“It’s important that we prepare our youth—our future workforce—for success in a digital world. ... Every student, regardless of where they live, should have access to affordable broadband technology.”

ASSEMBLYMAN IAN CALDERON
Majority Leader, California State Assembly
NEW ADDRESS NOTICE

THE COUNCIL OF STATE GOVERNMENTS
HAS A NEW ADDRESS
1776 AVENUE OF THE STATES
LEXINGTON, KY 40511
ON THE COVER
California Assembly Majority Leader Ian Calderon chairs the state’s Select Committee on Youth and California’s Future and is a founding member and co-chair of the Legislative Technology and Innovation Caucus. He believes technology is a key driver for economic development efforts, and the state can help build the technology infrastructure and ensure the future workforce is well equipped for the jobs of tomorrow.

Photo Courtesy California Assembly Democratic Caucus

STAY CONNECTED
LIKE US
www.facebook.com/CSGovts
LINK US
www.linkedin.com/company/council-of-state-governments
FOLLOW US
@CSGovts
TUNE IN
CSGovts

14
SPOTLIGHT—
FORCES OF CHANGE
The state government information technology landscape continues to evolve and respond to significant changes. Doug Robinson of the National Association of State Chief Information Officers discusses several “forces of change” that require state IT leaders to adapt to new demands and opportunities.

16
SPOTLIGHT—
PROTECTING DATA
Cyberattacks are increasing in frequency and scope and are becoming more sophisticated, and the impact for states can be significant and far ranging. But it doesn’t take an information technology specialist to understand and be proactive in protecting your state’s cyber assets.

30
SPOTLIGHT—
UPGRADING VOTING EQUIPMENT
The chaos that unfolded with the 2000 presidential election led to new voting machines for many districts across the U.S. But technology has advanced since then, and the machines purchased continue to age —leaving state and local governments to figure out how to upgrade equipment with little money.

42
SPOTLIGHT—
CRACKING THE CODE
State leaders across the country are focused on preparing their workforce for the new digital economy. Meeting the employer demand for workers with digital literacy and skills is the key to many successful state workforce development plans.
SPOTLIGHT: Technology and State Government Performance

10 IN THE KNOW: USING SOCIAL MEDIA
In just a few short years, social media sites have become a critical communications tool—for the public and government officials, alike. Here are some tips on how state leaders can make the most of social media to access all the information CSG has to offer.

12 GOVERNING DATA
The emergence of digital government and the power of data has expanded dramatically in recent years, but the management and governance of states’ data assets have tended to be weak. CSG Senior Fellows Katherine Barrett and Richard Greene explore how some states are trying to change this.

14 FORCES OF CHANGE
The state government information technology landscape continues to evolve and respond to significant changes. Doug Robinson of the National Association of State Chief Information Officers discusses several “forces of change” that require state IT leaders to adapt to new demands and opportunities.

16 PROTECTING DATA
Cyberattacks are increasing in frequency and scope and are becoming more sophisticated, and the impact for states can be significant and far ranging. But it doesn’t take an information technology specialist to understand and be proactive in protecting your state’s cyber assets.

20 FACING THE RISK
Recent research predicts that the cost of data breaches will reach $2.1 trillion globally by 2019—four times the estimated cost of breaches in 2015—but are state governments prepared to prevent and respond to cybersecurity threats?

22 TECHNOLOGY AIDS DISASTER AID
In today’s world, living an unplugged life seems unimaginable, but this was the reality of many state emergency operations centers just a few years ago. New technologies are coming to the aid of state disaster response efforts, however—helping emergency managers prepare for, respond to and recover from the effects of disasters faster and more efficiently.

24 10 QUESTIONS: CALIFORNIA ASSEMBLY MAJORITY LEADER IAN CALDERON
According to California Assembly Majority Leader Ian Calderon, “technology has revolutionized the world we live in,” but state governments haven’t always kept up. Calderon explores how states can help support the technology sector both to spur economic growth and improve state government operations.

26 THE SHARING ECONOMY
New platforms and businesses in the sharing economy allow individuals to make use of underutilized resources such as their cars and homes, keep their own hours, and pocket the earnings. But with these new platforms have come fundamental concerns and big questions about the changing nature of work—not only for workers, consumers and the businesses themselves, but for governments, too.

28 LAWMAKERS TAKE ON TECH
Increasingly, state officials are using data and apps to make better policymaking decisions—from prioritizing limited resources to reconfiguring the delivery of key services—but knowing what is available and how to use it can be confusing. CSG members share their thoughts on how data and apps can help.

30 REVAMPING VOTING TECH
The chaos that unfolded with the 2000 presidential election led to new voting machines for many districts across the U.S. But technology has advanced since then, and the machines purchased continue to age—leaving state and local governments to figure out how to upgrade equipment with little money.

34 THE COMMUNICATIONS (R)EVOLUTION
Since the dawn of time, humans have worked to improve their abilities to engage and interact—beginning with smoke signals and cave paintings in prehistoric communities. Here is a look at how technology has helped transform communications in more modern times, making our interactions more efficient and productive.

38 BRIDGING THE DIGITAL DIVIDE
Some progress has been made to narrow the digital divide among the households and classrooms of urban and rural America. While this progress should be celebrated, there is much yet to do to ensure that access to broadband services reaches all corners of this nation.

42 CRACKING THE CODE
State leaders across the country are focused on preparing their workforces for the new digital economy. Meeting employer demand for workers with digital literacy and skills is the key to many successful state workforce development plans.

44 THE NEXTGEN IT WORKFORCE
Building a stronger workforce is a challenge for any state, but building and recruiting a workforce prepared to tackle a state’s information technology needs is particularly complex. In an effort to do just that, the Maine Office of Information Technology has developed a workforce development program to ensure the state is equipped to provide the latest in IT services not only today, but in the future as well.
EXPANDING NETWORKS TO GOVERN BETTER

For more than 80 years, The Council of State Governments has championed excellence in state government by building a community and creating networks among state officials across the country to share capitol ideas. With advances in technology, the development of these networks has never been easier. But the challenges facing the states are becoming more and more complex. That’s why CSG has never been more committed to helping states advance innovations in governance.

Here’s what’s happening at CSG.

1. CSG kicks off the 2016 Policy Academy series
The 2016 CSG Policy Academy series kicks off in May with two sessions. The CSG Transportation Leaders’ Policy Academy, May 18–20 in Washington, D.C., will be held in conjunction with national Infrastructure Week. CSG also will host the Cybersecurity and Privacy Policy Academy May 23–25 in Seattle. The CSG Policy Academy series is designed to give state policymakers an in-depth perspective on priority policy issues facing the states. For a full list of the 2016 CSG Policy Academy sessions, please visit www.csg.org/events/conferencecalendar.aspx.

2. CSG Justice Center hosts national Stepping Up Summit
In support of the Stepping Up Initiative, The Council of State Governments Justice Center, in partnership with the National Association of Counties and the American Psychiatric Association Foundation, hosted a National Summit on Reducing the Prevalence of Individuals with Mental Illnesses in Jails in April in Washington, D.C. The summit was designed to help county, regional, tribal and unified state teams develop and advance system-level plans to reduce the number of adults with mental illnesses and co-occurring substance use disorders in their jails. The summit was live-streamed and recordings of plenary sessions can be viewed online at https://stepuptogether.org/events.

3. CSG participates in Infrastructure Week
The week of May 16, CSG will serve as an affiliate for Infrastructure Week, a national week of events, media coverage, education and advocacy efforts to elevate infrastructure as an issue. In conjunction with the week, CSG will host a select group of state legislators who will take part in events on Capitol Hill and at the U.S. Department of Transportation, as well as discussions with transportation experts on key issues such as transportation funding, autonomous vehicles and transit-oriented development. For more information, visit infrastructureweek.org.

4. CSG Overseas Voting Initiative creates Technology Working Group
The CSG Overseas Voting Initiative Technology Working Group—and two of its subgroups on ballot duplication and data standardization—met in the spring to discuss technology that could improve voting for U.S. military and civilians overseas. The group plans to unveil best practices and recommendations for states during the 2016 CSG National Conference in Colonial Williamsburg, Va., Dec. 8-11. For more information about the CSG Overseas Voting Initiative, please contact OVI Director Kamanzi Kalisa at kkalisa@csg.org.

5. CSG Task Force reviews workforce issues for people with disabilities
The CSG National Task Force on Workforce Development for People with Disabilities and four subcommittees convened for the first time on March 19–20 in Chicago to introduce issues that impact people with disabilities who are preparing for or are already in the workforce. The subcommittees—Career Readiness and Employability; Hiring, Retention and Re-entry; Entrepreneurship and Tax Incentives; and Technology, Transportation and Other Employment Supports—met in Washington, D.C., April 30–May 1 to review policy options and case studies. A policy framework for state leaders will be unveiled at a policy academy during the 2016 CSG National Conference.
Technology

We’re telling the emergency management folks, ‘You’re used to fires, floods, etc. and have developed plans for that, we’re trying to plan for the cyber component of it.’”

» Bill Nash, Wisconsin’s director of the Bureau of Security Services in the Division of Enterprise Technology on how the state achieved a three-year low in cyber-security incidents on state networks.

WE ARE SEEING CORPORATIONS AS WELL AS THE GOVERNMENT CONSTANTLY BEING ATTACKED IN THE CYBER DOMAIN, AND WE JUST AREN’T PRODUCING ENOUGH PROFESSIONALS WHO CAN HANDLE THE THREAT.”

» Martin Carlisle, director of the Air Force Academy’s Center for Cyberspace Research in Colorado Springs, Colo., as quoted by Government Technology in April on the shortage of professionals trained to address the nation’s growing cybersecurity threats.

WE REALLY UNDERAPPRECIATED THE IMPACT OF A MOVE TO THE CLOUD. IT HAS TURNED INTO THIS PHENOMENAL CATALYST FOR COMPLETELY REINVENTING OUR IT CULTURE AND CHANGING HOW WE GO ABOUT DOING BUSINESS.”

» Wyoming CIO Flint Waters, as quoted by StateTech, discussing the state’s cloud initiatives and the transition to Google Apps.

There’s definitely a connection between increased accessible and affordable broadband service and economic development, especially through tech startups. … My hope is that this is the future of economic development, that this is how we keep our most talented people in the state.”

» Arkansas state Rep. Warwick Sabin, as quoted in the Northwest Arkansas Democrat-Gazette in April, discussing efforts to expand the state’s broadband infrastructure.

We’re not trying to teach people how to write code…we want to have a place where those individuals can be brought up to speed very rapidly.”

» Colorado Gov. John Hickenlooper, as quoted by GCN, on a National Cybersecurity Intelligence Center to be developed at the University of Colorado at Colorado Springs. The center will aim to be a national authority for cybersecurity research and development and training.

IT’S A 45-YEAR JOURNEY.”

» Illinois CIO Hardik Bhatt, as quoted by the Herald & Review, discussing the process to update the state’s technology—some of which dates back to the 1970s.
DIVERTING TAX REFUNDS
Delaware Gov. Jack Markell signed a bill that will allow the state to intercept property owners’ income tax refunds if they are late on property taxes or haven’t fully funded schools, and allocate the money to public schools, according to The News Journal. Nineteen Delaware school districts are owed $32.6 million in back taxes each year. Delaware schools have had trouble getting voters to approve property tax increases to fund schools when there were delinquent taxes that continued to go unpaid.

MILITARY EXEMPTIONS FOR SMOKING AGE
Legislation under consideration in Vermont would raise the state’s legal age for smoking and other tobacco use from 18 to 21 years over a three-year period, the Burlington Free Press reported in April. A provision of the bill, however, exempts members of the military and wounded veterans in Vermont, for whom the minimum smoking age would remain 18. The bill passed the Vermont House of Representatives in April, but faces an uncertain future in the Senate and with Vermont Gov. Peter Shumlin, who has expressed opposition to the bill.

HOUSING FOR THE HOMELESS
New Jersey Gov. Chris Christie has called on the state’s lawmakers to expand a state housing assistance program. According to NJ.com, the governor has proposed more than $5 million to fund 500 more vouchers to assist the chronically homeless and homeless veterans through the New Jersey Housing First program, which provides rental assistance to vulnerable residents in the state. New Jersey had more than 10,200 homeless people last year, down from nearly 12,000 homeless residents in 2014, according to state data.

REDUCING GOVERNMENT
Maine Gov. Paul LePage has proposed reducing the size of the state Legislature, according to the Portland Press Herald, as part of an effort to increase the salaries of future governors and legislators in the state. Under two bills released in April, the salary of future governors would increase from $70,000 to $150,000 per year. Legislators’ pay would increase by 25 percent, contingent on a cut in legislative membership from 35 to 25 seats in the Senate and from 151 to 100 or fewer seats in the House of Representatives. A change in the size of the Legislature would require a constitutional amendment approved by voters. The Maine gubernatorial salary is among the lowest in the nation.

DEBT PAYMENTS
Puerto Rico’s governor signed legislation in April that authorized him to stop payments on the island’s $72 billion debt, according to The New York Times. Gov. Alejandro García Padilla signed the law, which enables him to declare a state of emergency and halt payments after marathon debates in the territory’s legislature. The legislation did not set a starting date for the moratorium on payments, leaving that instead to the governor’s discretion.

NEW YORK PRISONS TO REFORM SOLITARY CONFINEMENT PRACTICES
Changes may be coming to New York state’s prison practices after a federal judge approved a class-action settlement meant to overhaul the way solitary confinement is used, reported The New York Times in April. The suit was filed on behalf of thousands of inmates who challenged the use of solitary confinement as a punishment in the state correctional system.

Judge Shira A. Scheindlin of the Federal District Court in Manhattan wrote that the settlement “should end the use and conditions of solitary confinement in New York as they have existed for decades,” and “will greatly reduce the frequency, duration and severity” of the use of solitary confinement.

The agreement limits how long an inmate can be placed in solitary confinement and offers alternatives to address “the underlying causes of an inmate’s disciplinary issues,” wrote Scheindlin. The settlement is enforceable in court.

Alphonso B. David, chief counsel to Gov. Andrew M. Cuomo, said the state directed the corrections department “to move swiftly in implementing all provisions of the agreement.”

“We anticipate the results will be a safer, fairer and more humane correctional system,” said David.
The South

POWERING PORTS
The South Carolina Ports Authority will install solar panels on warehouse rooftops at two of its terminals. The Post and Courier reported in March that the panels, capable of generating 3.7 megawatts, will be installed at the Wando Welch and Columbus Street cargo terminals, and will make the Ports Authority the largest rooftop solar host in the state. The project is scheduled to be completed by the summer.

THE ROAD AHEAD
Florida’s first privately built toll road, Orchard Pond Parkway, is scheduled to open in spring 2016, according to the Tallahassee Democrat. The 5.2-mile road has stayed on time and on budget throughout the construction process. Leon County, Fla., will lease the parkway while establishing rights of way and easements but ultimately will acquire the property. The parkway will not turn a profit for three to five years and is expected to be fully paid for in 30 years.

AGRICULTURAL TRADE
The Southern agriculture industry leads the nation in exports to Cuba, according to the Southeast Farm Press. All of the top five exporting states—Virginia, Georgia, Louisiana, Florida and Alabama—are in the Southern region. Exports from Virginia, the leader in agricultural exports to Cuba, accounted for 28 percent of Cuba’s total agricultural imports from the United States.

SCHOOL TESTING
The Georgia General Assembly has approved legislation that diminishes state tests’ role in public school classrooms, reported The Atlanta Journal-Constitution. Senate Bill 364 lessens the weight of student test results in teacher evaluations. Student test “growth,” or the change in test scores over time, currently accounts for approximately half of each evaluation. Under the new legislation, it will account for 30 percent. The bill also reduces the number of Georgia Milestones tests from 32 to 24.

OFFSHORE WIND
The federal government recently approved a wind research facility off Virginia’s coast on the Outer Continental Shelf. According to the Associated Press, the approval clears the way for the installation and operation of two 6-megawatt turbines capable of generating enough electricity to power 3,000 homes. Virginia Gov. Terry McAuliffe hailed the approval as an important step in making Virginia the first state to install offshore wind turbines in federal waters.

ZIKA VIRUS THREATENS THE SOUTH
As the mosquito-borne Zika virus continues to spread across South and Central America, scientists warn that the American South—and particularly the Gulf Coast—is at risk if an outbreak occurs in the United States. The Gulf Coast is home to both species of the mosquito that can transmit the virus.

In the International Business Times, Dr. Peter Hotez, dean of the National School of Tropical Medicine at Baylor College of Medicine in Texas, warned that impoverished regions in the south are particularly susceptible to an outbreak. People living in impoverished areas are more likely to live without items such as window screens and air conditioners that allow them to keep windows closed.

Most people who contract the virus show no symptoms. When symptoms do appear, they generally are mild and subside after about one week. Symptoms can include fever, joint pain and a rash, however the virus also is associated with birth defects and possible neurological problems in infants when it is contracted by pregnant women.
IN-STATE TUITION EXTENDED
The South Dakota Board of Regents is extending in-state, undergraduate tuition to new Iowa freshmen and transfer students at four of South Dakota’s six public universities, according to The Iowa City Press-Citizen. During the past five years, the percentage of Iowa students enrolling at the South Dakota universities fell from 15 percent of the freshmen class to 11 percent. The tuition discount, based on current-year rates, is a $2,170.50 reduction per year per student.

FANTASY SPORTS
Minnesota’s House of Representatives voted in April to explicitly legalize daily fantasy sports and regulate the industry, according to the Duluth News Tribune. Minnesota’s decision contrasts with the tactic taken in several states, including Nevada and New York, where daily fantasy sports have been deemed illegal. In daily fantasy sports, participants pay an entry fee, pick players and can win money based on their players’ performance each day.

INFRASTRUCTURE BANK
In April, Nebraska lawmakers approved a $450 million infrastructure bank to speed along work on the state’s expressway system as well as local bridge repair and other transportation projects, reported the Lincoln Journal Star. Under the bill, the state can extract as much as $50 million for the infrastructure bank from the rainy day fund. Additionally, the Nebraska Department of Roads is now permitted to use different bidding processes, which is meant to help them complete projects faster.

STANDARDIZED TEST REPEAL
Indiana’s ISTEP student exam will be repealed by July 2017 under a bill signed by Gov. Mike Pence in March. The bill creates a 23-member panel of educators and experts who will make recommendations about what should replace ISTEP, according to The Indianapolis Star. The committee will look into ways to reduce the amount of time students spend taking standardized tests, decrease the cost of administering tests, and increase the fairness of testing to students, teachers and schools.

JUVENILE JUSTICE
Gov. Sam Brownback signed a bill in April intended to overhaul Kansas’ juvenile justice system and provide more targeted intervention for youth in the justice system, reported The Topeka Capital-Journal. Under the bill, Kansas will spend less on low-risk juvenile offenders and more on high-risk offenders, and youth will be less likely to go to jail for probation violations. It also seeks to reduce out-of-home placement for troubled youth by placing them in community-based programs while allowing them to continue living at home.

IOWA FIRST RESPONDERS AUTHORIZED TO ADMINISTER OVERDOSE TREATMENT
Iowa Gov. Terry Branstad signed a bill in April that will empower first responders and others to administer naloxone, an overdose antidote, to people who’ve overdosed on opioids such as heroin and some prescription pain medications, according to The Des Moines Register. Prior to this legislation, civilians and some first responders such as police were prohibited from administering the drug.

“This bill is a direct attempt to mitigate the number of opioid overdoses in our state and deaths that result,” Branstad said. “These overdoses might be an instance where someone took too much of an opioid medication, but it might also be instance of heroin overdose. In either case, the state is making it clear that reducing barriers to saving lives is a priority of our state.”

Kim Brown, who lobbied for the legislation after her son Andy died of an overdose in 2011, said she hopes it could help prevent the same thing from happening to other Iowans. “I think you just learn to walk with your grief. I don’t think there is such a thing as closure,” she said. “But yes, being able to save a life, being able to save somebody else’s son or daughter, mother, father, brother, sister, aunt, uncle is extremely comforting to me.”
The west
AK • AZ • CA • CO • HI • ID • MT • NM • NV • OR • UT • WA • WY • AB • AS • BC • GU • MP

For more on CSG West, visit capitolideas.csg.org and www.csgwest.org.

SMOKING BAN
The Alaska Senate approved a bill that bans smoking in most public buildings in the state, according to The Juneau Empire. The bill prohibits smoking in bars, restaurants and most workplaces. Sen. Peter Micciche, who brought the bill forward, called secondhand smoke a “critical health issue.” The ban includes both cigarettes and e-cigarettes. Although the bill covers most workplaces, smoking still would be allowed aboard fishing boats at sea and in tobacco stores with an enclosed, ventilated smoking area.

FOSTER CHILD HEALTH
A new Arizona law requires fast access to behavioral-health services for kids in foster care, reported The Arizona Republic. House Bill 2442, or Jacob’s Law, gives foster parents access to behavioral-health services for kids under their care within 72 hours after the Department of Child Safety removes the child from his or her home. A two-hour response is required for kids with immediate needs. The bill had unanimous support and was passed relatively quickly.

RAPE KIT TESTING
Oregon passed a law in March mandating the state crime lab to process the state’s backlog of untested rape kits and enter the results into a national DNA database. Senate Bill 1571, or Melissa’s Law, also requires police departments to retain rape kits for at least 60 years, allows victims to ask if a DNA match has been found from their rape kit, and allocates $1.5 million to hire nine additional analysts for the state crime lab, reported The Statesman Journal.

FACEBOOK AD DRAWS RECORD NUMBER OF WASHINGTON VOTER REGISTRATIONS
On March 18, a Facebook post appeared on many Washington state residents’ pages reminding them to register to vote, a tactic that resulted in a record 13,072 Washington online voter registrations and updates being processed in one day, according to Washington’s Office of the Secretary of State. The Facebook post linked to the U.S. government’s voter registration portal, which directed users to Washington’s online voter registration tool, MyVote.wa.gov, reported The Olympian.

“We are pleased with the influx of new voters as we head into the presidential primary and the state primary and general election season,” Secretary of State Kim Wyman said in a news release. “We love using social media as one of the avenues to attract new voter registrations.”

The previous one-day record for online voter registration in Washington was 12,655, and was set on the last day to register before the 2012 presidential election.

The state worked with Facebook to find ways to increase online voter registrations. Facebook has reminded users to vote and showed them where to find their polling place during previous elections, but this year is the first time they’ve sent targeted reminders encouraging people to register to vote.

“By providing a platform for civic engagement, Facebook makes it easier for people to participate and have a real impact on the political process,” said Katie Harbath, Facebook’s director of government and politics. “When more people are engaged, they hear a wider range of views, leading to an open and healthy debate about the important public policy issues that affect all of us.”

VOTING AGE
A bill passed by the New Mexico Legislature allows 17-year-olds who will be 18 at the time of the general election to vote in the June 7 presidential primary, according to The Albuquerque Journal. The law’s effective date is May 18, which is eight days after early voting for the primary begins on May 10. The law only applies to the primary; New Mexicans will still have to wait until they turn 18 to vote in all other elections.

MINIMUM WAGE
California will raise its minimum wage to $15 an hour by 2022, reported The Sacramento Bee. California and New York are the first states in the country to raise their minimum wage to $15, the highest rate in the country. The legislation also requires employers to provide three annual sick days and includes a provision allowing the governor to postpone a wage increase if there is an economic downturn. Los Angeles and San Francisco have already enacted measures to phase in a minimum wage increase to $15.
CONNECT WITH CSG THROUGH SOCIAL MEDIA

State leaders know how important it is to have a social media presence to connect with, listen to and learn from constituents. Likewise, it’s important to stay connected with The Council of State Governments; staying up-to-date with CSG publications, conferences and educational opportunities is a little easier through our social media platforms. CSG uses Facebook, Twitter, LinkedIn, YouTube and the Capitol Comments blog to connect leaders with information they need to better serve their states. Here are some tips on how to make the most of social media to access all the information CSG has to offer.

Like CSG on Facebook

CSG uses Facebook to share announcements of upcoming events, CSG infographics that offer state comparative data in an easy-to-understand graphic format and top news from the states. On the CSG Facebook page, state officials can find the results of state elections, information about CSG conferences and announcements of CSG eCademy sessions. Don’t forget to like our stories and share them with your own networks. Find us at facebook.com/CSGovts.

Follow CSG on Twitter

@CSGovts provides instant, up-to-the-tweet access to what’s happening in state governments. CSG shares the latest headlines from across the states, as well as federal news that impacts state governments. Followers also get the latest blog posts from our in-house policy experts on the full range of issues facing the states—from transportation to health, energy to education. @CSGovts provides the latest news and information state government officials need to know.

Link with CSG on LinkedIn

CSG shares organizational news through LinkedIn and creates a connection with a network of the nation’s top state officials. In addition to insights and resources to help state government officials enhance their work, the CSG LinkedIn page features opportunities for states and associates to get involved in CSG efforts to share capitol ideas. As the only organization serving all three branches of state government, the CSG LinkedIn page offers a place for this broad-base of state officials to continue networking and learning from each other in between CSG conferences and events, while also keeping updated on important CSG news and announcements.

Follow Capitol Comments

The CSG blog, Capitol Comments, located in the CSG Knowledge Center, knowledgecenter.csg.org/kc/blog, provides insights and analysis of state government news. With the ever changing landscape of state government policy, understanding the full range of implications that state and federal policies can have on state governments and their constituents can be a challenge. CSG policy experts offer their perspectives on the latest policy news with an eye for how it will impact state governments through Capitol Comments, providing state officials with the information and insights needed to make well-informed policy decisions.

Tune in on YouTube

CSG’s YouTube channel, CSGovts, shares CSG eCademy sessions and videos from CSG national conferences, allowing members to take advantage of important CSG programming, even when busy schedules prevent attendance or participation during a live event. Viewers can also participate in discussions on programming provided through the CSGovts channel, giving members the opportunity to share feedback to help CSG continue improving its products.
It’s no secret that technology has revolutionized our society. It’s transformed the way we communicate with our friends and family. It’s changed the way we access information and it’s led to an exponential growth in the amount of information available to us, right at our fingertips. But just as we are adapting to the technology revolution as individuals, so, too, should government. From ensuring that constituents have access to the technologies that are shaping our future economies to protecting states’ information resources from cyberattacks, states have a leading role to play in creating the infrastructure and legal framework to support the technology revolution. What’s more, states also are benefiting from the adoption of new technologies to enhance the quality and efficiency of the services they provide to the people they serve.

IN THIS SECTION

10 – Using Social Media
12 – Governing Data
14 – Forces of Change in IT
16 – Protecting Data
20 – Facing the Risk
22 – Technology Aids Disaster Aid
24 – 10 Questions with California Assembly Majority Leader Ian Calderon
26 – The Sharing Economy
28 – Lawmakers Take on Tech
30 – Revamping Voting Tech
34 – The Communications (R)evolution
38 – Bridging the Digital Divide
42 – Cracking the Code
44 – The NextGen IT Workforce
The emergence of digital government and the power and potential of data have expanded dramatically in the last 10 years. Social media has become ubiquitous. Open data, which makes data sets available to all citizens, often through state websites, has become ever more commonplace since 2009. And the daily media attention to “Big Data” started around 2012.

But although state governments are floating in a sea of data, the management and governance of this new kind of asset has tended to be weak, and sometimes close to nonexistent. The National Association of State Chief Information Officers’, or NASCIO’s, survey of CIOs in 2015 noted that technology directors are “wrestling with a host of challenges around data governance, legacy data, data access and sharing, and major new flows of data from new sources.”

In 2015, data management appeared for the first time on the CIOs’ top 10 priority list. Still, fewer than 5 percent said they had “formal data management policy and practices” at an enterprise level. Less than half said the current role of the state CIO was to develop an enterprise data strategy. Only 38 percent believed their current role involved convening stakeholders for data governance decisions.

Legislatures haven't jumped into the breach with any frequency. “There’s a significant gap in the understanding of the power of analytics and what needs to happen on the legislative side,” said Doug Robinson, executive director of NASCIO. “They’re not having these conversations in legislative bodies.”

Agency apprehension doesn’t help. Part of the reluctance to share data is the sense among agencies that it will be used against them. Said Connecticut’s chief data officer, Tyler Kleykamp, who has held the newly created position for two years, “We’ve tried to communicate to the agencies that their data has value beyond the purpose for which they collect...
looking ahead to 2016 it. And that purpose isn’t to look over their shoulder and tell them they’re doing a bad job. We’re not looking for problems. We’re looking for solutions.”

Said Beth Ashcroft, executive director of Maine’s Office of Program Evaluation and Government Accountability, “There really need to be . . . dedicated resources and focus in each agency to work with the Office of Information Technology in matters of IT significance, including data governance.” Without centralized data governance, resources can be wasted in a constant reinvention of the wheel as individual research projects have to go through lengthy meetings and legal maneuverings to gain permission to work together, and share data, for the common good.

Fortunately, while most states are still very early on in setting up structures for data governance, a growing number of states have made progress. In 2010, Colorado became the first to appoint a chief data officer and followed that move with the creation of the Government Data Advisory Board. Since then, states such as New Jersey, New York, Connecticut and Texas have created data chief or data coordinator positions. Some states, like Virginia, have devoted attention to data governance, without actually creating a data chief role. Others, including Indiana, have inaugurated statewide programs for data sharing through executive orders.

Texas appears to be advancing as quickly as any, which is a particularly difficult challenge, given its deeply decentralized structure. It established both a statewide data coordinator position and an interagency data transparency commission in the 2015 legislative session. Chaired by the governor’s office, the commission is made up of representatives from the House, Senate, legislative budget board, comptroller’s office and the Department of Information Resources, with support from executive leadership from Texas agencies.

The creation of new communities of interest has already sparked some unexpected collaborations such as one between the Texas Veterans Commission and food and nutrition programs associated with day care and run by the Department of Agriculture. The goal is to make sure that veterans who have children, and who were eligible for the reduced meals program, were using it, by matching data between the two programs.

Ed Kelly, who had been the chief administrative officer for the Texas Department of Agriculture, took on the statewide data coordinator job in September 2015. Data governance, open data and data analytics/business intelligence are the “three towers” under “data utility” in the state’s strategic plan. “Data is an extremely important strategic asset,” said Kelly. “There’s opportunity, even in a decentralized government environment, to open up and share so agencies can be more effective and efficient in the way they serve their constituents.” So far, Kelly has met with 30 agencies. He says the predominant reaction to his appointment is “overwhelming;” the phrase he hears is: “It’s about time we had a person in this role.”

Working on data governance involves a potent effort to change the culture of a state’s approach to technology. It involves multiple individuals spread out across programs and incorporates both technological, political and business decisions. Who decides whether data is open or not? How are decisions made about what is collected and what it is used for? Where do you need approval and from whom?

These aren’t easy questions. “The data was safe when it was locked in a box,” said David McCurdy, the director of technology in Colorado. But the more you open it up, the more potential risk. “But also we know we can use open or shared data to really change lives.”

About Barrett and Greene

CSG Senior Fellows Katherine Barrett and Richard Greene are experts on state government who work with Governing magazine, the Pew Charitable Trusts, the Volcker Alliance, the National Academy of Public Administration and others. As CSG senior fellows, Barrett and Greene serve as advisers on state government policy and programming and assist in identifying emerging trends affecting states.
STATE CIOS, TECHNOLOGY TRENDS AND THE FORCES OF CHANGE

by Doug Robinson

The state government information technology, or IT, landscape continues to evolve and respond to significant changes reflecting demands of citizens, evolving business models, emerging technologies and the faster paced, more complex environment faced by state chief information officers. Based on recent surveys and data from the National Association of State Chief Information Officers, or NASCIO, state CIOs face several “forces of change” that require state IT leaders to adapt, evolve and respond to new demands and opportunities.

About the Author

Doug Robinson is the executive director of the National Association of State Chief Information Officers.

CYBERSECURITY

Today, these forces of change are led by the highest priority of all for CIOs—cybersecurity and risk management. Since 2013, this priority has held the number one position as voted by state CIOs in NASCIO’s annual top 10 ranking. It’s evident state governments are at risk.

Today’s headlines are filled with stories of cybersecurity incidents and their disturbing impact on both public and private sector organizations. Because of the massive amounts of personal information held in trust by state government agencies, states are attractive targets for hackers, cyber criminals and foreign entities, and in the last three years, states have experienced a significant increase in cybersecurity threats. Attacks from activist groups or “hacktivists” with a political agenda have also become more prevalent. In fact, because of the increasing severity, volume and sophistication of cyber threats, states are becoming more vulnerable to attacks.

State governments face persistent challenges in cybersecurity risk reduction because of several factors, most importantly these four key issues:

- Inadequate Strategic Direction and Organizational Structure
- Constrained Security Budgets
- Increasing Sophistication of the Threats
- Lack of Cybersecurity Professionals

In the face of these rising threats, states must organize for success with a clear and authoritative governance structure that includes all appropriate stakeholders—and not just technology leaders. Cybersecurity threats present “business” risks to the states and must be understood in this context. States should adopt a cybersecurity framework based on national standards and guidelines, including a focus on adopting critical controls for cyber defense, and should prioritize actions that will yield the best results. This will provide a roadmap for action and guide investments.

Certainly cybersecurity should be addressed as a significant risk to state governments and funded at a level commensurate with the risk. Based on NASCIO data, the percentage of IT spending on security is much lower than recommended benchmarks for comparable organizations. States should prioritize their risks and adequately invest in data protection, security tools and training. Finally, NASCIO recommends states plan for the consequences of a cyber incident or data breach with a robust response and recovery protocol, including a crisis communications plan.
EVOLVING SERVICE DELIVERY MODELS

With a focus on enterprise strategy, state CIOs preside over increased diversity in service delivery models and options for sourcing IT services. Since 2010, state CIOs have continued a steady progression toward more consolidation, optimization of technology resources, and increased use of shared services and outsourcing. One thing is clear; the conventional “owner-operator” model, where state government owns all the computer systems and infrastructure and licenses commercial software to support business applications, is declining. More than half the states now outsource at least some of their IT infrastructure and operations. NASCIO expects this trend to continue and transform the longstanding approach to IT management in state government.

This shift has been supported by the major force of change in IT—cloud computing.

Cloud computing allows organizations to pool expensive IT resources and consume needed services like a utility.

Leveraging advances in technology and the power of the internet, users pay for only what is used when it’s needed. Constrained by budgets and supported by the availability and utility of cloud services, state governments are becoming more mature in adopting this alternative approach. An attractive model delivers business software applications using Software-as-a-Service, or SaaS, over the internet, where the application and supporting infrastructure are provisioned by an external third party, rather than the state data center. While cloud services are certainly more flexible and agile than traditional IT service delivery, their adoption raises policy questions related to procurement, data ownership, security and legal concerns that must be addressed.

DATA IS EVERYWHERE!

The growth of digital data and the power of analytics represent prominent forces of change in state government. As service and knowledge intensive organizations, states rely on data, but historically only a small percentage of data collected is ever analyzed for insights on citizen service delivery, improving performance and making better policy decisions. This is slowly changing, but will quickly advance if states devote more attention to data strategy, governance, stewardship and quality.

State agencies do recognize data and information are essential to improved service delivery and program integrity. They are responding to the public demand for open data and presenting more datasets in online portals and dashboards, including opening up legacy data resources.

States also are exploring new ways to support and improve the performance of programs and service delivery through better management of government data, business intelligence and data analytics. There is power in analyzing data with new tools and capabilities; however, states will need to focus on appropriate roles and responsibilities, while being attentive to security and privacy concerns.

RENEWING THE WORKFORCE

A major concern for state CIOs continues to be the significant number of state IT employees who are eligible to retire today. The pending retirements and the challenge of recruiting new IT talent to state government is a force of change with significant impact. Some call it a crisis. Retirements present a challenge, but also an opportunity to bring new talent to the state workforce. However, 86 percent of states are having difficulty recruiting new employees to fill vacant IT positions. The major reason?

State CIOs continue to advocate for personnel and pay reforms and have been proactive in using non-traditional and innovative approaches for recruiting. Crafting a formal marketing strategy, using social media, partnering with schools and universities, targeting veterans and tracking metrics are all essential to a successful program.

It remains to be seen if states can fill the IT pipeline and retain the talent they recruit. What’s clear is the transition to a digital government world is highly dependent on a skilled and capable state IT workforce.

Ninety-two percent of states say salary rates and pay-grade structures hinder efforts to attract IT talent, particularly given a shortage of qualified candidates for state IT positions in critical disciplines such as:

- Cybersecurity
- Application Development
- Project Management
- and Data Analytics
Protecting Data Starts with Education and a Plan

by Vinay Dattu

All screens are frozen. Constituents cannot communicate with their government agencies via phone, email or their websites. Questions arise, and many assume it is a glitch in the system. Unfortunately, there was an undetected flaw in your state’s system and it is now a prime subject awaiting exploitation by cyber criminals.

At any given moment, your data can be hacked and sold to the highest bidder. Very likely, sensitive data can be stolen and corrupted, possibly taking your entire organization to its knees. Neither of these outcomes is beneficial for your organization. In fact, the consequences can be devastating. It doesn’t take an information technology specialist to understand and be proactive in protecting your state’s cyber assets. In fact, assuring cybersecurity requires all members of an organization—including a state government—to protect themselves, their members and organization by asking a few simple questions and following procedures. What’s more, lawmakers share fiduciary responsibility to oversee the cybersecurity risks for a state.

This may seem overwhelming for state officials who don’t see themselves as technology specialists. But with some insight and education, leaders can develop a better understanding of the importance of and opportunity for cybersecurity development, producing a general framework that can aid in minimizing security risks for organizations, including state governments.

Cyberattacks are increasing in frequency and scope and are becoming more sophisticated, as evidenced in recent cyber breaches of dozens of banks and a New York dam by Iranian hackers that resulted in federal charges by the U.S. Justice Department. The potential for cyberattacks was also a point of discussion at the Nuclear Security Summit in Washington, D.C., where 29 participating nations pledged to establish a new initiative to address threats to nuclear cybersecurity.

The result of cyber breaches can be significant and far ranging. Impacts of a breach may include the loss and likely sale or publication of personal information such as Social Security numbers, home addresses, personal phone numbers, bank accounts, health records, emails and passwords. Customers, constituents, employees and households trust organizations—from private companies to state government entities—with this valuable information, and it is the responsibility of those organizations to ensure the protection of individuals’ information. Here is a quick snapshot of some recent cyberattacks and the scope of those affected by them.
Most users are aware and have basic knowledge of cyberthreats and the consequences that follow. These threats are often found in headlines as many major corporations and institutions have been affected. Almost all computer users have dealt with the frustration of spam, viruses, and cyberattacks. Even on a very small scale we all know how inconvenient it is to lose just a small amount of time, from home computers, tablets, and smartphones.

How can leaders and state officials be better informed to make better decisions for their cybersecurity programs? Before we address the decision-making process, it would be beneficial to understand the definition of cybersecurity.

According to a 2013 report by the technology research firm Gartner, cybersecurity is the governance, development, management, and use of information security, operational technology security, and IT security tools and techniques for achieving regulatory compliance, defending assets, and compromising the assets of adversaries.

### Sources of Cyber Threats

<table>
<thead>
<tr>
<th>Group</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>Malware or ransomware can freeze organizational operations.</td>
</tr>
<tr>
<td>Foreign States</td>
<td>Attacking infrastructure—energy, transportation or even nuclear facilities.</td>
</tr>
<tr>
<td>Hacktivists</td>
<td>Defacing websites, service disruption.</td>
</tr>
<tr>
<td>Competitors</td>
<td>Stealing intellectual property.</td>
</tr>
<tr>
<td>Hackers</td>
<td>Stealing credit card, social security and health records.</td>
</tr>
<tr>
<td>Spammers</td>
<td>Inundate inboxes with nuisance emails.</td>
</tr>
<tr>
<td>Artificial Intelligence</td>
<td>Internet of Things is the next big thing happening. Physical assets tied to electronic sensors and network connectivity. Example: Driverless cars, connected appliances, connected grids, etc.</td>
</tr>
<tr>
<td>Social Engineering</td>
<td>To trick someone into taking an action that is not beneficial for them or their organization. This could be initiated by hackers, phishing, scammers, identity thieves, etc.</td>
</tr>
</tbody>
</table>
Cybersecurity is a journey and state leaders must take an active role in learning, promoting and protecting a state’s assets. Start with small steps and continue to improve throughout your journey.

As a first step, embrace the problem by asking probing questions:

**What is cybersecurity and why is it important to me?**

To put it simply—you have information in your organization that is waiting to be exploited by cyber criminals. This information can be exploited for monetary or political purposes or terrorist activities. As a state leader, it is your responsibility to protect the information entrusted by your citizens.

Where do I start?

A good starting point is to contact your information security director about your state’s cybersecurity program. A brief conversation can help individual departments and the state as a whole. The following questions may aid you in understanding the current cybersecurity program. Each question should be easily answered in terms that any employee can understand. If answers are unclear, chances are your state is at risk.

Once you have an understanding of your state’s cybersecurity program, then what? What are the next steps to take to ensure the state is taking appropriate action to deter cyberattacks? If one doesn’t already exist, request to have a committee developed for overseeing the cybersecurity program for

---

### Key Questions to Assess Cybersecurity

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>Follow Up Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do we have a cybersecurity program?</td>
<td>Yes</td>
<td>Please explain the details of the program.</td>
</tr>
<tr>
<td>Do we have governance for our cybersecurity program?</td>
<td>Yes</td>
<td>What is the structure? Who is responsible? Who is accountable?</td>
</tr>
<tr>
<td>How much are we spending on our cybersecurity program?</td>
<td>$1 million</td>
<td>What is breakdown of the million dollars? Is it on equipment, training, insurance, salaries, etc.</td>
</tr>
<tr>
<td>Do we have the right people with the right skills to run our cybersecurity program?</td>
<td>Yes</td>
<td>Who are those people and what are their qualifications?</td>
</tr>
<tr>
<td>Do we have a formal training program to address cybersecurity concerns?</td>
<td>Yes</td>
<td>How many employees have successfully completed the training?</td>
</tr>
<tr>
<td>How are we conducting our risk assessment for cybersecurity?</td>
<td>Audits</td>
<td>What is the frequency of the audits? Any red flags from the last audit?</td>
</tr>
<tr>
<td>Do we have cybersecurity insurance?</td>
<td>Yes</td>
<td>What is the total cost of insurance? How much does the insurance pay in case of a breach</td>
</tr>
<tr>
<td>Do we have business continuity program?</td>
<td>Intentionally left blank.</td>
<td>Intentionally left blank.</td>
</tr>
<tr>
<td>Do we have operational resiliencies in place?</td>
<td>Intentionally left blank.</td>
<td>Intentionally left blank.</td>
</tr>
<tr>
<td>What is our disaster recovery strategy?</td>
<td>Intentionally left blank.</td>
<td>Intentionally left blank.</td>
</tr>
<tr>
<td>Where are we most vulnerable for cybersecurity attacks?</td>
<td>Network, Computers, Applications, Databases, Employees</td>
<td>Do we have network intrusion detection systems in place? Are we developing secure web application technologies? Are we continuously educating our employees about cybersecurity?</td>
</tr>
</tbody>
</table>

---

“Very likely, sensitive data can be stolen and corrupted, possibly taking your entire organization to its knees.”
your state. Ideally, the size of such a committee should be limited—consisting of no more than eight people—but having diversity in education and professional backgrounds is critical. A minimum of one high-level IT professional and a lawyer should be included in this committee for its success.

Clearly identify the purpose of the committee, which may include to:
- Identify and establish people or groups responsible for the security of the organization.
- Establish a monthly, then quarterly meeting schedule.
- Provide governance and financial guidance for cybersecurity-related programs.
- Gain understanding of the information security risks and its tolerances.
- Approve policies related to the cybersecurity program.
- Monitor the performance of the cybersecurity program.
Likewise, it is also critical to clearly outline the roles and responsibilities of the committee, such as to:
- Review briefings from the chief information officer, or CIO, and the chief information security officer, or CISO, about the current state of the cybersecurity program. For example, “What threats are we facing? Where are we most vulnerable?”
- Review policies and procedures on how threats are reported, managed and resolved, and make recommendations where appropriate.
- Review strategies for educating staff about the cybersecurity program.
- Review reports focused on security-related information.
- Review and approve cybersecurity-related investment requests.

Enhancing security and protection of a state’s information system is a complex goal that requires the efforts of everyone—including leaders outside the office of chief information officer. To do so, however, state leaders should have a clear understanding of the definition of cybersecurity, the state’s current cybersecurity posture and, finally, a framework to promote and protect your state’s most valuable assets.

Cybersecurity is not all things IT, but it encompasses every aspect of state organizations. By understanding the current state, identifying gaps and challenges and creating a vision for the future of your state’s cybersecurity program, as a leader you will yield benefits that will keep your state, its employees and constituents safer. State employees responsible for protecting state information assets need you. Please lean in and help them!

“**To put it simply—you have information in your organization that is waiting to be exploited by cyber criminals. This information can be exploited for monetary or political purposes or terrorist activities.**”

**About the Author**

Vinay Dattu is the director of legislative information systems at the Tennessee Legislature, where he is responsible for managing and providing strategic direction and leadership in defining, establishing, supporting and operating the overall information systems infrastructure and services provided to the Tennessee Legislature. He previously served as the director of enterprise architecture for the Tennessee executive branch.

**Cybersecurity To-Do List:**

1. Meet with state CIO and CISO to explain the current state cybersecurity program.
2. Create a cybersecurity committee.
3. Define the purpose, scope, roles and responsibilities of the committee.
4. Schedule the first meeting of the state cybersecurity committee to discuss:
   - a. The state’s most valuable information-related assets;
   - b. What happens if those assets become compromised;
   - c. Possible technological, operational and financial impacts of compromised assets;
   - d. Prevention and response plans for a cybersecurity threat of this magnitude; and
   - e. Crisis communications in the event of a cyberattack.

“**To put it simply—you have information in your organization that is waiting to be exploited by cyber criminals. This information can be exploited for monetary or political purposes or terrorist activities.**”
Juniper Research predicts that the cost of data breaches will reach $2.1 trillion globally by 2019—four times the estimated cost of breaches in 2015.

50 percent of respondents said their state has an insufficient number of cybersecurity personnel.

43 percent of respondents said there is insufficient funding at the state level for cybersecurity.

50 percent of respondents said their state has an insufficient number of cybersecurity personnel.

According to a hearing by the U.S. House Small Business Subcommittee on Health and Technology, approximately 60 percent of small businesses close within six months of a cyberattack.

According to a 2016 report by the Governing Institute, a majority of legislators surveyed understand cyber threats are evolving and pose a risk to their state.
Building the Cybersecurity Workforce

From the October 2015 Raytheon-NCSA survey of young adults ages 18 to 26 in 12 countries about cybersecurity career interest and preparedness:

Schools can help build the cybersecurity workforce. 45 percent of respondents said they did not get classroom lessons on staying safe online. 69 percent were not offered classes needed to pursue a cybersecurity career or degree.

Young people want jobs that use skills needed for cybersecurity professions. They just may not realize it. 44 percent want jobs that use problem-solving skills. 36 percent want jobs that use data analysis.

Based on a study by Verizon that looked at data from 200 cyber insurance claims:

The majority of cyber hacks are preventable. More than 70 percent of attacks exploited known vulnerabilities with available patches.

Knowledge is a powerful weapon. In the past 11 years, 96 percent of all cybersecurity-related incidents fell into nine patterns:
NEW TECHNOLOGIES AIDING STATES’ DISASTER RESPONSE

by Shannon Riess

Today, access to computers and technology is practically a given. With the majority of Americans using smartphones, computers or tablets on a daily basis, it is almost unimaginable to live life in an unplugged world. Even though it is difficult to think of disengagement from technology in recent years, this unplugged world was the reality of many State Emergency Operations Centers, or SEOCs, as little as a few years ago.

Although the introduction of technology in an EOC may be recent for some states, the advancement and investment in specialized emergency management programming and software is not entirely a new concept. Emergency management agencies across the United States have become more reliant upon technically advanced systems and programs, which have heightened the ways state emergency managers are able to prepare for, respond to, recover from and mitigate against the effects of disasters.

Information is key whenever a disaster strikes. Lack of information could be detrimental to populations, neighborhoods and local economies. Many of the technological advances in the field of emergency management have been developed in order to solve the information problem and increase situational awareness. Data allows emergency managers to create a common operating picture that can help the state to predict and mitigate against the impacts of disasters, identify at-risk populations and respond to those areas in need, and recover from the effects of a disaster when a threat has passed. Information systems and emergency management specific software have led states to carry out their missions faster, better and more cost efficiently.

Creating a common operating picture used to be a challenging feat. By the time data was collected, analyzed and pieced together, the picture had changed and was therefore invalid. The need for constant updating could only be addressed by a technological solution, which is why Geographic Information Systems, or GIS, have become a staple in many state EOCs. GIS has the ability to spatially integrate data sets, such as weather, demography, topography and utilities. These combined datasets allow the emergency managers to create a real-time picture or map of an incident or disaster.

Many states use mapping software such as the ArcGIS™ system, an Esri software product, as a platform for their state’s incident tracking capabilities. This software is generally combined with integrated emergency management software applications that have the ability to coordinate and track missions, resources and personnel while streamlining information between responding agencies, departments and first responders.

The state of Florida, for instance, was able to use ArcGIS™ as a platform to create GATOR, the Geospatial Assessment Tool for Operations and Response. This application was a critical asset during the 2010 Deepwater Horizon oil spill. Florida’s Division of Emergency Management was able to use GATOR to track the movement of water within the Gulf of Mexico in order to follow and understand the oils trajectory. Thousands of reconnaissance photos were logged into GATOR daily, which aided in response efforts by providing Florida’s emergency management team with a clear common operating picture and a wider understanding of the issue at hand. Once a response mission was tasked,
the emergency managers were able to track the responding vessels and task forces that were deployed. Hazard-specific decision support software systems have been created to serve as planning and modeling tools that demonstrate to state emergency management personnel what a specific hazard would look like if it occurred in a certain region. States conduct exercises using these programs, which help to estimate potential losses, generate evacuation routes and improve mitigation efforts that protect the state when these threats are genuine. Software such as the Hurricane Evacuation program, or HURREVAC, may even be able to show a state how other states in a region would be affected by a hurricane, which can spur the creation of mutual aid agreements and can serve states in response and recovery when a disaster does occur in the future.

Looking toward the future of technology in emergency management there are many recently developed systems, such as unmanned aircraft systems and ‘smart’ flood detection technology, which are new to emergency managers and the public alike. While these systems are innovative, they are also unfamiliar to a state’s emergency managers and residents, many of whom may be resistant to adopt such novel technology. In order to be successful, states will need to effectively manage social behaviors and attitudes about technology in order to implement viable new systems.

One program that could have a profound effect for emergency managers at the state level would be the implementation of a statewide alert and notification system that would send emergency voice and text alerts to cell phones in a geographical area that is deemed at risk of an emergency or disaster. Many universities employ this method for their alert and notification systems, which has been salient for the safety and security of students during emergency situations such as active shoot scenarios and armed robberies, but on a much smaller scale than state agencies.

Currently, states are not held accountable for alert and notification, but rather counties and local governments are charged with notifying the public during disasters. This can prove problematic for some counties that do not have public alerting systems. Additionally, those counties that do have systems in place must maintain those systems with their own funds. Many alerts do not reach their intended audiences as some methods of alert require residents to be doing a certain activity at a certain time, such as listening to the radio or watching the news on television. A comprehensive statewide alert and notification system that allows counties to send out alerts to mobile phones in an area would provide uniformity for notification systems throughout a state, increase public awareness and reduce expenses statewide.

The true future of emergency management at the state level lies in the ability of states to support and aid in the growth of local and county emergency management. A uniform and supportive statewide emergency management network that embraces our changing world and proven technologies will ensure that a state’s residents, visitors and businesses remain informed and protected during an emergency or disaster.

"Information is key whenever a disaster strikes. ... Information systems and emergency management specific software have led states to carry out their missions faster, better and more cost efficiently.”

About the Author
Shannon Riess is currently a continuity of operations intern at the Florida Division of Emergency Management and a student at Florida State University. This summer she will be interning with the Smithsonian Institution in Washington, D.C., and hopes to find a permanent career in the field of emergency management after graduation.
1. Technology and innovation are big components of California’s economy. Why has the state been so successful in this area?

“It’s undeniable that one of the most important economic assets we have is creativity. In 2014, the creative industries generated 1,447,100 jobs (direct, indirect and induced), $113.5 billion in total labor income, and $12.1 billion in taxes to California state and local governments. … I am proud to support policies that invest in our future workforce — whether it’s through funding arts education or promoting STEM (science, technology, engineering and math) fields, it’s critical that our state continues to provide the tools and resources that will inspire the next generation of leaders.”

2. What are some of the most significant changes California has made to its government operations as a result of new technologies?

“Technology has revolutionized the world we live in. Unfortunately, and not surprisingly, government has had a difficult time keeping up. … That’s why my bill, AB 582, aims to help government function more efficiently by placing a proven business leader or entrepreneur in a state agency to help streamline and update their day-to-day processes. Other federal, state and local governments have used a similar program called the ‘Entrepreneur in Residence’ and have seen significant results. Our state is home to some of the most successful entrepreneurs in the world, and it’s time for us to tap into that talent and help our government keep up with an ever-evolving world.”

3. What emerging technologies do you see on the horizon that could yield big improvements for state governments in the future?

“Improvements on encryption for our servers and infrastructure will be of utmost importance. With cyberattacks occurring thousands of times a day, our state needs to make sure our critical infrastructure is safe from these attacks and we develop the kind of cybersecurity necessary to keep our information protected.”

4. How can state policymakers help ensure that today’s youth are prepared for the high-tech jobs of tomorrow?

“One of the challenges we face is the ongoing difficulty of recruiting for high-demand occupations due to a shortage of qualified candidates. We need to spark interest in our youth to pursue tech-related jobs. Whether it’s computer science, mechanical engineering or any other science-based area of study, we want to ensure that our students have not only an opportunity but also a leg up on the competition. Furthermore … we have to provide arts courses in career technical education programs and develop
opportunities that connect classroom arts education with real-world entrepreneurial experiences because the arts education is a catalyst for creativity and our innovation-driven future.”

5. How can state lawmakers help increase access to technology for students in rural and lower-income communities?

“It’s important that we prepare our youth—our future workforce—for success in a digital world. In California, 69 percent of residents have a broadband Internet connection at home, up from 55 percent in 2008. However, there is still a digital divide in our state and every student, regardless of where they live, should have access to affordable broadband technology.

Several years ago, the Legislature passed a bill that created the California Advanced Services Fund, or CASF, to support broadband infrastructure in the most remote areas of the state that still lacked high-speed Internet access. … Legislation has been enacted to authorize additional funds to provide broadband access in the last remaining unserved areas and identify grants for the deployment and adoption of broadband services in publicly supported housing communities using the CASF.”

6. California has been a leader in consumer privacy and data protection. Why is this so important?

“Understanding certain types of data collection can be helpful to the individual, but protecting the privacy of our diverse population is, and always will be, a priority policy of the state.

Up until now, privacy rights have almost exclusively focused on the rights of the living, especially in regards to digital privacy. … A bill I introduced last year, AB 691, or the Privacy Expectations Afterlife & Choices Act, creates a pathway for families to follow in order to obtain the information necessary to administer the newly deceased’s estate, and strikes a balance with the decedent’s wishes about which communications they want to be kept private.”

7. With your colleague Assemblymember Evan Low, you launched the new Legislative Technology and Innovation Caucus in California. What do you hope to accomplish through this new body?

“The California Legislative Technology and Innovation Caucus seeks to promote technology and foster innovation, support legislation that creates good paying jobs, and engage on emerging policy issues. From technologies that support social interactions and agricultural equipment that conserves water consumption, to renewable energy technologies that are redesigning our electricity grid and the latest discoveries in medicine, this caucus will be dedicated to educating the Legislature, as well as the public, about our state’s tech and innovation sector.”

8. You are among a few millennial state legislators across the country. What new perspectives do you think your generation can bring to state legislatures?

“My generation wants to believe we have a political system where we can promote positive change and an economic system where we can at least be competitive; that there’s a level playing field even if we’re competing with those in the top 1 percent. … I see the millenial generation being very similar to our grandparent’s generation, known as the greatest generation. We’re not only concerned about ourselves, but about our seniors and future generations and the world they will have to live in.”

9. How can state lawmakers use technology to better engage and encourage millennials to engage in the political process?

“We should use technology as a medium for millennials to communicate to us what their priorities are, to register to vote in a simple, accessible way, and to hear from us how we’ve incorporated their priorities into legislation. … It’s also important to continue to keep up with technological advancements and stay ahead of the game. What’s the next platform that young people will be using? … And there is no doubt that public-private partnerships and collaborative efforts with the tech industry will allow us to use these mediums more effectively.”

10. As a legislator, what’s your favorite app or apps?

“Twitter. I love Twitter because it allows me to see what’s happening in a quick, easily digestible way. In my role, it’s important to know what’s going on in the world as well as what’s going on around me. I also depend on it to help me communicate immediately with my constituency, so they know what I’m up to, and always know I’m working hard on their behalf. But I also like that it allows people to get more of an idea who I am and what I care about. It helps me remind people that I’m also human, which is important in politics.”
It has been called the sharing economy, the peer-to-peer economy, the app-based economy, the gig economy. New platforms and businesses such as Uber and Airbnb allow individuals to make use of underutilized resources such as their cars and homes, keep their own hours, and pocket the earnings. But with these new platforms have come fundamental concerns about the changing nature of work that expose thorny questions not only for workers, consumers and the businesses themselves but for government at all levels, as well.

“There is increasingly a precarious nature of work and more and more (of) what passes for a job in today’s economy is not a job in any sense of what we used to think of,” said Stacy Mitchell, co-director of the Institute for Local Self-Reliance, a non-profit advocacy group with offices in Washington, D.C., Minneapolis and Portland, Maine. “It doesn’t come with the kind of security and sufficient hours that full-time work ought to come with.”

Mitchell, who in 2007 chronicled the rise of big box chain stores and their impact on independent businesses in her book Big-Box Swindle, said the new platforms are playing a similar role in this economy. But the idea of Uber and Lyft squeezing out local taxi companies just as Wal-Mart and Best Buy squeezed out local mom-and-pop stores isn’t necessarily the biggest concern. For one thing, those ride-share companies consider their drivers independent contractors and not employees, which allows them to get around providing benefits, Mitchell said.

“When I look at … Uber and Lyft I see companies that exert a tremendous amount of control over how their drivers operate, what their drivers can charge, the terms under which they work,” Mitchell said. “That’s much more of an employee relationship and the primary reason it has not been structured as such by Uber is that it’s a way of getting out of the obligations that typically come with having employees and foisting those costs and risks onto the employees themselves.”

While the workers bear much of the risk in this new economy, the employers bear relatively little.

“In the old days at least the capitalists had to put up capital,” Mitchell said. “They had to build the factory and fill it with equipment and have something on the line. And you look at Uber or Airbnb or any of these other kinds of platform companies, what are they really providing beyond the software? And yet they’re taking a huge percentage of the revenue and incurring very little risk.”

Shelby Clark knows the sharing economy well. He founded a company called RelayRides—now known as Turo—which operates a peer-to-peer car-sharing marketplace. He now serves as executive director of Peers, a San Francisco-based organization whose mission according to their website is “to make the sharing economy work for the people who power it.” Clark said he took the job in 2013 just as many were starting to ask a lot of questions about work in the sharing economy.

“There is increasingly a precarious nature of work and more and more (of) what passes for a job in today’s economy is not a job in any sense of what we used to think of.”

—Stacy Mitchell, co-director of the Institute for Local Self-Reliance

One answer the group came up with is a concept called portable benefits. Last fall, Clark
Are these good jobs or is this a race to the bottom? … How can we support workers in this emerging (sharing) economy?

»Shelby Clark, executive director of Peers, a San Francisco-based organization dedicated to supporting workers in the sharing economy

joined tech industry, labor and public policy leaders in calling on Congress to support new protections for on-demand contract workers in a letter to lawmakers.

Clark said the portable benefits concept is starting to gain traction in Washington, D.C., and around the country.

“Everybody should be able to have affordable access to benefits regardless of their employment classification,” said Clark. “So we’re starting to look at what the systems could look like, what regulatory and legal changes need to happen to enable those systems.”

Benefits wouldn’t be tied to a particular job, so they would be portable. They would be pro-rated based on the number of hours worked in a week so someone who works 10 hours out of a 40-hour work week could get a quarter of the cost of a full-time employee’s benefits. The benefits would be universal because they would be accessible to everyone, even workers not considered employees. For example, benefits like workers’ compensation or a substitute like short-term disability, which are difficult to find as an independent contractor, would be attainable.

Legislative action likely would be needed at the federal, state and local levels to modernize labor laws and make things like portable benefits a reality nationwide. But Clark noted there are existing initiatives around the country that could help show the way. One of those is the Black Car Fund of New York.

Clark and Mitchell both say worker-owned co-ops could also be a vehicle to allow these kinds of on-demand, independent workers to band together to attain benefits. Mitchell points to Cooperative Home Care Associates, a large co-op of home health aides in the New York area. Clark points to another New York-based company.

“Juno is sort of like a large-scale version of (a co-op),” he said. “It’s just like Uber but they give a larger cut to the drivers and the drivers also get equity in the company. The way they’re competing is they’re taking care of the drivers and I’d like to see more and more of that.”

Clark said he believes other changes are already afoot among companies in the new economy but challenges lie ahead.

“Right now I think that we need more mechanisms to enable companies to treat their workers well,” he said. “I think sometimes the companies are sort of characterized as just trying to shirk the responsibility and I don’t see that.”

Mitchell believes states have an important role to play in this new sharing economy.

“I think states need to be on top of enforcing existing labor law, particularly where companies are misclassifying workers as contractors,” she said. “States have an important role I think in helping — along with the federal government — to maintain those lines and to be clear about what those responsibilities are.”

© Spencer Platt / Getty Images
A group of The Council of State Governments’ members recently visited the headquarters of CSG Associate member Esri, an international Geographic Information System, or GIS, software company, in Redlands, Calif., to discuss how to use data and apps to make better policy decisions in their states.

“More mayors lose their jobs over snow-plowing than any other reason,” said Richard Leadbeater, public relations manager for Esri. Leadbeater flashed a map on a screen showing how data can be used to help make better decisions about snowplow deployment.

In Ohio for example, for the 2013-14 winter, the City of Columbus Department of Public Services started using a new GIS web application they named “Warrior Watch” to internally monitor both real-time and historical performance of the city’s snow and ice removal activities. Moving to a data-focused GIS platform helped the department to manage the complexities of more than 100 snow operation vehicles and a street network of approximately 2,000 miles.

“Every day as legislators we have to make important decisions about where to spend our taxpayer’s money,” said Delaware state Rep. Helene Keeley, who attended the event. “We rely heavily on data to help us make those decisions.”

Keeley and other attendees at the session discussed how difficult it can be to access data and information that is trustworthy.

“We ask a lot of questions about how the programs we fund will benefit our constituents and what those funds will be used for,” said Keeley. “Isn’t it just as important that we ask where our data is coming from and if we can trust it?”

Reliability isn’t the only obstacle attendees identified when it comes to using data in decisions—it also needs to be presented in a meaningful format, especially in a world of big data. Big data encompasses huge datasets that include everything from traffic patterns to grocery purchases. But, as Leadbeater explained, big data doesn’t have to be intimidating.
Sen. Jorge Suarez  Puerto Rico
“I use Twitter a lot to keep my constituents informed of my work, bills, events and news that are important for my district. I was also very impressed with the technology that we learned about (at Esri) that can be used to implement smart cities. Mapping is everything.”

Rep. Ryan Lynch  Montana
“My favorite app is probably Twitter. The ability to quickly gauge constituents’ thoughts on different issues is amazing. You can really get a feel of what is being discussed and the significance within different communities. It is a great way to share news stories and ideas with folks back home.”

Rep. Marvin Abney  Rhode Island
“My favorite app for political purposes is called Vote Builder. It is a powerful, easy-to-use tool that helps me manage=14,000 constituents. I can respond real time to who my constituents are, where they can cast ballots, how to contact them. The app helps me develop canvassing plans and stay informed on issues most important to voters. I can create response letters and generate mailing lists. Most importantly, I can view the voting history of constituents in my district.”

Sen. Michael Moore  Massachusetts
“Facebook is still the best app for communicating with my constituents. Beyond a convenient way for me to respond to local needs, it allows me to update constituents about legislative efforts and provides a forum for the community to discuss important ideas.”
The chaos that unfolded with the 2000 presidential election transformed election administration in the United States. Most jurisdictions used federal money to purchase new voting machines, and guidelines were created to make the voting process more reliable.

But that was almost 16 years ago. Technology has advanced, and the machines purchased at that time continue to age. State and local governments across the country are trying to figure out how to get new equipment with little money.

Most jurisdictions bought new voting equipment between 2004 and 2006, and most of them are still using the same equipment, said Christy McCormick, a commissioner with the U.S. Election Assistance Commission, or EAC.

“Many of those systems are coming to the end of their natural life cycle,” McCormick said. “In addition, the advances in technology have been so great over the past 10 years that a lot of that technology is old and outdated, and it’s hard to find parts and pieces for the systems.”
Election Mess Spurs Change

The 2000 election that pit George W. Bush against then-Vice President Al Gore depended on Florida, where the outcome was too close to call. The situation was complicated by lawsuits, demands for recounts and confusing punch-card ballots.

The country cried for election reform and new voting machines. Some of the technology used during the 2000 presidential election had been used since the 1960s or 1970s, McCormick said.

In 2002, Bush signed the Help America Vote Act, or HAVA. In addition to creating the EAC, which was charged with creating voting system guidelines, HAVA addressed voting technology and voter access issues. HAVA provided funding to help states replace voting machines, especially punch-card and lever machines.

“It was pretty comprehensive on different issues that Congress wanted to address regarding voting technology in the states, and included a huge tranche of money — almost $3 billion — for election administration, and most of that was for new voting technology,” McCormick said.

Now states have little, if any, of that money left.

After a Decade, Change Needed Again

In 2016, jurisdictions in 43 states use voting machines that are at least 10 years old, according to a report by the Brennan Center for Justice titled “America’s Voting Machines at Risk.” Jurisdictions in 14 states have machines that are at least 15 years old.

Election jurisdictions in 31 states want to purchase new voting machines over the next five years, the report said. However, election officials in 22 of the 31 states said they didn’t know how the funding for the machines would be obtained.

“After years of wear and tear, machine parts like motherboards, memory cards, and touch screens can fail,” the report said. “When this happens on Election Day, voters can be forced to wait in line while repairs are made or machines replaced.”

It could cost the country more than $1 billion to replace equipment over the next few years, according to Brennan Center estimates.

Various solutions have cropped up across the country where voting technology not only differs from state to state but also from county to county in any given state.

“Some states have all one system and some states allow the jurisdictions to choose what they want to purchase,” McCormick said. “So, it’s kind of all over the place. It’s really a patchwork of systems throughout the country.”

States Search for Solutions

Use of commercial off-the-shelf, often referred to as COTS, technology has become popular in some jurisdictions. Voting systems have traditionally been contained to stand alone, all-in-one units. But now some systems are beginning to utilize technology such as tablets and printers.

“It’s a trend that’s starting for a number of reasons,” McCormick said. Items such as tablets and printers are easy to find and easy to replace. They also can be used in other capacities when not being used in elections.

The EAC is currently working on new voting system guidelines, and commercial off-the-shelf technology is one area being considered. McCormick said the new guidelines, which will include new technology certifications, should be available in the next couple of years.

Utah state Rep. Brad Daw, a software engineer, sponsored a bill earlier this year that would have created a selection committee to recommend new voting equipment for the state. Daw wanted to replace the current electronic, touchscreen technology with a system that uses hand-marked paper ballots and scanning machines.

“They’re very low cost, and they’re reliable, auditable,” he said.

TOUCHSCREEN VOTING MACHINES OUT-OF-DATE

RIVERSIDE, Calif.—A woman demonstrates how to use a touchscreen voting machine, which was first used in the 2000 election. Now many districts are struggling to find a way to replace out-of-date electronic, touchscreen machines. Some jurisdictions have considered a return to paper ballots.

© Kim Kulish/Corbis
Under the legislation, the state would not force counties to use the voting system selected by the committee, but it would offer financial support to counties that decided to implement the new system. Daw said the bill had wide support but did not get through the state’s short legislative session.

According to Daw, the current voting machines “are good for another year, another election cycle,” and he hoped there would be time to revisit the issue next year.

In March, Utah Republicans cast votes in the state’s presidential caucus online. Media outlets called it the largest online election in history. Asked if online voting could be a viable, affordable option for states, Daw pointed to unavoidable risks.

“Either you have to sacrifice some level of anonymity, or you have to be open to the possibility of having your system hacked and somebody casting fraudulent votes—one of the two,” he said. “In other words, in online voting, you have to give up something in order to make it work. And, as far as I can tell, no one has figured out a way around that.”

Mail-in voting also has become a trend across the states. “We’re seeing an uptick in absentee ballots and also early voting has been extremely popular this year,” McCormick said.

Three states—Colorado, Oregon and Washington—conduct elections either solely or primarily by mail. Proponents of mail-in voting say it is more accessible, especially for voters with disabilities.

Colorado Secretary of State Wayne Williams said his state has “a very robust initiative and referendum process” and voters like to study the complex ballot issues.

“It’s easier for them to do that if they have the ballot sitting in front of them where they can research it on the internet or the newspaper or whatever source they may want to use,” Williams said. “When you walk into a polling place, you obviously don’t have those opportunities to study each ballot issue in that type of fashion.”

Williams said 95 percent of voters returned a mailed ballot in the state’s last election. The other five percent visited polling places, which open for about two-and-a-half weeks during a general election. However, of the 95 percent that used a mailed ballot, most of the voters dropped off the ballot as opposed to returning it by mail.

In addition to mail-in voting, Colorado encourages jurisdictions to use specific voting technology for ballot creation and ballot scanning by offering to help pay for the technology using the state’s remaining HAVA funds. Some counties in the state had machines that were out-of-date or that election officials “didn’t have confidence in,” Williams said.

“Some are using scanning and tabulation software that relies on Windows operating systems no longer supported by Microsoft,” he said.

In the past, voters have reported feeling that old touchscreens were out of calibration. Williams added that there are many other reasons why counties need to update equipment. But even with money from the state, there is a cost to counties, where finding money for areas such as parks and sheriff departments is also essential.

“I was a county commissioner for eight years,” Williams said. “I understand those challenges, but I think the integrity of the elections process is worth spending some money on.”
CSG Working Group Reviews Voting Technology

A working group that is part of The Council of State Governments’ Overseas Voting Initiative, or OVI, met in the spring to discuss technology that could improve voting for U.S. military and civilians overseas. The CSG OVI’s Technology Working Group plans to unveil best practices and recommendations for states during the 2016 CSG National Conference in Colonial Williamsburg, Va., Dec. 8–11.

One election administration tool being discussed by a subgroup of the OVI Technology Working Group is automated ballot duplication. Ballots returned by U.S. military and civilian voters residing overseas through the mail or by email must be duplicated before they are tallied and counted. Damaged absentee ballots often must be duplicated before county elections officials can count the ballots. The group is looking at technology to help election officials avoid manual reproduction of ballots.

The CSG group is analyzing, researching and recommending improvements to the technology to help improve the number of overseas ballots that are counted in U.S. elections, but the results could have a much broader impact.

“The tools and technology that they are researching and trying to improve for states can also be used for stateside voting,” said Kamanzi Kalisa, CSG director of the Overseas Voting Initiative.

In 2015, the CSG OVI Policy Working Group released recommendations based on extensive research of voter communication and online voter registration for military and overseas voters.

The Overseas Voting Initiative was formed through a cooperative agreement with the U.S. Department of Defense Federal Voting Assistance Program.
Since the dawn of time, humans have worked to improve their abilities to engage and interact—beginning with smoke signals and cave paintings in prehistoric communities. Here is a look at how technology has helped transform communications in more modern times, making our interactions both more efficient and productive over time.

The amount of digital data is growing exponentially, doubling in size every two years. 2013–4.4 ZB OF DATA » 2020–44 ZB OF DATA, EQUAL TO 44 TRILLION GIGABYTES

WHAT IS A ZETTABYTE (ZB)?

1 ZETTABYTE = 1,000 EXABYTES = 1,000,000 PB = 1,000,000,000 TB = 1,000,000,000,000 GB

The sources of digital data are shifting as well. In 2013, 60 percent of digital data came from mature markets. By 2020, experts estimate that emerging markets such as China will produce 60 percent of digital data globally.

But what happens to all this data? In 2013, less than 5 percent of the data in the digital universe was analyzed, but with the growth of internet-connected systems, industry experts estimate that the percentage could increase to more than 35 percent by 2020.

Source: IDC Inc., a global research, analysis and consulting firm
The Gutenberg Bible is the first work ever published on the printing press invented by Johannes Gutenberg.

1844 Samuel Morse invents the telegraph, which uses the Morse code to transmit information across an electric wire. The first telegraph was sent from Washington, D.C., to Baltimore, Md.

1876 Alexander Graham Bell makes the first telephone call to his assistant, Thomas Watson, using telegraph cables.

1901 The first radio receiver successfully received a radio transmission.

1927 The television was first introduced.

1960s Engineers in Bell Laboratories develop the modem, allowing computers to communicate over standard telephone wires. The first commercial modem, produced by AT&T, had a speed of 300 bits per second.

1984 Apple launches the Macintosh home computer.

1985 Microsoft announced the Windows operating system. Also this year, the first dot-com domain name is registered, symbolics.com, 15 years before the World Wide Web would be available.

1981 The first IBM personal computer is introduced, using the MS-DOS operating system.

1990 Tim Berners-Lee, a researcher at the Geneva physics lab, CERN, developed HyperText Markup Language, or HTML, which gave rise to the internet.

1992 The first ever text message was sent, which read “Merry Christmas.”

1996 The Google search engine is developed by Sergey Brin and Larry Page at Stanford University.

2004 Mark Zuckerberg launched themefacebook.com, which became Facebook.com one year later.

2012 Facebook hit 1 billion users on Oct. 4.

2013 Nielsen group researchers estimate that smartphones are in two-thirds of all Americans’ pockets.

2014 According to a report by ComScore, 60 percent of all Internet traffic is now derived from cell phones and other mobile devices, rather than desktop computers.

2007 Apple launches the iPhone, beginning the transformation of the mobile phone market into a world of smartphones. The Apple iPad hit markets three years later.

2006 New York University student Jack Dorsey, founder of Twitter, sent out the very first tweet. “Just setting up my twttr.”

2014 Connected Things The number of devices, objects and machines that are connected to the internet is rapidly growing.

2015 4.9 BILLION

2016 6.4 BILLION estimated

2020 20.8 BILLION estimated

Source: IDC Inc.


The Internet of Things (IoT) More and more products—from the activity tracker on your wrist to the drill on an oil rig—are now connected to the internet, creating the Internet of Things, or IoT. While not new, the IoT is taking on increasing importance—for individuals, businesses and industry, and governments. New York and Chicago are using high-tech devices to create smart communities—with a network of devices able to track everything from air quality to pedestrian traffic and from energy consumption to the health of residents, according to Business Insider.

Businesses such as Cisco and GE estimate that the Internet of Things could generate between $14 and $15 trillion by 2033.

Hear us roar! Rep. Akbari joined colleagues in the elevator as they head to session. “We realized there were all women. Had to grab a selfie!”

Akbari confers with her seatmate, Rep. Karen Camper, about a piece of legislation on the floor. “I’m really fortunate to have a mentor and friend as a seatmate.”

For Akbari, being willing to work across party lines is key to effective governance. Here, she takes a bipartisan selfie with colleagues Rep. Harold Love, Rep. Jeremy Faison and Rep. Karen Camper. “Though we don’t always agree on everything, we find our strength in the things we can agree on. Ultimately, we have to keep moving forward.”
Akbari, a member of the House Education Instruction and Programs Committee, presents HB 2490 on the Tennessee House floor, which would give special recognition to high school graduates who complete 10 hours of community service per semester. “Not only will this allow the kids to get the required hours to take advantage of the Tennessee Promise scholarship, but will hopefully build a lifelong commitment to the community.”

Akbari presents HB 2483 and 2489 during the House Finance Ways and Means Subcommittee meeting. The first bill, HB 2483, would reduce the felony expungement fee by $100. “Currently, Tennessee has one of the highest fees, at $450. By reducing the fee, more ex-offenders will be able to afford the process—and will get back to work.” The bill was placed behind the budget.

The second bill, HB 2489, allows large non-profits to provide tutoring services for grades K-3. “This bill passed and is current law,” said Akbari.

As a way to keep in touch with her constituents, Akbari often live streams from the House floor. “After live streaming the presentation of my legislation, I turned the camera back and spoke to the people on my way back to my seat. It’s always important to keep in touch with the people you represent.”

Akbari didn’t always plan to become involved in politics at such a young age. But when a House seat opened in her district in 2013, she was elected with 89 percent of the vote at the age of 29.
BRIDGING THE DIGITAL DIVIDE

by Gary Rawson
Some progress has been made to narrow the digital divide among the households and classrooms of urban and rural America. More people have access to the internet today than five or 10 years ago. School students and library patrons now have access to broadband that wasn’t there just a few years ago, and more people now have access to the internet through their smartphones. While this progress should be celebrated, there is much yet to do to ensure that access to broadband services reaches all corners of this nation.

The Gap is Narrowing

According to EducationSuperHighway, a non-profit organization that aims to upgrade internet access in U.S. public school classrooms, an additional 20 million students have been connected to high-speed broadband in the last two years.

“We have made tremendous progress in connecting students to meet the Federal Communications Commission’s minimum internet access goal of 100 kbps per student,” according to EducationSuperHighway’s 2015 “State of the States,” a report on the state of broadband connectivity in America’s K–12 public schools.

In 2013, 30 percent of school districts met the minimum goal, the report said. In 2015, 77 percent of school districts met the minimum goal.

In addition, libraries reported to the American Library Association, or ALA, that public internet speeds had improved. According to an ALA report released in 2015, “nearly half of all libraries report subscribed internet download speeds as being greater than 10 Mbps (megabits per second) in 2013, compared with only 18 percent of libraries four years earlier. New speed test data collected from July–August 2014 found median download speeds of 30 Mbps for wired and 13 Mbps for Wi-Fi connections in city libraries to rural libraries clocking download speeds of 9 Mbps and 6 Mbps, respectively.”

In its report titled, “U.S. Smartphone Use in 2015,” the Pew Research Center found 64 percent of American adults owned a smartphone, up from 35 percent in spring 2011. However, the report also said 7 percent of Americans owned a smartphone but had neither traditional broadband service at home nor an easily available alternative for going online other than their cell phone. The Pew report said 15 percent of Americans owned a smartphone but had a limited number of ways to get online other than their cell phone.

These studies show that the digital divide still exists despite increased access.

Urban Versus Rural America

In the FCC’s 2016 “Broadband Progress Report,” the commission found that 10 percent of all Americans, or 34 million people, lacked access to services with 25 megabits per second download speeds and 3 megabits per second upload speeds, the FCC’s broadband benchmark.

In rural America, 39 percent of, or 23 million, residents lack access to 25 Mbps/3 Mbps service. By contrast, 4 percent of urban Americans lack access to those speeds.

The availability of fixed terrestrial services in rural America continues to lag behind urban America at all speeds: 20 percent lack access even to service at 4 Mbps/1 Mbps and 31 percent lack access to 10 Mbps/1 Mbps.

Americans living in rural and urban areas adopt broadband at similar rates where 25 Mbps/3 Mbps service is available: 28 percent in rural areas and 30 percent in urban areas.

While an increasing number of schools have high-speed connections, about 41 percent of schools, representing 47 percent of the nation’s students, lack the connectivity to meet the commission’s short-term goal of 100 Mbps per 1,000 students/staff.
The FCC is responsible for administering a program called Universal Service. There are four programs within the Universal Service program — E-rate, Rural Health (Healthcare Connect Fund), High Cost (Connect America Fund), and Lifeline—that provide funding for specific populations.

The E-rate program provides funding to offset the cost of internet access, wide-area networks, or WAN, and internal connections used for local-area networks, or LAN, and Wi-Fi. This funding is specifically for K–12 schools and public libraries. The program provides up to a 90 percent discount on internet access and WAN services while providing up to an 85 percent discount on the LAN equipment and services. The program is currently capped at $3.9 billion per year.

Since the start of the E-rate program in 1998—and as of March 31, 2016—the FCC has committed $42.5 billion to improve broadband access in schools and libraries across the country. These schools and libraries have served as anchor tenants that have pulled broadband to the communities in which they are located. As the number of applications have exploded, and with more and more internet-based devices being used by students and library patrons, the need for increased bandwidth has forced service providers to deploy additional fiber. As this fiber has been built out to serve all of these schools and libraries, we are seeing rural communities gaining access to fiber and to broadband services.

The Rural Health/Healthcare Connect Fund, similar to the E-rate program, provides funding to offset the cost of internet access and WAN for rural health care providers. The Healthcare Connect Fund provides up to a 65 percent discount on internet access and WAN services. Health care services delivered using broadband—called telemedicine—provide needed medical assistance to the most rural locations, which sometimes lack physicians in their area. Using broadband-supported connections, rural health clinics are able to treat the patient, under a physician’s care, while the patient and the doctor are miles apart. This FCC program is currently capped at $400 million per year.

The High Cost Program/Connect America Fund, or CAF, initially was a program designed to provide financial assistance to encourage service providers to build out voice services, both wired and wireless, into the rural locations of the country where the customer base was not sufficient to encourage providers to invest in infrastructure. This program has helped fund countless cellular towers that have been constructed in rural areas of the country. The FCC recently determined that the funds could be used to build broadband services in those same rural locations. Voice and data services have almost completely merged into a single service utilizing the same transmission infrastructure—fiber. The CAF funding cap is about $7 billion annually.

Lifeline, originally designed as a program to assist low-income families seeking telephone service, has become a program to assist low-income families seeking telephone service or broadband services. After the FCC modernized Lifeline in March 2016, the program began to offer a $9.25 subsidy to encourage low-income families to adopt broadband services rather than just voice services. The program was also capped at $2.25 billion per year, indexed to inflation.
Bridging Slowly, but Surely

As noted, all four of the Universal Service programs now support the build-out and the adoption of broadband services across the U.S. As schools, libraries and health care providers pull broadband to them, as service providers are encouraged to build fiber where none exists, and as families are able to better afford broadband services, we are slowly bridging the digital divide. We are not there yet, but with every mile of fiber, with every new broadband connection and with every new broadband adopter, we are getting closer.

The FCC is just one of many federal agencies with programs devoted to expanding broadband.

In 2015, U.S. Sen. Kirsten E. Gillibrand of New York issued a report titled, “A Guide to Broadband Funding Opportunities—How to Navigate the Funding Process.” In her report, Gillibrand listed the various broadband funding sources that are available from the federal government.

The following is a list of federal programs that are supporting efforts to expand broadband across the country, according to Gillibrand’s report:

- U.S. Department of Agriculture
- Federal Communications Commission
- Appalachian Regional Commission
- U.S. Department of Commerce
- Economic Development Administration
- Institute of Museum and Library Services
- U.S. Department of Housing and Urban Development
- U.S. Department of Education
- Office of Special Education and Rehabilitative Services
- U.S. Department of Health and Human Services
- Health Resources and Services Administration

There are many federal programs for broadband. But, what is lacking is coordination of these programs at the federal level, or even the state level. How do we prevent duplication, overlap and wasteful spending? How do we ensure that the dollars spent are spent wisely? These are important questions for officials at all levels—federal, state and local—to consider as we continue to work to expand broadband access throughout the country.
CRACKING THE CODE TO THE DIGITAL ECONOMY

States hope to write a brighter future for workers and state economies by increasing digital literacy

by Elizabeth Whitehouse

State leaders across the country are focused on preparing their workforce for the new digital economy. Meeting the employer demand for workers with digital literacy and skills is the key to successful state workforce development plans.

When Congress updated the Workforce Investment Act in 2014 through the Workforce Innovation and Opportunity Act, an emphasis on digital literacy was made a requirement of state workforce development plans. States now must include a focus on enhancing digital literacy skills for workforce participants.

Training Today for Jobs of Tomorrow

Colorado is a leader in the successful integration of 21st century skills in workforce development. Ellen Golombek, executive director of the Colorado Department of Labor and Employment, cites the digital revolution as one of the biggest game changers in world history.

“There is the Industrial Revolution that came before it, the Digital Revolution has redefined how we work, how we think and how we live,” Golombek said. “We are committed to marshaling the skills of our workforce to reach astounding levels of achievement and excellence. But we can do that only if that workforce is digitally literate. That digital literacy—the ability to adapt to the new technologies and to keep learning—is a key building block of our future.”

Colorado’s Department of Employment and Labor works closely with the business community to meet employer demand for workers who are digitally literate.

“Our came to realize that importing talent from other states is not an effective long-term solution to our workforce needs, nor is the heavy reliance on four-year degrees,” said Golombek. “In fact, in many cases, because of the digital revolution, new skills and certificates are what businesses are looking for. In almost every industry, digital literacy is now a basic requirement.”

Colorado’s workforce development leadership emphasizes research to meet the needs of the business community through their Talent Pipeline Report, which analyzes data on educational attainment, occupation forecasting and in-demand skills by occupation. These forecasting tools provide the ability to focus the education and training pipeline to meet the workforce needs of the state.

At the current production rate, the United States is expected to fall short by 5 million workers with postsecondary education by 2020. Many states are struggling to find the key to preparing students to enter this new digital economy—and finding it even harder to retrain current labor force participants.

States like Kentucky are finding success thinking outside of the box. In the eastern part of the Bluegrass state, there is a new initiative to train former coal miners to code. Bit Source, a small business founded in 2014 that is housed in an old Coca-Cola bottling plant in Pikeville, Ky., is made up of former coal miners who have found a new vocation and good pay as computer coders. Using grant funding from the U.S. Department of Labor, former coal miners spent five months learning the language of HTML and JavaScript. This training gave them the skills and ability to be competitive in a global job market that prizes digital literacy.

If You Build It, They Will Come

Among the challenges in expanding models such as the one used by Bit Source, however, is that they often require high-speed internet access.

Nearly a quarter of the U.S. population living in rural areas lack adequate high-speed internet or broadband access, and a significant percentage of people cannot afford it, according to the Federal Communications
“Like the Industrial Revolution that came before it, the Digital Revolution has redefined how we work, how we think and how we live.... Digital literacy—the ability to adapt to the new technologies and to keep learning—is a key building block of our future.”

» Ellen Golombek, executive director of the Colorado Department of Labor and Employment

Commission’s 2015 Broadband Progress Report. Lack of broadband access is an impediment to many children and adult learners to getting the education and training they need to succeed in the workforce.

Jared Arnett, executive director of Shaping Our Appalachian Region, or SOAR—a regional economic development effort initiated by former Kentucky Gov. Steve Beshear and U.S. Rep. Hal Rogers—discussed the importance of broadband expansion to the Appalachian area.

“One of our four main strategies this year is to infuse a broadband perspective into everything,” Arnett said. “We believe this to be the foundation in which the future of Appalachia will be built and that it integrates into all sectors of development including entrepreneurship, workforce development and health care.”

“The future of Appalachia hinges on our ability to embrace technology and become a participant in the 21st century global economy,” said Arnett.

This infrastructure is being built, however, and state governments are taking the lead in making it economically feasible for private industry to expand access, giving students the ability to learn and gather information at high speed and providing the business community the ability to compete globally.

The state of Delaware, under Gov. Jack Markell’s leadership, developed the best broadband internet capacity in the nation, which posted an average peak of 85.6 megabits per second in 2015.

Markell is proud of this legacy. “In today’s technology-driven world our ability to provide quality education, foster a strong workforce, and position our economy for growth is increasingly dependent on access to broadband,” said Markell. “That’s why we have invested in extending high-speed internet access to every corner of our state so that members of every community—from north to south, urban to rural—can leverage this powerful resource to reach their full potential and enjoy a better quality of life.”

Looking ahead to the jobs of tomorrow, the ability to embed digital literacy in education and training and provide high-speed internet access in tandem are vital strategies for states to build a skilled workforce and a more competitive economy.

Now Hiring

According to the Center on Education and Workforce at Georgetown University, there will be 55 million job openings in the economy through 2020—24 million openings from newly created jobs and 31 million openings due to baby boomer retirements.

By educational attainment:

- 34 percent of the job openings will require at least a bachelor’s degree.
- 30 percent of the job openings will require some college or an associate degree.
- 36 percent of the job openings will not require education beyond high school.

COAL TO CODE

PIKEVILLE, Ky.—Employee Shawn Hopkins works on a coding project on Feb. 1, 2016, at the office of Bit Source, a tech startup that trains former coal miners to code. The Eastern Kentucky region, once a hub for coal mining, has witnessed five major coal mining companies fall into bankruptcy and has experienced thousands of coal industry job losses in recent years. Firms like Bit Source hope to provide a new future for the region. © Sam Owens / Bloomberg via Getty Images
Building a stronger workforce is a challenge for any state, but building and recruiting a workforce prepared to tackle a state’s information technology needs is a particularly complex challenge. In an effort to do just that, the Maine Office of Information Technology, or OIT, has developed a workforce development program—an effort to ensure that the state is equipped to provide the latest in information technology services not only today, but in the future as well.
Change is on the horizon at the Maine Office of Information Technology, and a part of that change is the culture. Workforce Innovations has become the driving force—it is an integral part of OIT culture—and the OIT workforce is realizing the benefits of such a culture change.”

The Maine Office of Information Technology’s Workforce Innovations program began in 2013 in response to an alarming statistic: More than 24 percent of the state’s IT workforce will be eligible to retire within the next two years. The program also addresses another emerging issue for the Maine OIT—the dissonance between millennials and other generations in the workplace. With all organizations in the IT industry competing for IT talent, both in the private and public sectors, the state recognized the challenge in remaining competitive in such a high-demand field. The Workforce Innovations program, the first of its kind in Maine, was designed to address both of these challenges in an effort to ensure a high skilled, sustainable workforce equipped to meet the ever evolving technology needs of the state.

Perfecting the Art of Recruitment
One of the primary challenges in recruiting a new generation of IT workers is the transformation of communications. Simply put, recruitment efforts of the past simply don’t reach the IT workers of the future. While the Workforce Innovation program continues to use the traditional process of posting and advertising jobs and available positions, the program also actively recruits by means of internships and partnerships with universities, colleges, technical schools and veteran programs where IT talent is being developed. The program was designed to not only attract and retain the millennial traditional student from a two- or four-year school, but also adult learners looking to re-enter the workforce, individuals with disabilities and veterans returning from service with valuable skills in the IT field. A critical component of these recruitment efforts is building strong relationships with those who are able to identify talented individuals, such as coordinators or educators, and participating in career fairs throughout the state.

Other community outreach initiatives include the Maine Office of Information Technology’s annual TechNight, which not only introduces students to exciting career options in the field of technology, but also offers an opportunity for students to interact and have fun with hands-on activities similar to the work we do in IT on a daily basis, such as project management and teambuilding, performing forensics on systems and programming. In 2016, we hosted more than 70 high school students and 20 local schools as part of our TechNight event.

Skilled IT Professionals Will Not Wait
The Workforce Innovations program has also transformed the application process to better reach and meet the needs of today’s tech workers. In addition to creating and branding an online presence to market jobs, the program also has used social media to reach out to potential candidates and it is revamping its application process. Before, the process of applying to a state job was an intimidating and tedious one. Mailing in an 11-page application with private information was not ideal for most applicants, particularly those in the IT field, and the time to fill the position often took a few months to over a year due to delays and paperwork.

Just two months after streamlining the application process to an electronic submission of a cover letter and resume, state IT job applications have nearly quadrupled. The next step for recruitment, currently in the works, is a move toward cloud-based applications that will further simplify the process.

Developing Talent
Recruiting new talent is an important first step, but developing that talent is a critical, ongoing process in the IT field. Interns selected through recruitment efforts complete a three- to six-month internship, ranging from 20–40 hours weekly, during which they work on hands-on projects that output quality work for the citizens of Maine. Existing OIT staff members are assigned to interns as mentors, further personalizing the internship experience. This allows mentors to gain beneficial leadership skills while interns gain insightful career guidance. Currently 75 percent of all interns who have participated in the program have been recruited into a career with the state.

Driven by Passion and Meaningful Work
Change is on the horizon at the Maine Office of Information Technology, and a part of that change is the culture. Workforce Innovations has become the driving force—it is an integral part of OIT culture—and the OIT workforce is realizing the benefits of such a culture change. Maine’s IT workers enjoy being part of a forward thinking team that is leading the way to provide IT solutions to improve state governance. While many people could make more money in the private sector, our workforce appreciates the opportunity to do meaningful work for Maine’s citizens.

As someone whose job is to build the future IT workforce for the state of Maine, I come to work each day asking some important questions: How can we continually cultivate an environment built on passion for the people and the work, and how do we promote the state’s IT jobs so we are not the “best kept secret” in Maine? It is certainly an exciting time to work in the technology field. Our mission, as state leaders, is to ensure that the states are prepared to be drivers of innovation in the future, and that begins by finding and cultivating talent today.

About the Author
Kelly-Samson-Rickert, Ed.D, SPHR, SHRM-SCP is the director of the Workforce Innovations program in the Maine Office of Information Technology.
//APPA Hosts Annual Training Institute in Cleveland

Join us in Cleveland for the American Probation and Parole Association’s 41st Annual Training Institute, Aug. 28–31. With more than 70 workshops and lots of networking opportunities, this event is not to be missed for those who work in the field of community corrections.

Details can be found on the APPA website at http://www.appa-net.org.

//CSG Compacts Director Addresses Coalition for Patients’ Rights Annual Meeting

Colmon Elridge, director of The Council of State Governments’ National Center for Interstate Compacts, discussed interstate licensing compacts for health care providers at the annual meeting of the Coalition for Patients’ Rights on April 20 in Washington, D.C.

The combination of increased mobility, changes to the health care system, changes to education and the rise of telehealth has heightened the need for clinicians to have the ability to practice across jurisdictional boundaries with minimal barriers. Licensed professionals in areas such as medicine, nursing, physical therapy and EMS have increased efforts to improve licensure portability.

“For more than a decade now, the National Center for Interstate Compacts has been a leader in promoting national solutions to some of America’s most pressing issues,” Elridge said. “As providers and states continue to assess how to provide greater access to health care for the American people, we will continue to be a resource that promotes common sense policies that empower the practitioners as well as the consumer.”

The Coalition for Patients’ Rights consists of more than 35 organizations representing licensed health care professionals who provide a diverse array of services.

The National Center for Interstate Compacts is a policy program developed by The Council of State Governments to assist states in developing interstate compacts, which are contracts between states.

//CSG Regional Meetings

Mark your calendar for the CSG 2016 regional meetings!

Don’t miss these opportunities to network with colleagues and explore targeted policy solutions for issues affecting your region.

**CSG SOUTH**

70th Southern Legislative Conference Annual Meeting July 9–13 | Lexington, Ky.

**CSG MIDWEST**

71st Midwestern Legislative Conference Annual Meeting July 17–20 | Milwaukee, Wis.

**CSG EAST**

56th Eastern Regional Conference Annual Meeting Aug. 7–10 | Québec City, Québec, Canada

**CSG WEST**

69th CSG West Annual Meeting Sept. 6–9 | Coeur d’Alene, Idaho
Southern Legislative Conference Welcomes New Staff

The CSG South/Southern Legislative Conference, or SLC, is pleased to welcome two new staff members to its office in Atlanta, Ga.

ROGER MOORE is the SLC's newest policy analyst. He staffs the SLC's Human Services and Public Safety Committee. Prior to joining SLC, Moore worked at Principal Financial Group, a Fortune 500 financial services company, and at the Carter Center, a nongovernmental organization founded by former President Jimmy Carter. He received a bachelor's degree from New York University and a master's degree from Georgia State University.

NICK BOWMAN is the research and publications associate for the SLC. In his new role, Bowman will be the staff liaison for the Legislative Service Agency Directors Group and the State Transformation in Action Recognition—or STAR—Program. He also will assist with the Center for the Advancement of Leadership Skills, content management and graphic design. Bowman previously served as a research assistant for the College of Charleston in Charleston, S.C. He earned a bachelor's degree in political science and a master's degree in public administration, both from the College of Charleston.

NEMA Briefs Presidential Campaigns on Key Issues

The National Emergency Management Association, or NEMA, recently published its 2016 National Issues Brief, which describes some of the emergency management and homeland security challenges that should be addressed by the next presidential administration. The paper was briefed in person to three of the current presidential campaigns in conjunction with NEMA's Mid-Year Forum in April in Alexandria, Va.

NEMA’s priority issues for the next administration include:

- Preparing for emerging and nontraditional threats, i.e., Zika virus, unaccompanied minors crossing borders, water crisis, Ebola virus, Highly Pathogenic Avian Influenza
- Climate adaptation
- Cybersecurity
- Countering terrorism

The NEMA issue brief is available at www.nemaweb.org. NEMA is a CSG affiliate organization.

CONGRATULATIONS!

To the following CSG Leadership Circle members for being named in the top five of Forbes’ 2016 list of America’s Best Midsize Employers:

- esri
- novo nordisk

To the following CSG Associates, who were also included on the select list:

- Biogen
- Celgene Corporation
- New Avon LLC
- Prime Therapeutics
PAMELA GOLDBERG

CEO of the Massachusetts Technology Collaborative, a state economic development agency

Pamela Goldberg is fueling the innovation economy in Massachusetts—and spurring job growth and access to technology in the process—as the CEO of the Massachusetts Technology Collaborative, or MassTech, a public economic development agency. As a former entrepreneur herself, Goldberg understands what tech startups need to be successful and she works closely with the Massachusetts governor and legislature to create opportunities for startups to thrive. The agency’s Tech Hub Caucus brings together leaders in tech with legislators and the administration for conversations about barriers to success that can be impacted by government, and helps government officials understand what the drivers are for innovation. “Having been an entrepreneur and having worked in the private sector and spending years in academia, I see how critical those conversations among education, the private sector and government are,” she said. “If those conversations don’t happen we are less likely to have creation of opportunity.” Prior to her role at MassTech, Goldberg served as the director of The Center for Entrepreneurial Leadership at Tufts University, a program she launched to drive innovation for the university. Under her leadership the program expanded from 40 to more than 500 students per year, and supported the start of more than 50 businesses in Massachusetts. Her experience mentoring startups at Tufts was one of the impetuses for starting a mentoring initiative at MassTech. “The most successful startups are the ones with strong mentorships,” she said. One of MassTech’s other enterprises, the Massachusetts Broadband Institute, or MBI, is aimed at expanding high-speed internet access in the state. The MBI’s MassBroadband 123 network expanded broadband connectivity to over 120 communities in western and north central Massachusetts, but 44 towns and cities remain without broadband access. “The goal is to bring broadband to communities that are unserved or underserved,” she said. “The reason we are so anxious to get broadband to those communities is that in today’s world you cannot be a business person or a student in school without internet access. The people in those 44 communities are severely handicap in their ability to be successful.”
Thank you!

CSG’S LEADERSHIP CIRCLE

1800 contacts  CVS Health  ERI  esri  GSK
HCA  ICSC  INTUIT  Mylan  Novo Nordisk  P&G
RAI  RELX Group  SAP  Sunovion

TO LEARN MORE ABOUT CSG’S ASSOCIATES PROGRAM AND LEADERSHIP CIRCLE, PLEASE CONTACT

Maggie Mick, Director of Development | The Council of State Governments | ph 859.244.8113 | mmick@csg.org
Liz Roach, Development Coordinator | The Council of State Governments | ph 859.244.8053 | lroach@csg.org
COMING IN CAPITOL IDEAS’ NEXT ISSUE!

PUBLIC HEALTH