impressed the powers that be and put the agency on a fresh and forward-looking course.

“We worked very hard back in 2014 to establish a centralized IT organization with the proper amount of authority, budget and mission to really move the needle in state government IT,” he said recently. He was officially appointed in late 2014, and securing the state’s data centers was front and center on Allison’s list of priorities. A sharp legislative(oditions timetable from more than two years to just 120 days.

“It can’t be stated enough how much of a challenging, complex and collaborative effort it was to move an entire data center in less than 100 days.”

“Allison impressed the powers that be and put the agency on a fresh and forward-looking course.”

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When he first started delving into denial of service attacks on 911 call centers, Jay English thought there might be a threat to the critical public safety systems.

At the time, English was director of Communications Center and 911 Services for the Association of Public-Safety Communications Officials International (APCO), and as he looked deeper into the topic he found that these attacks were more widespread than he first thought and that a large percentage of public safety answering point (PSAP) officials were unaware of the threat. That set the stage for the last four years spent working to educate PSAP officials about the importance of cybersecurity and how to combat attacks.

At APCO, English worked with the U.S. Department of Homeland Security (DHS) and the National Emergency Number Association (NENA) on a best practices document that yielded surprising feedback. “The request for information and sharing of information going out to PSAPs and public safety netted us an amazing return,” he said. “Where we thought we might have dozens of attacks targeting public safety infrastructure, we found we had more than 300 in a relatively short period of time.”

That set in motion a campaign to educate PSAP and public safety officials about denial of service attacks.

“From that point we’ve grown to a national program that encompasses associations like APCO, NENA, DHS, DOJ, the FBI and the National Fusion Center Association and have lots of resources that can be brought to bear when we have an event,” he said. “We have fostered what I believe is really an information-sharing environment that lets PSAPs know if there is an event through their associations.”

That information sharing continues for English at the DHS, where he began a new chapter in October 2016 to help guide the public sector on cybersecurity issues. — JIM McKAY
Much has been said about the various phases of citizen-government interaction over time. Los Angeles CIO Ted Ross offers up yet another interpretation of events—a five-phase view that helps place him among leading government IT practitioners.

The most antiquated way for citizens to access government services was a visit to a city building. Next came telephoned-eriable service, followed by the world of government websites, ushered in by the age of the Internet. Ubiquitous smartphones led to public-sector mobility efforts, making government available anytime, anywhere. The fifth wave of citizen engagement Ross points to—the one he’s most excited about—centers on virtual assistants.

“Ultimately we want to work toward the direction in which 311 service requests can be taken through a virtual assistant,” he explained, adding that the city recently started coding Amazon’s virtual assistant, Alexa, to take in data from the city calendar. “We’re not there yet, but we want to work in that direction because in the year 2017 with 4 million Angelenos, we need digital tools to be able to connect and engage with them.”

Under Ross’ leadership, the IT establishment in California’s most populous city is on solid footing. Its focus, he explained, is being responsive to city employees, as well as residents; responsible in promoting sustainability and diversity; and providing excellent technology tools and practices.

The strategy is proving effective. Los Angeles won the Center for Digital Government’s 2016 Digital Cities Survey and is consistently pointed to for IT leadership. A multifaceted Women in Tech Initiative coupled with aggressive recruiting at colleges, hackathons and coding academies is helping build its tech bench to prepare for an impending retirement wave, while partnerships with local universities are supplementing the city’s in-house data analytics capacity. A visible commitment to transparency is fueling the need and creating opportunities, like Vision Zero, aimed at wiping out pedestrian deaths by 2020. What unites the e-government efforts is a steady commitment to the needs of the people they serve.

“We need to focus on our customers, have a great understanding of who they are and what they need,” Ross said, “and deliver the maximum value to them using technology.”

When Utah and the National Association of State Procurement Officers (NASPO) ValuePoint wanted to streamline cloud procurements across the country, they turned to Christopher Hughes to lead the charge. After just under three years in Utah’s Division of Purchasing, Hughes recently released a multistate Cloud Solutions solicitation that could save states and their taxpayers millions of dollars.

The basic concept behind the multyear procurement undertaking was to give states tools to make buying cloud solutions simpler using collective purchasing power. Vetted companies are added to a roster and states can take advantage of what they offer. In his post, the assistant contracting director said working across agencies to procure any item helps lend perspective to all that the state is responsible for.

“One day I may be working on a cooperative contract for cloud services and the next day I will be reviewing a solicitation for an agency contract for calendars. And each of these procurements is important to the end user of the contract, so it is important that I learn why the item is needed.”

The cloud project was no different. It provided a substantial value to all involved, but required Hughes to work outside of his own state that he normally would not work with, along with others from other states and cloud experts from the Cloud Security Alliance, NASPO ValuePoint, Cloud BC and NASCIO. These people were able to help me understand the need and importance of cloud in the public sector,” he said, citing the collaboration as critical to the success of the effort.

It’s a strategy Hughes sees as necessary, especially on tech procurements, moving forward. “It is beneficial … to reach out to others to see what has worked out and what has not, especially as technology advances rapidly.”
Q: What features were you looking for in an ECM solution?
Terry: We needed a system that included security and auditing capabilities. In the past, users could scan over an existing document or delete a document, without any record of who did it. Laserfiche’s auditing and security features enable us to better maintain accurate records of inmate files.

Q: How does the ECM system integrate with your other applications?
Fields: Our Inmate Management System (IMS) consists of about 20 applications — 6 of them write data to Laserfiche. For example, instead of printing, filling out and then scanning paper forms into the system, users can complete Laserfiche Forms online and save them in the inmate’s electronic record. Also, if there are any inmate incidents that result in disciplinary actions or health services, they’re recorded online and transmitted directly into Laserfiche, which saves us time.

Q: How have you streamlined processes and the release of documents to each facility?
Terry: We used to print inmate summaries and forward them to each institution. Now, the inmate summary is directly downloaded into an inmate’s file in Laserfiche, as well as made available in a shared folder, where the documents can be printed and given to the inmate. This process has allowed us to get documents to the institutions quickly.

We’ve also streamlined inmate release information with Laserfiche. For example, we often receive court documents to release an inmate the same day. Those documents go directly into the inmate’s file in Laserfiche and the shared folder at the appropriate institution, so the inmate can be released from our system as soon as possible.

Q: How has Laserfiche helped you comply with security and documentation requirements?
Fields: We have a new suicide monitoring requirement that calls for additional documentation. Using Laserfiche, we can quickly modify one of our applications so social workers can scan the necessary documents and save them directly into inmates’ records. Some of these forms fall under HIPAA. With Laserfiche, we have the capability to limit file access and audit activity, which is going to help us comply with the new requirement.
Traditionally, even tech-savvy governors have left specific mentions of IT-centric initiatives out of their annual addresses to the legislatures and citizens of their state. But over the past few years, that tide has shifted. Technology has increasingly snared a larger percentage of the limelight, indicative of its growing prominence in policy conversations.

Vulnerabilities across the cyberspectrum have propelled IT security to the forefront, with many state leaders announcing the development of, or progress on, multiagency cyberinitiatives to confront the growing threat to government and citizens alike. Broadband is getting plenty of executive attention too — an acknowledgment of the importance of high-speed connectivity across both urban and rural areas. And that attention is followed by investment, with many governors citing proposals for new money for broadband.

Education always takes center stage during State of the State speeches, as is the case this year. Science, technology, engineering and math (STEM) curriculum continues to get a boost, signaling a growing awareness of the needs of today’s and even more so, tomorrow’s, economy. Many governors detailed plans to beef up computer science curriculum as well as STEM teaching expertise in their states.

What emerged this year more than ever was the growing realization that the economy, and therefore the workforce, is undergoing a fundamental change. Notably, but not surprisingly, policymakers now understand that jobs of the future require more training and education. What governors aren’t saying explicitly is that technological advances in robotics and automation are responsible for the change. But it’s exactly these trends that are driving investments in preparing the workforce for careers in highly skilled industries. Savvy governors are pairing those investments with incentives to keep skilled workers within their borders.

We analyzed each speech based on tech’s prominence in governors’ plans for 2017. Here are the speeches with the most tech influence and notable IT initiatives. See the full story online at govtech.com/2017states.
Hawaii

For Hawaii Gov. David Ige, 2017 promises to be a big year for innovation. The new economy will rely on “the development of an innovation sector,” said Ige. This includes innovating in energy, public education, housing and preserving the environment, and working closely with the University of Hawaii on solutions to those issues. Ige promoted the work done by the Office of Enterprise Technology Services, which creates “more efficient, effective and accountable” government. The office also held a code challenge, bringing local talent in to try to solve a widespread civic problem. The hackathon, according to Ige, led to several tech solutions, including an online visitor tool for families visiting loved ones in the Oahu Community Correctional Facility.

Arizona

Gov. Doug Ducey’s third State of the State address began with a heavy focus on Arizona’s education system and devoting more resources to both schools and teachers. While he said that many of the state’s public schools are leaders in science and technology, including teaching students how to code, schools in rural areas and tribal nations are missing out on opportunities. “It’s 2017, but outside of our urban areas, broadband is still spotty,” Ducey said. “Let’s fix this by connecting these rural areas to high-speed Internet.” He suggested coupling those efforts with a statewide computer science and coding initiative. Another prominent technology announcement during the speech was the launch of RedTape.AZ.gov, a portal for business owners to report regulations that prevent job growth. Ducey also mentioned that Arizona is set to manufacture electric cars, called the state the “world’s hub” for autonomous vehicle testing and mentioned that Uber is available at the airport.

Georgia

In his State of the State address, Gov. Nathan Deal drew attention to the need for improvements in prescription drug monitoring and cybersecurity. While he didn’t dive into the details of what improvements to the monitoring systems would look like, he did outline the plan for the new Georgia Cyber Innovation and Training Center and a partnership with the U.S. Army’s Fort Gordon Cyber Center of Excellence, Augusta University, and other public and private partners. Deal mentioned a $50 million investment in the state-owned facility and the ongoing efforts of state agencies and officials to make Georgia the “Silicon Valley of the South.” Deal said the investment and efforts in this area will help put the state at the forefront of the larger cybersecurity conversation.

Colorado

Gov. John Hickenlooper kept to two main themes in addressing state legislators: bridging the divide between urban and rural areas and investing in the state’s future prosperity. And he frequently referenced the potential for technology to play a part in the state’s plans. One solution in bringing economic growth to rural areas is a proposal to bring infrastructure into the 21st century. Part of this effort is already underway with the RoadX program, a host of smarter transportation technologies that includes vehicle-to-everything communication sensors and a testbed for autonomous vehicles. However, smart infrastructure also includes laying down fiber to connect communities. “Every school, hospital, clinic and home should have high-speed Internet,” he said. Referencing that 30 percent of rural households lack access, Hickenlooper announced the creation of a broadband office to increase that number to 100. Another area where Colorado is attempting to distance itself from the pack is in its commitment to cybersecurity. First discussed in his 2016 address, Hickenlooper pointed to Colorado’s cyberleadership through the National Cybersecurity Center, which helps businesses, nonprofits and government agencies combat and recover from cyberattacks, provides intelligence to public officials and bureaucrats, and conducts research into threats.
Idaho

Gov. C.L. “Butch” Otter made clear the connections among technology, education and cybersecurity, noting that all three were top priorities this year. In addition to millions in funding for classroom technology statewide and expanding efforts to encourage students to move onto higher education or career-technical education and training, the governor’s budget recommendation also includes funding for workforce development and expanding programs at four-year institutions and community colleges that support in-demand career fields like energy and computer science. Otter also noted that the state is working with the Idaho National Laboratory to strengthen colleges’ and universities’ capabilities in addressing cyberattacks. “Cybercrime and even cyberwarfare are very real and growing threats,” he said.

Indiana

Citing an increasingly globalized economy, Gov. Eric Holcomb focused on what Indiana must do to remain competitive in job creation. To this end, Holcomb emphasized several major investments, stressing throughout that attracting high-tech jobs was important to the state’s goals. He reiterated that over the next 10 years Indiana will invest $1 billion in entrepreneurship and innovation through the Next Level Indiana Fund, the 21st Century Fund, and a new grant program aimed at both local communities and higher education. With more than half of schools lacking Wi-Fi in classrooms, Holcomb pledged $1 million annually to increase digital connectivity and participation in federal E-rate matching programs.
ISTE OF AUTOMATION

ILLINOIS

It took Gov. Bruce Rauner less than four minutes of his speech to start talking about specific state technology initiatives Illinois is undertaking. Calling out tech-focused employees by name, Rauner pointed to the Department of Innovation and Technology’s data encryption efforts, its migration of physical files into digital systems and its cybersecurity work. He went on to highlight projects to build a digital process for professional license applications, more license renewal notifications online, and to fight fraud and abuse within the Medicaid system. Rauner also talked about higher education funding in an effort to support the growth of technology jobs in the state.

Iowa

In his 22nd and likely final Condition of the State address, Iowa Gov. Terry Branstad mentioned the state’s STEM initiative twice, but he gave more time to the concept of “smaller, smarter government.” Even in challenging times, said the governor, Iowa should “continue to prioritize initiatives that will grow the state’s talent pipeline like the STEM initiative, registered apprenticeships and work-based learning.”

Branstad also cited the July 2015 death of bicyclist Grace Harken, killed by a motorist who was texting, calling on residents to demand change in laws targeting distracted or impaired drivers. “Modern technologies should come with new responsibilities,” he said.

Massachusetts

The state’s economic, innovation and educational prowess has translated into a robust digital economy, with Massachusetts ranked as one of the top three states in the country when it comes to the development of cybersecurity technology, according to Gov. Charlie Baker. The governor also spoke on efforts to bring fiber broadband to the western and more rural areas of Massachusetts. Since last May, he said, “we completely overhauled the Last Mile program for our rural communities. We started with 53 towns lacking high-speed Internet access. And while there’s still more work to be done, in just six months we’ve moved a dozen towns forward. That’s more progress on local broadband access than in the last five years.” The state has also converted its main toll highway into an all-electronic charging system, replacing human toll operators with a wireless collection system.
MICHIGAN

Gov. Rick Snyder spent most of his speech looking backward rather than forward. The major themes of his speech were focused on the economy and education, and throughout he wove in mentions of technology — without going into great detail about future plans. Snyder did mention the need to make further investments in Michigan’s prescription drug monitoring system, infrastructure and technical education programs. Specifically, he wants to create a working group with the Legislature to support computer science and coding education. He also highlighted the state’s autonomous vehicle testing assets, including the University of Michigan’s Mcity, the development of the 300-acre Willow Run facility and the smart mobility initiative Planet M.

NEBRASKA

Gov. Pete Ricketts, now halfway through his first four-year term, called for cutting the state income tax and improving the fairness of the agricultural property tax, but also laid out a budget proposal he said would provide more resources for education and Child and Family Services, and protect reforms to state corrections — one of several state agencies that has recently increased its tech savvy. The Department of Environmental Quality cut wait times by launching online applications for stormwater permits and new general air construction permits, Ricketts told members of the 105th Legislature. The Department of Health and Human Services debuted ACCESSNebraska, a portal that has also reduced average wait times on calls, improved Supplemental Nutrition Assistance Program application processing, and saved the state $17 million.

NORTH DAKOTA

Newly elected Gov. Doug Burgum spoke consistently about technology in broad strokes throughout his first State of the State address without giving much in the way of concrete plans. Burgum, whose decades of technology experience include time spent at Microsoft and Atlassian, spoke about emerging technology as a driving force to transform the economy and government — specifically health care, education and infrastructure. Burgum said the state needs “automatically generated data” to improve its decision-making and pointed toward citizen feedback as a critical tool for improving infrastructure spending.
South Dakota

Much of Gov. Dennis Daugaard’s address drew connections between technology and improving government. Transparency and accessibility ranked as the most prevalent topics. Daugaard said South Dakota will be the first state with a completely online pardon application process. He also voiced pride in opening government by putting economic development grants, restaurant inspections, and information on oil, gas and water drilling online. He praised Open.SD.gov as a hub for info on grants, contracts, payroll and vendor payments, and Rules.SD.gov for letting citizens track and comment on proposed rules. Two years ago, the governor noted, South Dakota launched a portal centralizing state board and commission membership info, agendas, minutes, finance reports and audits. Daugaard will now support legislation institutionalizing this to ensure it exists after he leaves office in January 2019.

Nevada

Gov. Brian Sandoval’s final State of the State speech began with heavy emphasis on economic success. After detailing his budget plans, he turned the conversation to tech. The governor announced that the state is on its way to becoming a global center for innovation in technology, and that education and the workforce are the most crucial areas in which to promote this progress. His agenda incorporates workforce training and investment in engineering sciences. Sandoval then discussed funding technology in education, namely through his Connect Kids Initiative, which is poised to ensure high-speed broadband access in every school, regardless of whether it’s in an urban or rural area. The governor’s speech remained focused on technology as he moved into the discussion of renewable energy projects, drones and autonomous vehicles. He noted that Elon Musk has publicly dubbed Nevada the “get it done state.” After announcing the creation of the state’s first cybersecurity coordinator and the first cyberdefense center, Sandoval dedicated the remainder of the speech to other policy areas, such as health and state parks. Sandoval also looked toward the future with his instructive statement: “As technology evolves, so must we.”

Texas

In his third State of the State address, Gov. Greg Abbott highlighted Texas’ petroleum prowess — “leading the nation in areas like oil and gas” — but also predicted a shift from traditional power. Texas, Abbott said, “is in the middle of an innovation renaissance that weans our economy off of energy.”

“Biotech. Defense tech. Wearable tech. Clean tech. Technologies developed in Texas are changing the world in which we live,” the governor said, pointing out that the Dallas, Houston and Austin areas are considered “knowledge capitals.” Midland, Abbott said, beats the tech stronghold San Francisco area in the percentage of jobs created by startups.
Obama-Appointed CISO Leaves the White House
The CISO responsible for safeguarding the White House against cyberthreats was either let go or resigned from the Trump administration on Feb. 2. According to a report from 2DN, Cory Louie, the White House CISO appointed by former President Obama, has been removed from the post under "unclear" circumstances. Louie was appointed to the cybersecurity position in August 2015.

Eric Larson is now serving as Florida’s interim CIO. Larson has been with the Agency for State Technology (AST) since 2014 and held the positions of CTO and chief operations officer. Before joining AST, he was the chief of distributed infrastructure at the Florida Department of Financial Services.

Federal Digital Officer Fails Background Check
As of mid-February, federal Chief Digital Officer Garrit Lansing no longer reports to work at 1600 Pennsylvania Ave. Lansing was one of six staffers dismissed from the White House after failing to pass an FBI background check. In Lansing’s case, it was due to complications regarding past investment dealings. His official file reports that he left on his own accord. Lansing previously served as chief digital officer for the Republican National Committee.

INNOVATION OFFICER TO LEAD COLUMBUS, OHIO’S SMART CITY INITIATIVE
Columbus, Ohio, hired a new lead for its multimillion-dollar smart city initiative. Mike Stevens, a former deputy director of the Columbus Department of Development, will head up the effort and serve as the city’s first chief innovation officer. Columbus has secured $367 million in public and private investment pledges, which augments an initial $40 million in federal funding from the U.S. Department of Transportation’s Smart City Challenge. Stevens was CEO of Lake County Partners, a nonprofit economic-development organization outside Chicago, since leaving the city in 2012.

Baltimore CIO Resigns
Jerome Mullen, CIO of Baltimore and the city’s top technology official, resigned in late February. While details weren’t immediately available, the move could signal continued tough sledding for the tech sector at City Hall, where Mullen is the city’s third CIO to depart in five years. The city’s deputy CIO, Evette Munro, has been named acting head of the Mayor’s Office of Information Technology.

USDS Co-Founder to Return to the White House
Haley Van Dyck, one of the co-founders of the U.S. Digital Service (USDS), is returning to the White House, according to numerous reports. After leaving during President Obama’s final days, she is reportedly continuing to serve in the federal government at the USDS in an unannounced role. While with the Obama administration, Van Dyck helped draft the executive order to make documents open and machine readable by default.
Oakland, Calif., has appointed a new chief information officer — the city's first since the departure of Bryan Sastokas in mid-2015. Andrew “Pete” Peterson began serving as the new CIO on March 6. Peterson is a 25-year veteran of the IT industry, working most recently as the chief operating officer for San Francisco-based ConnectSolutions.

On Feb. 22 the San Francisco Mayor's Office of Civic Innovation tweeted a job alert to aid in its search for a CIO and director of the city and county Department of Technology — the position vacated by Miguel Gamiño last year. According to city officials, Ken Bukowski now serves as interim CIO.

After losing Gamiño to New York City, where he now serves as its chief technology officer, San Francisco has been on the hunt for the perfect candidate to fill the position on a permanent basis — one who possesses “outstanding leadership qualities that will bring stability and credibility” to the city, according to the brochure outlining the job description and qualifications.

Gov. Doug Burgum announced on March 10 the appointment of Shawn Riley to assume the state’s lead technology role. He will begin working as the state CIO on April 17. Over the past 13 years, Riley has served in a number of leadership roles with the Mayo Clinic, most recently as the organization’s CIO.

Riley is replacing former CIO Mike Ressler, who was displaced when the incoming governor announced his plans to shake up the C-suite. After the departure of Ressler, Deputy CIO Dan Sipes stepped up in an interim capacity. According to the governor’s announcement, he will return to the deputy CIO role.

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Cybersecurity’s Metrics Problem
Is your metrics program coordinated with decision-making? Here are three steps for creating an effective system.

Almost 4.2 billion records were exposed in 4,449 data breaches in 2016, according to a recent report from Risk Based Security. The worst-hit sectors were businesses at 51 percent of reported breaches, surpassing unknown (23.4 percent), government (11.7 percent), medical (9.2 percent) and education (4.7 percent) industries. While the number of data breaches remained about the same in 2015 and 2016, the number of records compromised skyrocketed last year, according to the report.

But wait, the Identity Theft Resource Center said there were 1,093 reported data breaches in 2016 — 40 percent more than the 790 breaches in 2015. Confusing things further, the Privacy Rights Clearing House counted 538 breaches occurring in 2016 with just over 11 million records lost.

To be sure, there are plenty of explanations, different definitions, regional exceptions and so on to account for the conflicting numbers. But how do we easily explain this to business leaders?

What’s my point? The security industry has a metrics problem — and not just with counting breached records. If you add in disparate definitions of “security incidents,” numbers of “vulnerabilities,” “threats” or even what’s included under “cybersecurity,” you will see that different organizations use different terms, accounting and approaches, making apples-to-apples comparisons very hard.

What About Enterprise Security Metrics?
But enough about tabulating industrywide security metrics. How are you doing at measuring risk in your organization? Sadly the gap between management expectations and reality usually gets worse when serious academic rigor is applied to measuring local cybersecurity programs.

Many governments are just happy to have any security metrics at all. Often, easy-to-find items like “spam emails blocked” or “viruses detected and eliminated” are the only things counted, since network and security tools easily capture these cyberalerts. But is this practice acceptable? Digging deeper, is your security health report truly measuring risk and evaluating future investments in people, process and technology? No doubt, reporting big numbers to managers (often measured in the millions of hostile data elements removed) looks impressive on management reports, but has anyone asked tough questions about these reports lately?

Have you ever matched the metrics you’re collecting to management decision-making? Are the relevant definitions clear and consistent? Is the threat intelligence data reliable? What is the process for creating security action items and priority levels? Who is (truly) looking at the captured data in a timely manner? Where can leadership turn for answers during an incident?

Maintaining Impactful Metrics
What can be done? Here are three steps you can take to strengthen cybersecurity metrics, communicate risk levels, and recommended actions to the right people up and down the management chain.

Know your enterprise security data, collection capabilities, policies and current reports. Who is doing what regarding your organization’s metrics collection processes now? Review risk assessments and security operation capabilities that are already in place from an end-to-end perspective. Ask what reports are really being read and used, and by whom.

Talk to top executives, financial staff, external partners and your internal team about “must have,” “nice to have” and “wasteful” metrics. What compliance reports are required by auditors? How can internal and external partners help? What risk-measuring results are expected? Consider if cybersecurity checklists and processes can help document risk-reducing steps that lower premium costs.

Build (and use) a meaningful security dashboard for executives. Make sure the detail behind the metrics are real. As you build your future metrics model, examine best practices and talk with industry peers to understand what is working in your business sector. A few years back, the National Governors Association’s Resource Center for State Cybersecurity helped to build a template that can be used for government security dashboards. These templates are a helpful start. The Center for Internet Security consensus metrics are also valuable.

Building security metrics, measuring risk and improving cyberincident communications aren’t “one and done” processes. Seek to constantly improve and refine cybersecurity metrics, while maintaining your historical data and capturing trends. Don’t just “check the box,” recheck your cybersecurity.
More research, more science, more technology.

“FACIAL RECOGNITION TECHNOLOGY HAS THE POTENTIAL TO HELP SAFEGUARD OUR SOCIETY. ADAPTING IT TO HELP SAVE ENDANGERED SPECIES IS ONE OF ITS MOST INSPIRING USES.”
— ANIL JAIN, PROFESSOR, MICHIGAN STATE UNIVERSITY

Michigan State University researchers have repurposed facial recognition software used to find criminals to help animal conservation efforts. Habitat loss is threatening extinction of lemurs, which are found only in Madagascar and have unique facial characteristics. The team created LemurFaceID, which correctly identified more than 100 individual lemurs with a nearly 99 percent accuracy rate, proving that it could provide a noninvasive way of tracking the mammals and providing data over long periods of time for insight into population growth and decline. The software may also be used to identify other animals that have variable facial hair and skin patterns, like bears and red pandas.

SOURCE: MICHIGAN STATE UNIVERSITY

Permitting Pokemon. After the popularity of Pokemon Go brought big crowds (and overflowing trash cans) to a Milwaukee County park, officials signed a permitting process Feb. 10 for game makers that include virtual monsters and other augmented reality features on public property. The ordinance requires game developers to obtain a park permit, which will range from $100 to $1,000 depending on factors like how many people are expected to participate. The Wisconsin government is the first to regulate the emerging industry in this manner; however, other lawmakers are also looking at how to legislate in the space. For example, a bill pending in the Illinois Legislature would require companies to remove locations from a game once they are requested to do so.

SOURCE: THE ASSOCIATED PRESS

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

The amount that Austin, Texas-based startup Data.world, which is billed as a “social network for data people,” raised in a funding round. The site’s framework is built on the Semantic Web, the same technology used by tech giants like Facebook and Google, and users can sign up for free and import data from any source. However, storing data privately requires a monthly fee. Users sift through the information, creating visualizations and sharing it on their Data.world profiles.

SOURCE: VENTUREBEAT

8.7 MILLION

As phones get smarter and replace other devices, some users are longing for the simpler handsets of the past. The Nokia 3310, arguably one of the most iconic dumbphones, has been brought back by Finnish manufacturer HMD Global Oy, which made the announcement at the Mobile World Congress in February. While the phone isn’t yet available in the U.S. — Barcelona and Europe are getting first access — its price tag will be around $60. Following its original release in 2000, more than 100 million 3310s were sold. While it’s too early to call it a comeback, recent headlines about the announcement included the phrases “the greatest phone of all time” and “the most reliable phone ever made.”

SOURCE: TREEHUGGER

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Nokia for a New Age

8.7

$ MILLION

SO
Worst of the Web?

A great online presence isn’t reserved for agencies with extensive resources.

Every year, this publication gives out Best of the Web awards in recognition of cities and states that have produced excellent websites. However, while there are some great success stories, this is the exception, rather than the norm.

Recently my colleagues and I set out to answer the question of “why are so many government websites just plain bad?” by reviewing the speed, security, mobile-friendliness and accessibility of nearly 300 of the most popular federal websites. What we found is that bad websites are rarely the result of bad intentions, as no agency sets out to build an inferior site. Instead, agencies tend to make mistakes along the way — mistakes that fortunately can be avoided.

To begin with, it is worth reiterating that government agencies are certainly capable of building great websites. Boston, for example, redesigned its website last year to make it more accessible and user-friendly. As part of its upgrades, the city improved its support for hosting content in multiple languages and updated its back-end hosting to create a faster, more responsive site. The result was a modern site designed to meet the needs of a diverse set of residents and businesses.

But Boston built its superb website by partnering with IDEO, one of the world’s best design firms, and Acquia, a local technology company that also happens to be one of the most sophisticated cloud providers for Drupal website hosting, the popular content management system used by Boston for its website. While Boston’s technology team was smart to work with these talented partners, they are not going to be feasible options for every government project because not all projects will command the same level of funding and attention. Instead most agencies must build websites with limited staff and resources, and while this makes building a successful website more challenging, it’s still possible.

The first mistake some governments make is they ignore their own guidance and standards. Government agencies and public officials often make bold promises to build secure, user-friendly websites, but back down from these commitments once they face the day-to-day challenges of maintaining them. For example, many cities struggle to build citizen-centric sites where information is organized around user needs rather than agency needs. The result is inconsistencies as users look up information on city parks, trash removal and transportation, since each of these functions is typically run by a different organization. The solution here is stronger accountability, so that government agencies have clear performance criteria for their websites and are held responsible if they do not meet these benchmarks.

The second mistake some governments make is ignoring best practices from the private sector. While some governments commit to security standards or accessibility guidelines — possibly at higher rates than the private sector — they tend to overlook best practices on design and performance. For example, relatively few government agencies commit to fast page load times or ensuring mobile-friendly Web design even though these are some of the most important metrics for the average commercial website. But user expectations are based on what people are used to, and so the public sector needs to ensure that its websites do not fall behind those of the private sector.

The third mistake some governments make is that they keep websites around long past their expiration date. After all, many government websites are quite old — the first iPad was only released in 2010 — and websites must keep up with this pace of change. However, not enough agencies treat their websites as they would any other asset and recognize that it has a finite life cycle and will need replacing. The result is that websites stick around well past when they should have been retired or refreshed. Better management of digital assets can avoid this problem.

In short, government agencies can improve their online presence by developing stronger accountability, learning from the private sector, and better managing the life cycle of websites. Not every agency is going to win an award for Web design, but even if they are not all striving to be the best, they should all be striving to do better. Websites continue to be one of the most important ways that individuals and businesses interact with government, and so agencies should be committed to facilitating this communication as part of their mission.
Interactive Touch Monitors

Dell’s 55-inch and 86-inch 4K Interactive Touch Monitors (C5518QT and C8618QT) offer a touch display for collaboration with up to 20 touch points for classrooms and meeting rooms. New InGlass touch technology allows for a more natural writing experience with two (included) passive styluses, as well as anti-glare and anti-smudge coating on the cover glass for easy viewing. The monitors can integrate a Dell OptiPlex Micro desktop within the back panel.

dell.com

Rugged Workhorse

Panasonic announced the Toughbook CF-33, the company’s 3:2 aspect ratio, fully rugged 2-in-1 detachable laptop, powered by the latest-generation Intel Core vPro processor. The laptop also has a set of business interfaces with additional customizable options to meet a worker’s needs. Designed for outdoor use in bright sunlight or heavy rain, the Toughbook CF-33 has a 12-inch, 10-finger capacitive dual-touch QHD screen (2160 x 1440 pixels). The laptop comes with Intel i5-7300U, 8 GB RAM (4 GB and 16 GB project options) and 256 GB SSD (project options 128 GB and 512 GB).

panasonic.com

Room to Grow

The SanDisk iXpand Flash Drive is a mobile storage device designed to help users free up space on their iPhone and iPad — now offering up to 256 GB of additional capacity. It features a flexible Lightning connector and a USB 3.0 connector so users can quickly and easily move photos and videos between their phone and tablet, and Mac or PC. The drive allows users to automatically back up their camera roll and content from social networking sites, and watch popular video formats straight from the drive via the iXpand Drive app. The drive also includes encryption software that password protects files, letting people share their content while helping keep sensitive files protected across devices.

sandisk.com
Managing Negativity

Negative comments can’t be avoided on social media. Here’s how to handle them.

If your public-sector entity is on social media, it’s only a matter of time before you receive negative comments from citizens. Recognize that all negative comments are not created equal, and how you deal with them says a lot about your agency.

In my experience, there are generally three types of negative comments on government social media: a complaint about a specific service or situation they encountered; disagreement or dissatisfaction with something your agency is doing; and unhappiness about anything related to your agency. Before you get depressed about all this, know that there are techniques good social media managers use to effectively manage negativity.

**Legitimate Complaints**

“My water bill is totally messed up!”

The first type of negative comment — complaints — is the easiest to address. Think of them as customer service opportunities. Acknowledge the person’s complaint and try to help resolve the problem, or at least point him or her in the right direction.

Get in touch with the right department behind the scenes and understand that timely responses are critical. Ensure that your subject-matter experts know they need to help your social media coordinators to respond quickly. Use every agencywide training as an opportunity to mention how important their back-end support of social media is. Often complaints have private details that would be better communicated offline, so you may need to point the citizen to a phone number or email for resolution.

**Comments of Disagreement or Dissatisfaction**

“I hate all these speed traps around town lately. Don’t police officers have anything better to do?”

While it is harder to manage negative comments that disagree with a policy, program or approach your agency takes, there are still some techniques to consider.

First, does the comment warrant a response? Sometimes you might want to leave it alone and let them speak their opinion. Remember, citizens have a right to speak their mind and it’s not your job to remove opposing views. However, you’ll want to jump in if the comment communicates misinformation that might confuse other people. Correcting misstatements can sometimes be an art. You want to clear things up, but not put the citizen on the spot or embarrass him or her.

Make sure to acknowledge the comment. “Sorry to hear that. We appreciate you taking the time to share your thoughts with us” goes a long way. Many times, you’ve satisfied the commenter because they know they have at least been heard, even if their issue was not resolved. Taking it a step further, you might offer to have them call or direct message you with more details. Most people won’t actually take you up on that offer, but they’ll remember that you extended the invitation.

**Your Agency Makes Me Unhappy**

“This is so typical of the city. Sometimes I don’t think anyone there has a brain.”

This type of comment is the hardest to deal with, because they are gut reactions that reflect a general unhappiness with anything related to your agency.

If you respond with “We appreciate you taking the time to comment,” it might not help and may even come across a bit snarky. And you don’t want to fuel the fire. Do not remove comments like these unless they have foul language that violates your published comment policy. Negativity shouldn’t be a reason for comment removal. Often, these comments don’t warrant a response.

Keep in mind that these comments are designed to get personal, but make sure to avoid getting emotional. If you feel it’s appropriate, ask them to consider joining a neighborhood group so they can help guide the direction of policy — hopefully turning them into community champions down the road.

Kristy is known as “GovGirl” in the government technology industry. A former city government Web manager with a passion for social media, technology and the lighter side of government life, Kristy is the CEO of Government Social Media.
CAN YOUR LOCAL GOVERNMENT’S NETWORK KEEP UP WITH ITS CITIZENS?

To be effective, local governments need to communicate with their citizens. In today’s world, that means going online. 94% of local officials agree that e-government requires a ubiquitous network, but that requires bandwidth. Remain on a weak network and your citizens may end up dealing with slower response times and limited access to critical services. Fortunately, Comcast Business offers the high-performance Ethernet network that local governments need and citizens demand. Plus, its extra redundancy maximizes availability at a lower cost that meets government budgets and standards of security. Visit business.comcast.com/government or call 866-429-2241 to learn more.
9
Vendor Management
Government agencies interact with countless vendors, but many do not have a robust vendor management strategy in place. Without one, outside vendors may continue to have access to systems or facilities they no longer service, creating a threat to data security.

10
Public Wi-Fi
Although convenient, public Wi-Fi must be properly separated from secure networks to prevent unauthorized access to secure documents or devices.

1
BYOD
As more government employees use their personal devices for work and become increasingly mobile, vulnerabilities arise when these devices are not under centralized enterprise control.

2
Outdated Policies
Government policies may go years without major revisions or updates, which can create gaps and unforeseen liabilities as new technologies continue to challenge existing operating structures and methods.

3
Print Environment
An often-ignored, vulnerable area of cybersecurity is the print environment. A recent Center for Digital Government survey found agencies are aware their print environment is just as vulnerable to threats as other endpoints, but they face challenges in securing it.

4
Legacy Equipment
Many Internet-connected legacy machines no longer receive security updates from their manufacturers and can be easily compromised as a gateway into a network.

5
Social Engineering
Social, or human, engineering is another overlooked attack that is accomplished by someone manipulating a government employee to divulge information. Training employees on how to respond to these situations is important.

6
Third-Party Software
Many government employees prefer to use their own third-party tools, but if they are not built with security features, they can become a back door into secure networks for malicious software.

7
Remote Workers
Remote employees are commonplace within agencies across the country, but how and where employees access government systems can create significant liability.

8
Outdated Training
Every new government employee goes through some form of training during the onboarding process, but without having a regular security training program in place, employees are ill-equipped to identify and address the latest cybersecurity threats.

9
Vendor Management
Government agencies interact with countless vendors, but many do not have a robust vendor management strategy in place. Without one, outside vendors may continue to have access to systems or facilities they no longer service, creating a threat to data security.

Looking for where to start? Find out if your printers are vulnerable to attack.

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