

Understanding

# State & Local Government



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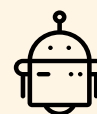


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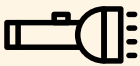


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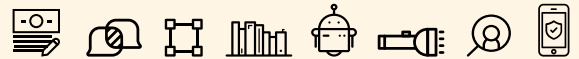


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# Executive Summary



Every January, the President of the United States makes the 1.5-mile journey from the White House to the Capitol Building to address the three branches of government and the public through the annual State of the Union speech. For more than 200 years, presidents from George Washington to Barack Obama have taken the opportunity to outline how the government is functioning and priorities for the nation going forward.

Whether you agree with the politics of the speech or not, the address provides insights into the challenges and executive actions the president plans to take in the next 365 days. In essence, the State of the Union is a status update — the presidential Facebook update, so to speak.

No universal speech encompassing trends across state lines, communities or districts is given for state and local governments at large is given for state and local governments at large, however. The speeches are localized, and although they are critically important, we want to highlight the state and local challenges that affect all 50 states.

In our new guide, we paint a picture of where state and local governments stand in 2016. We are not just going to explain the challenges, but we will also explain some of the history and background on how these challenges came to be.

In this guide, we will focus on eight areas where state and local governments are running into roadblocks and finding complexity:

- 1. Understanding State and Local Budgets** — A complex mix of federal grants, taxpayer dollars and city revenue streams fund state and local governments. Understanding and using the complicated budgeting systems are essential for a government's success. In this section, we will discuss why state and local governments are so complex and what some of their biggest challenges are.
- 2. Understanding State and Local Collaborations** — Does Hawaii have innovations that Wyoming could use? What about Texas for New York City? Working across state and city lines is imperative. In this section, we will look at some of the barriers to cross-boundary collaboration and how states and localities are breaking them down.
- 3. Understanding State and Local Government Structures** — No two governments in the United States are structured exactly the same. This can cause major confusion. Understanding the basics can go a long way toward improving how you work with state and local agencies going forward. In this section, we will break down state and local government structures and uncover areas of potential restructuring.
- 4. Understanding State and Local Regulations** — When it comes to regulations, state and local governments are beholden to the federal government. More than 30 percent of a state's budget comes from federal funds. In this section, we will break down the types of government regulations and explore how state and local governments go about implementing them.
- 5. Understanding State and Local Technologies** — It may seem obvious, but a city with the square mileage and population of New York City has a much more substantial budget than, say, Des Moines, Iowa. However, both cities need and want the same new technologies. In this section, we will look at how smaller cities can compete with their larger counterparts.
- 6. Understanding State and Local Emergency Response** — State and local governments are first on the ground during emergencies. Whether it's a fire, floods or other natural disasters, it's up to the state and local governments to assist. To create better response times, cities are investing in new technologies. In this section, we will look at how first responders are empowered at the state and local levels and what steps they are taking to be more innovative.
- 7. Understanding the State and Local Workforce** — The state and local workforce is graying. In five years, roughly 40 percent will be eligible to retire. To maintain government business as usual, states and localities must recruit, hire and retain differently. In this section, we will look at the current government workforce and highlight how agencies plan to transform in the next few years.
- 8. Understanding State and Local Security** — Utah, Texas, Oklahoma and Detroit were just a few of the governments that experienced cybersecurity breaches in 2015. The nature of security has shifted in government from a totally reactionary stance to one in which states and localities are trying to mitigate risk. In this section, we will look at how state and local governments are currently dealing with cybersecurity challenges and what solutions they are looking to for the future.

In each section, we'll also share case studies and how-to guides that will help you better understand the issues that state and local governments are dealing with.

**Ready? Let's go.**

# Meet the Experts

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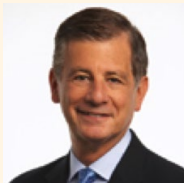
## Robert Atkinson

As founder and president of the Information Technology and Innovation Foundation (ITIF), Robert D. Atkinson leads a prolific team of policy analysts and fellows that is successfully shaping debate and setting the agenda on a host of critical issues at the intersection of technological innovation and public policy. He is an internationally recognized scholar and a widely published author whom *The New Republic* has named one of the “three most important thinkers about innovation, and “*Washingtonian Magazine*” has called a “Tech Titan.”



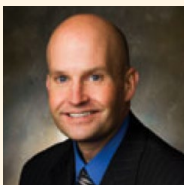
## Deborah Blyth

In August 2014, Deborah (Debbi) Blyth became the state's Chief Information Security Officer (CISO), bringing a diverse background including 14 years of information security experience. As the CISO, she serves as the point of contact for all information security initiatives in Colorado, informing the Secretary of Technology & Chief Information Officer and executive agency leadership on security risks and impacts of policy and management decisions on IT-related initiatives.



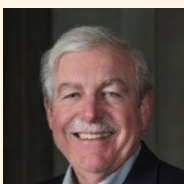
## Stephen Goldsmith

Stephen Goldsmith is the Daniel Paul Professor of the Practice of Government and the Director of the Innovations in American Government Program at Harvard's Kennedy School of Government. He currently directs Data-Smart City Solutions, a project to highlight local government efforts to use new technologies that connect breakthroughs in the use of big data analytics with community input to reshape the relationship between government and citizen.



## James Honchar

James A. Honchar was appointed as the Deputy Secretary for Human Resources & Management effective September 10, 2007. Honchar has been employed as a human resources professional with the Commonwealth since 1988. Most recently, he served as the Director of Human Resources for the Pennsylvania Department of Revenue. Previously, he held human resources positions as a Division Chief for Classification, Recruitment and Placement and as a Labor Relations Analyst.



## Doug Robinson

Doug Robinson serves as Executive Director for the National Association of State Chief Information Officers (NASCIO). Representing state CIOs and information technology executives, NASCIO is the premier network and resource for state CIOs and an advocate for information technology (IT) at all levels of government. NASCIO provides state CIOs and members with products and services designed to support the challenging role of the state CIO, stimulate the exchange of information and promote the adoption of IT best practices and innovations.

# Budgets



**A complex mix of federal grants, taxpayer dollars and city revenue streams fund state and local governments. Understanding and using the complicated budgeting systems are essential for a government's success. In this section, we will talk about why state and local governments are so complex and what some of their biggest challenges are.**

# Understanding State & Local Budgets

Let's make a few things clear from the outset. First, no two state budgets are appropriated the same way. For example, California's state budget estimate in 2016 was just more than \$167 billion, while Vermont's annual appropriations hover at just more than \$3.6 billion. On the local government side, the scales are just as diverse. Los Angeles County collects taxes from more than 10 million people, while Lubbock County, Texas, has just 70 taxable residents.

However, regardless of the size, scale and breadth of state and local budgets, they all have a few things in common.

For starters, all state and local governments receive some sort of federal funding, which often acts as a baseline for revenue in the state's budget. "If you look across the United States today, 30 percent or more of a state's budget is comprised of federal funds," explained Doug Robinson, Executive Director of the National Association of State Chief Information Officers (NASCIO). The Congressional Budget Office estimates that in 2015, the federal government appropriated more than \$600 billion to states to execute federal programs such as Medicare and Medicaid. With those federal funds, state and local governments must create a cost allocation methodology that the federal government approves before they can act. (The regulations section of this guide will delve into how these funds are implemented.)

In addition to federal funding, state and local governments can also raise revenue by taxing consumer products, residents and private industry. Those taxes generally fall into three categories:

- ▼ Sales taxes, which are placed on various products. Today 45 states have a general sales tax that applies to most goods, although food is usually excluded. Some cities also collect sales tax.
- ▼ Income taxes, which all but a handful of states impose on personal and corporate incomes. Personal income taxes are generally progressive, meaning the rate goes up with the size of the income.
- ▼ Property taxes, which provide the chief source of income for local governments today. Taxes are levied on land, buildings and residences. Property must be assessed for its value, and most cities employ tax assessors for that job.

However, there are limits. States generally do not allow local governments to levy income taxes, but some municipalities impose a payroll tax on people who work within their borders. "The limitations are often presented as a combination of referendums and state legislation that constrains the county's ability to increase revenue or generate additional tax revenue," said Brian Namey, Director of Public Affairs at National Association of Counties (NACo). "Under these limitations counties can and will continue to struggle to do more with less."

Second, as new technologies emerge, state and local governments are moving more and more toward buying services. The services model of purchasing is causing a major transformation in the way governments budget because instead of buying a product, state and local agencies are buying services that have no real end date.

One way states are attempting to rethink the services budgeting process is to use the information technology chargeback method. An IT chargeback is an accounting strategy that applies the costs of IT services, hardware or software to

the business unit that uses them, according to TechTarget. This contrasts with traditional IT accounting models in which a centralized department bears all of the IT costs in an organization and treats them as corporate overhead.

"In some cases, 100 percent of a state's budget is essentially coming from the revenue that they receive from other state agencies who are consumers of their services," Robinson said. "And those state agencies are often paying the state's IT department with federal dollars they were allocated for a service. "In the end, this creates an incredibly complex budget environment that leaves very little room for budget flexibility."

On the expenditures side of state and local budgeting, there are also a few similarities. [According to the National Association of State Budget Officers](#), the single biggest expenditure in all states is education. The average state and local government spends just less than one-quarter of the budget on public schools.

The other top state and local expenditures usually fall into these categories:

- ▼ Public welfare.
- ▼ Health care.
- ▼ Highways.
- ▼ Police and fire protection.
- ▼ Interest on debt.
- ▼ Utilities and liquor stores.

Each of these items is less than 10 percent of state and local expenditures in most states, but together they make up a good portion of the expenses. "The counties are responsible for 45 percent of the nation's road miles," Namey said. "In addition, counties are responsible for owning and maintaining one in four bridges, and a third of the nation's transit systems."

Maintaining the nation's infrastructure can be costly, but for state budgeters, there is room to be excited. NASBO reported that, on average, budgets were up by more than 3 percent nationally, and general fund spending and revenue are projected to increase for the fifth consecutive year. The consistent year-over-year growth has helped states steadily increase spending, reduce taxes and fees, close budget gaps, and minimize mid-year budget cuts.

Robinson and Namey see the growing numbers as a result of the stabilizing economy and agreed that state and local governments now have the opportunity to think longer-term when it comes to budget forecasting.

Despite the 3.1 percent budget growth from last year, however, general fund spending is still 2 percent below the pre-recession peak. "That means continued jockeying for the limited funds beyond health care and education spending," wrote [Liz Farmer, Governing Finance Reporter](#). "While competing for limited funds is not uncommon to any fiscal year, that will play against an expected push for tax cuts in state legislatures next year as new lawmakers seek to fulfill campaign promises."

Overall, states are in a better position than they were a few years ago, but as the economy continues to rebuild, fiscal challenges, such as rising spending demands and limited gains in revenue collections, are likely to remain. States will have to get creative when it comes to effectively budgeting for the future.

# State of California



**Capital**

*Sacramento*

**Population**

*39 million*

**State since**

*1850 (31st)*

**Area**

*163,696 sq mi*

**State Flower**

*California Poppy*

**Fun Fact**

*There are around 500,000 detectable seismic tremors in California annually*

California's budget — \$167 billion — is more than \$20 billion larger than the next largest, New York state's. But all those appropriated dollars, made it difficult for the Golden State to track, account and verify the resources being spent, owed and managed. Even more troubling was California's shortsighted focus. It tried many things to achieve short-term budget relief via a significant amount of public debt, spending deferrals and other obligations. However, all of that changed when Gov. Jerry Brown took office in 2010.

Since then, the state has undergone a transformation by strengthening budget reserves through a focus on long-term debt reduction and requiring revenue and expenditure forecasts from the executive branch that extend for three years beyond the upcoming budget. The Volcker Alliance, a nonprofit that aims to rebuild public trust in government through the effective execution of public policies, tracked the changes in a report, "[Truth and Integrity in State Budgeting](#)." Specifically, the report found that California officials amended their budget procedures to:

Reduce the legislative vote requirement for approval of the budget from two-thirds to majority. This change has helped the state pass five consecutive on-time budgets, compared with its previous history of chronically late budgets built on short-term spending solutions and inadequate spending restraint.

Increase recurring revenue to fund ongoing expenditures. It also temporarily increased the personal income tax for seven years and sales tax rates for four years to raise an estimated \$6 billion annually from fiscal 2012–13 through 2016–17. Proposition 39 changed the method of calculating some corporations' income taxes to raise an estimated \$1 billion annually.

Stabilize the state's rainy day fund. Mandates include using unusually large capital gains tax revenue to build up reserves; diverting general fund revenue toward paying down retirement obligations and debt; providing multiyear budget forecasts; and establishing a special reserve for education funding, the Public School System Stabilization Account.

The reforms are already paying off. In one year, the state saw revenue increase by more than 5 percent.



# City of Chicago



## **Population**

*2.7 million*

## **City since**

*1837*

## **Counties**

*Cook and DuPage*

## **Area**

*234 sq mi*

## **Fun Fact**

*The first Aquarium opened in Chicago, 1893*

In 2009, [Joe Moore](#), Alderman for Chicago's 49th Ward, launched the first participatory budgeting process in the United States. Now seven years later, eight more Aldermen are giving their residents a chance to be part of the budgeting process. And more than a dozen other cities nationwide are too, including New York City and Vallejo, Calif.

The Windy City Aldermen put aside [roughly \\$1 million](#) every budgeting cycle for the residents to spend at their will. In Chicago, the participatory budgeting process works by having residents follow four clearly defined steps:

- 1. Brainstorm ideas** — Residents come together and start thinking about what projects and programs they would like to see in their neighborhoods.
- 2. Create proposals** — Volunteers work with government experts to turn their ideas into actual government project proposals.
- 3. Vote** — After the leaders of each of the project proposals gives a presentation, the community can vote on them.
- 4. Get funding** — The projects with the most votes get funded and implemented in the next few years.

So far, the 49th Ward has funded projects to build community gardens, fix park benches and bring solar panels to the firehouse.

Originally developed more than two decades ago in Porto Alegre, Brazil, [this approach](#) to community building has been replicated in more than 1,000 cities worldwide.

In addition to getting residents more involved in what happens in their community, the nature of the participatory budget process increases budget transparency, creates a more educated citizenry, promotes a greater sense of community and instills a sense of social justice.

How-to:

## Budget Terms

# Budgeting Cheat Sheet:

Because no two states or local governments have the same budgetary structure, it can be difficult to understand the process. The first step to clearing up the budgetary confusion is to understand the terms better. The [State of Montana](#) has crafted a budget glossary. We've adapted it for our purposes.

## Appropriations

An authorization by law for the expenditure of funds or to acquire obligations. Types of appropriations are listed below.

### Continuing

An appropriation that continues beyond one two-year period, or biennium.

### Language

An appropriation made in the language of the general appropriations act for a non-specific or limited dollar amount. Officials generally use language appropriations when an agency knows it will receive federal or state special revenue funds but is uncertain as to the amount.

### Line Item

An appropriation made for a specific purpose and which cannot be used for any other purpose. Line-item appropriations highlight certain appropriations and ensure that they can be separately tracked on the state's accounting system.

### One-time

Appropriations for a one-time purpose that are excluded from the base budget in the next biennium.

### Restricted

An appropriation designated for a specific purpose or function.

### Statutory

Funds appropriated in permanent law rather than a temporary bill.

### Temporary

An appropriation authorized by the legislature in the general appropriations act or in a "cat and dog" bill that is valid only for the biennium.

### Cat and Dog Appropriations

One-time appropriations made in bills other than the general appropriations act.

## Base Budget

The resources needed for the operation of state government that provide for expenses of an ongoing and non-extraordinary nature in the current biennium.

## Fixed Costs

Fees (fixed costs) charged to agencies for services provided by other state agencies (e.g., payroll service fees, rent, warrant writing services and data network services.).

## Proprietary Funds

Enterprise or internal service funds. Statute does not require that most proprietary funds be appropriated.

## Decision Package

Separate, specific adjustments to the base budget. Decision packages can be either present law adjustments or new proposals.

## FTE

A Full-Time Equivalent position, or the equivalent of one person working full time for an entire year.

### Enterprise funds

Funds that account for operations financed and operated in a manner similar to private business enterprises, and through which the intent is to provide goods or services to the public.

### Internal service funds

Funds that account for the financing of goods or services that one department or agency provided to other departments or agencies of state government.

## Earmarked Revenue

Funds from a specific source that can be spent only for designated activities.

## Indirect Cost

A cost necessary for the functioning of the organization as a whole, but which cannot be directly assigned to a specific division or agency.

## Vacancy Savings

The difference between what agencies actually spend for personal services and the cost of fully funding all funded positions for an entire year.

## Enterprise Fund

A fund used to account for operations financed and operated similarly to private business enterprises, where the intent of the legislature is to finance or recover costs, primarily through user charges.

## Federal Special Revenue

Accounts deposited in the state treasury federal to be used for the operation of state government.

## Fiduciary Funds

Funds used to account for assets the state holds in a trustee capacity or as an agent for individuals, private organizations, other governments or other funds.

## Fiscal Note

An estimate, prepared by the office of budget and program planning, of the probable revenues and costs that will be incurred as the result of a bill or joint resolution.

### Fun Fact:

**At least 30 percent of a state's budget is appropriated from federal funds.**



# ACQUIA® THINK AHEAD.

## ACQUIA PROVIDES THE LEADING CLOUD PLATFORM FOR BUILDING, DELIVERING, AND OPTIMIZING DIGITAL EXPERIENCES.

**Acquia is the enterprise platform behind Drupal, the leading open-source content management system, recognized as a Magic Quadrant Leader by Gartner two years in a row.** Our platform enables agencies to foster greater digital engagement with citizens and securely deliver mission essential information and services with greater speed, agility, and resiliency.

The City of LA, State of New York, FEMA, Department of Homeland Security and many other government agencies rely on the Acquia platform to build websites and digital experiences that meet the needs of their citizens, internal users and IT teams while moving their missions forward.

[acquia.com/government](https://acquia.com/government)



State of Georgia  
Case Study



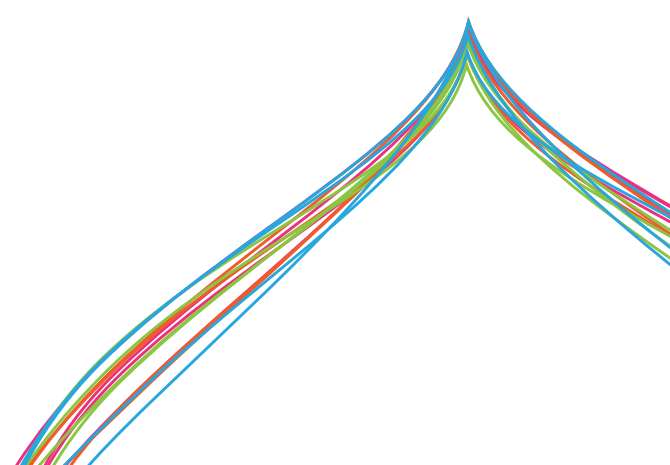
City of Los Angeles  
Case Study



FEMA  
Case Study



Australian Govt.  
Case Study



# How to Implement a State or City Wide Content Strategy

An interview with Dan Katz, Technical Director, Public Sector, Acquia

**“Our survey reveals that, on average, enterprises manage 268 customer-facing websites... Delivering great experiences across every device a customer wants fuels complexity.”**

**Forrester Research, The State of Digital Experience Delivery, 2015  
April 2015**

In the digital era, citizens are not just getting information about government from press releases or even their state's main website. Now, citizens are connecting to government via apps, dashboards, various websites and social media. All of these content vehicles reach citizens in new and engaging ways. But the reality is that in the quest to go digital, many governments are also wasting a lot of time and money duplicating content and effort.

What if there was an easier way? Actually, there is. The solution is a large-scale content management strategy coupled with the latest technology and enabled by government content architects – a role that often exists informally in the IT shop. In order to understand how and why agencies need to manage content differently at an organizational level, Gov-Loop sat down with Dan Katz, Technical Director for Public Sector at Acquia, a software-as-a service (SaaS) company.

“When we think of content management, traditionally we think of a single channel, website or a property, but large-scale content management looks across a wider spectrum,” explained Katz. “Today organizations don't just have one website, but many sites for different campaigns, agencies and events. They have social media properties, mobile apps and even digital signage that has to get content from somewhere. There are so many channels and such a proliferation of connected devices that our old definition of content management is too limited.”

In order to organize all of this content across multiple channels and to break down organizational silos, Katz recommended agencies create the role of a content architect. A content editor-in-chief, such as one at a magazine, doesn't really touch the

technology behind the site but a content architect would. Content architects work with developers and designers to help structure content in a way that enables reuse across multiple channels. The content architect is a key role in the discovery and architecture process as governments are looking to refresh their digital platforms. He or she enables the content writers and the content marketers to do their job more effectively by providing them with needed tools and governance workflows.

However, in order for the role of content architect to function properly, governments need to be willing to support some structural shifts. People from different agencies and departments need to be able to talk to each other.

Being able to publish and syndicate content across a wide list of channels requires a technology platform. Acquia offers a solution called Content Hub to address this need. “For Acquia, Content Hub is a foundational product for the future of our SaaS services,” says Katz.

“Acquia Content Hub is a secure, cloud-based content distribution and discovery service that enables content managers to author, search for and share content throughout a complex network of sites and channels. Whether it's multiple sites, diverse departments, or even different technologies, Content Hub connects content bi-directionally, enabling governments to discover, reuse, and distribute content throughout their entire organization in a secure cloud environment.”

Large Scale Content Management initiatives are happening in the state of New York. There, they are in the early stages of creating a holistic communi-

cations strategy centered on reusing content across departments. The state has two different offices that handle content and technology: New York Digital, which houses the content and brand people; and the New York State Office of Information Technology Services (ITS), which handles the technology. Over the past year, the two departments have teamed up to leverage Drupal and Acquia to help move all of the different New York State sites onto a shared, centrally governed platform. By implementing Content Hub, New York State will support content sharing across all state websites.

New York's move towards shared content resources comes back to improving citizen services and saving money. “From a citizen perspective as the consumer of that content, they want to have a consistent experience across all their touch points,” explained Katz. “Citizens want the DMV site to look the same and sound the same as if they were on the social services site. It's less confusing that way and easier for people to use.” And that ease of use is also felt on the backend by government staff themselves. By streamlining content creation and distribution, governments are able to reduce duplication.

In the end, the digital era provides governments the opportunity to communicate across multiple channels to reach citizens, and by utilizing large-scale content architecture combined with the right technology platform, true omnichannel communication strategies can be implemented more easily and cheaply for government.

# Collaboration



**Does Hawaii have innovations that Wyoming could use? What about Texas for New York City? Working across state and city lines is imperative. In this section, we will look at some of the barriers to cross-boundary collaboration and how states and localities are breaking them down.**

# Understanding State & Local Collaboration

State and local governments have been working together since long before the Constitution was ratified in 1788. The first official interstate agreements can be traced to the American colonies, where they were used to settle boundary disputes.

Fast forward more than 200 years and now more than 190 formal interstate agreements are on the books that cover everything from protecting against [forest fires](#) to [improving education](#).

State and local governments typically use two types of interstate agreements. First, states can draft what's called interstate compacts. According to the [American Bar Association](#), "interstate compacts work by structuring interstate relationships, regulating private activity that transcends state lines and furnishing government services on a regional basis. They offer an alternative to federal programs and regulation and are particularly apt for matters traditionally addressed by states, such as law enforcement and public health, safety and welfare."

Interstate compacts may be divided into two categories — those that Congress has approved pursuant to Article I, Section 10, Clause 3 of the Constitution, often referred to as the Compact Clause, and those that have not. The Compact Clause provides that:

No State shall, without the Consent of Congress, lay any Duty of Tonnage, keep Troops, or Ships of War in time of Peace, enter into any Agreement or Compact with another State, or with a foreign Power, or engage in War, unless actually invaded, or in such imminent Danger as will not admit of delay.

State and local governments can also enter into slightly less formal partnerships called stakeholder agreements. An important aspect of these is the development of written agreements that express participants' interest, support and commitment to the project.

In 2012, California Department of Transportation officials were looking for a way to increase collaboration in the creation and maintenance of a new highway system. They established the Connected Corridors program to bring in more local government partners. [The University of California at Berkeley reviewed](#) the Connected Corridors program and identified the types of stakeholder agreements the department used:

- ▾ Resolution of Support — A resolution expresses general interest and support for the project without specifying any further commitment or involvement on the part of the agency. For the I-210 Pilot, the Connected Corridors team received a [Resolution of Support](#) from the San Gabriel Valley Council of Governments.
- ▾ Project Charter — The Project Charter describes the initial stakeholder agreement and responsibilities. While not a legally binding document, stakeholders sign the charter to express their commitment to the project. Stakeholders developed, reviewed and signed the [Project Charter for the I-210 Pilot](#) over a period of several months.
- ▾ Cooperative Agreement and/or Memorandum of Understanding (MOU) — These documents are more legally binding and take more time to draft, review and execute. They may require review by the agency's legal adviser. The [MOU for the I-80 ICM project](#) illustrates this type of agreement.

Despite having the tools in place to create these intergovernmental partnerships, very few governments take advantage of them. Robert Atkinson, President of the Information Technology and Innovation Foundation (ITIF), explained the problem this way: "States tend to do their own thing and don't learn from

one another too much. There is an entrenched ideology among many state officials that their state is unique. By and large, they're not all that unique. They share many of the same challenges and many of the same processes."

Atkinson blames the busy nature of government work as one of the biggest detractors from engaging in more intergovernmental collaboration. "If you're a CIO working in this space, you've got a million things to do, and the last thing in the world you're going to want to spend your time on is going out and finding another state that you can partner with and working through all those arrangements. There's no real organization whose job it is to build cross-state solutions. So, collaboration just stalls."

But not all is lost. Sure, collaboration across state or community lines is still a "work in progress," Robinson said, but he sees some areas of improvement. "We are seeing more states collaborate along the lines of working with local governments and other states on higher education or K through 12," he said. "I also see a lot of examples of states working with nonprofits, and I think there's a number of good examples in the last few years of that partnership working well."

Two areas where intergovernmental collaboration is growing are in responding to natural disasters and technological innovation.

## Natural Disaster Response

In 2015, a record droughts struck many states including California, Arizona and Colorado. As a result, they and other western states are relying on an interstate compact created years ago to ensure water continues to flow from the Colorado River. The [Upper Colorado Basin Act of 1948](#) brought together Arizona, Colorado, New Mexico, Utah and Wyoming to determine the rights and obligations of each signatory state respecting the uses and deliveries of the water of the river's upper basin.

Now more than 70 years later, the compact commissioners are working together to find innovative solutions to the water problems. At last year's annual meeting of the [Western Governors' Association](#), the group outlined general recommendations for states to stretch their shrinking water supplies, including ways to more efficiently use wastewater, better track soil moisture levels, and work with other states and invest in water infrastructure.

## Technological Innovation

For many local governments budgeting, testing, purchasing and using new technologies such as the cloud is incredibly difficult. To lessen costs and risks, many local communities are working together.

In Michigan, five communities have teamed up to create G2G Cloud Solutions. The idea is that by working together and forming a technological network, they can cut costs and improve online services.

"We know we can't go alone in many of these technologies and many of these systems," Phil Bertolini, Oakland County CIO, told a [Michigan news outlet](#). "We have to work together."

Whether the goal is combating drought or implementing the next generation of technology, Robinson emphasized that inter-government collaboration is key to the future of government. "Working across state boundaries just makes sense. Why should each state keep reinventing the wheel? Collaboration saves time, money and resources. It's a no-brainer. Now we just need to break down some of the cultural barriers so that the processes are easier."

# State of Oregon



**Capital**

*Salem*

**Population**

*4 million*

**State since**

*1859 (33rd)*

**Area**

*98,381 sq mi*

**State Colors**

*Navy blue and gold*

**Fun Fact**

*At 8,000 feet deep Hells Canyon is the deepest river gorge in North America*

Every system needs to be backed up. But hosting data centers can be costly and difficult for many states. Since 2008, Oregon has outsourced disaster recovery to a third-party vendor, but that caused a few issues. In the event of a massive disaster loss, Oregon IT staff would have to fly to the vendor's storage site, which caused the state to lose valuable time and money.

All of that changed in 2012. For the past four years, Oregon has been getting a little help with disaster recovery backups from its friend to the east. Oregon Enterprise Technology Services (ETS) entered into an interagency agreement with Montana to lease rack space for the purpose of installing hardware that Oregon could use in the event of a disaster.

ETS established data connections with telephone service providers between locations and extended networks to the Montana data center. This allowed ETS staff to remotely manage infrastructure with limited physical interactions from Montana data center staff.

The first phase of the hardware installation provided for backups to be stored via disk instead of tape. This eliminated the costs associated with purchasing tapes, storing them offsite and shipping them from site to site. Now, if ETS needs to repair or restore a server in the Oregon data center, staff can immediately access the backup copies in Montana and perform the required work quickly and easily, compared with the old process of recalling backup tapes located offsite.

Besides saving time and money, this project has improved Oregon's ability to meet customers' business needs for available applications and provides a disaster recovery strategy that is sustainable, efficient, improves recovery time objectives and reduces data loss.



# Region of Carson Valley

**Founded**

1851

**Areas included**

Minden, Gardnerville  
and Genoa as well as  
Topaz Lake area

**Fun Fact**

Visitors to its center  
will find more than  
a few examples of  
nineteenth century  
architecture.

You often hear about new innovation technology grants going to cities such as New York and Chicago, leaving smaller communities without.

But a new challenge, America's Best Communities, is encouraging small localities to work together to achieve innovation in economic spending. With a \$10 million prize up for grabs, the competition, aims to stimulate growth and revitalization efforts in small cities and towns across a 27-state footprint by "identifying and investing in innovative ideas that small cities and towns can use to build and sustain their local economies."

Carson Valley has teamed up with nearby counties to enter the competition. "The contest provided a purpose for Carson Valley's counties, two of which lie in Nevada and the other in California, to create a more detailed plan for development," said Bill Chernock, Executive Director of the Carson Valley Chamber of Commerce in Nevada.

The multistage contest will give the top 100 communities a \$35,000 grant. "In our case, we have been pulling together resources and insights with our neighboring communities," Chernock said.

Just entering the competition has affected Carson Valley. "Traditionally the different areas don't communicate as much as they should. Through the application process, it's been really valuable for Alpine County to see what they're doing in Douglas County and what we're doing in Carson Valley," Chernock said. "We hope that we've put together enough compelling information to get to the next stage."

The open communication has led to a greater understanding of how the different local governments operate. "Each of the three areas that make up our region is remarkably different," Chernock said.

How-to:

## Effective Intergovernmental Collaboration

# Collaboration Cheat Sheet:

Here are a few tips for effectively collaborating across state lines.

How do you know if your collaboration will work? [The National Association of County and City Health Officials](#) has taken part in numerous collaborations and officials ask themselves seven questions that help them evaluate if an interagency collaboration will be successful:

1. Discussed the parties' interests and goals regarding the collaboration?
2. Agreed that there is a compelling, shared interest that the parties want to pursue, now?
3. Felt comfortable asking questions, discussing doubts and concerns?
4. Got people at the table who can speak for all of the stakeholder organizations?
5. Considered forming a smaller core group to take on certain leadership and management tasks (if the number of people involved has grown into the double digits)?
6. Spent time in the early phases getting to know one another?
7. Periodically asked if the process is clear and if the parties are comfortable with it?

## Create a common goal

Are both parties fighting for the same cause? For any interagency collaboration to work, all parties must be invested. Finding priorities or goals that aid all sides is crucial. For example, Arizona and California are teaming up to combat drought, a natural disaster that has wreaked havoc on their budgets for the past five years.

## Create a leadership structure

Will leadership be shared among agencies? Have roles and responsibilities been clearly defined and agreed on? It might sound simple, but detailing the frequency of meetings, protocols for communication across agencies, whether group meetings will have an agenda and whether stakeholders will take formal notes can make all the difference. Arizona and California each created a special task force of personnel and resources dedicated to getting the act passed.

## Create financial clarity

How will collaborative initiatives be funded and staffed? Have participating agencies developed online tools to support joint interactions? To ensure a successful collaboration, all sides must be very clear about what and when they are contributing. Both California and Arizona and some of their larger cities contributed more than \$4 million in funds.

## Create clearly defined outcomes

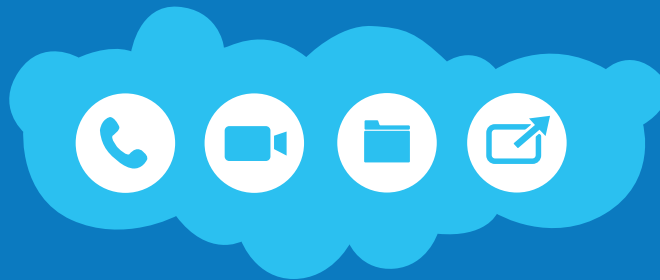
Participants need to ask themselves if have clearly defined both short- and long-term outcomes. It is essential that all collaborators have the same outcomes in mind and define success in the same way. For Arizona and California, the desired outcome was clear: They wanted a bill — the Emergency Drought Relief Act — passed in Congress so that the states could fix the Colorado River problem by building up reservoirs, augmenting the water supply and negotiating agreements between municipal water sources.

## Create an environment of accountability

Is there a way to track and monitor progress, and do agencies have in place individual competency and performance standards for staff involved? Arizona and California are now tied to each other by the lobbying dollars they have both pledged to help get the Emergency Drought Relief Act through Congress.

**Fun Fact:**  
**Interstate 70, which bisects the United States from Maryland to Utah, is a prime example of interagency collaboration. Nine states help maintain the roads and bridges along the more than 2,000 miles of road.**

**65%** of companies cited **Quality of Experience** issues as the reason preventing application adoption



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# How Visibility is Transforming Quality of Experience

An interview with Kevin Suitor, Vice President of Product Management, Exinda

**“The only area of government that has really seen an investment in QX is public safety. But if you don’t live inside one of those law enforcement areas in state or local, you’re probably in the dark ages where technology is concerned.”**

**Kevin Suitor**

It’s a simple truth for anybody in government, and the citizens accessing government services: quality of experience matters. Think about it. Citizens want to be able to easily and quickly access information on city services and apply for licenses or permits online without having to jump through a thousand different hoops.

Within the government, employees also want to be able to collect, secure and track records effectively, using the latest tools and resources. When the technology doesn’t work, mission-related tasks are crippled or, worse, come to a grinding halt – which hurts employee morale and creates unnecessary roadblocks.

That’s why quality of experience, or QX for short, is key to your mission success.

A focus on good QX not only allows your employees to perform at their best, but it also means the user’s experience is consistent and reliable. However, providing that level of service doesn’t happen by chance. It takes deliberate planning and insight into what applications are hosted on your network or in the cloud and better visibility into your network traffic.

In order to better understand how to bring good QX to your organization, GovLoop spoke with Kevin Suitor, Vice President of Product Management at Exinda, a company that specializes in ensuring QX for application users.

Good QX is easier said than done in government – especially at the state and local level. One of the reasons for the difficulty in implementing QX is the lack of funding geared towards new technologies –

with one exception. “The only area of government that has really seen an investment in QX is public safety,” said Suitor. “Since 9/11 there has been a big investment on public safety, fire and police spending due to grants from the Department of Homeland Security. But if you don’t live inside one of those law enforcement areas in state or local, you’re probably in the dark ages where technology is concerned”

In order to update their QX, Suitor recommended that state and local governments start by focusing on visibility of their IT operations. Most organizations have a horizontal view of their IT organizations. For example, there may be a group that manages networks, another for middleware and a different group that manages applications.

“These three groups operate in three different silos, and they’re horizontal, not vertical,” Suitor said. “Each one has its own manager, and this leads to this suboptimal visibility and diagnostic capability. Everyone can understand there’s something wrong below them or above them, but they cannot see, diagnose or act upon those problems. IT needs a solution that extends visibility across silos and captures and correlates data from both the network and application to identify what the issues are and where they lie.”

To make matters worse, most networks today have nearly 1200 applications running at all times. Of those applications, only 30-40 are actually sanctioned – the remainder are unsanctioned applications or applications that bypass the traditional IT buying and security mechanisms. “We really think that a great quality of experience requires multidimensional visibility and control to be able to isolate,

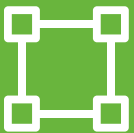
control, and prioritize those sanctioned applications. In addition, it is necessary to identify and control those unsanctioned applications such that they don’t overwhelm the mission critical ones that are absolutely required,” said Suitor.

Exinda goes beyond typical network management tools to provide a highly detailed and real-time visibility of network traffic. This allows agencies to separate traffic by user, device and application. Beyond just visibility, by partnering with Exinda, IT administrators also have access to a rich policy engine to shape particular types of traffic to meet their specific quality of experience goals.

“We think it is important for both seeing and reporting on network traffic, to understand how to manage and control the quality of experience for applications,” Suitor said. “Great quality of experience is not possible without these. Great quality of experience requires both visibility and control across your applications and your network, whether it’s a cloud network or a hybrid network.”

In the end, it’s about both visibility and control. It’s not enough to for state and local governments to just know what applications are running on their networks and how they’re being used. Once you have that visibility, you need to streamline processes and ensure a better quality of experience for employees and citizens alike.

# Structure



**No two governments in the United States are structured exactly the same. This can cause major confusion. Understanding the basics can go a long way toward improving how you work with state and local agencies going forward. In this section, we will break down state and local government structures and uncover areas of potential restructuring.**

# Understanding State & Local Structure

From the time you first opened up that U.S. history book in elementary school, you've gotten the basics about how states function. In essence, under the Tenth Amendment to the Constitution, all powers not granted to the federal government are reserved for the states and the people. Basically, whatever the federal government couldn't or wouldn't manage was pushed down to the state and local levels.

A little background: All state governments are modeled after the structure of the federal government and consist of three branches — executive, legislative, and judicial. Each of the 50 states is headed by a governor who is directly elected by the people. In most states, other executive branch leaders are also directly elected, including the Lieutenant Governor, the Attorney General, the Secretary of State, Auditors and Commissioners.

And that's about where the similarities end in terms of how state governments are structured. Sure, every state has a legislature, but each one is convened slightly differently. For example, Nebraska has a unicameral legislature, and Vermont, despite its small size, has one of the biggest legislative bodies in the country. Term limits for state senators also vary greatly in length and commitment.

Then there are local governments. There are four main types of local government: counties, townships, special districts and municipalities. Each features a slightly different structure and reporting restrictions.

According to data pulled from the [USHistory.org](http://USHistory.org) website on state and local governments, more than 80 percent of U.S. residents reside in municipalities — cities, towns, boroughs (except in Alaska), villages and townships. Municipalities are generally organized around a population center and in most cases correspond to the geographical designations the U.S. Census Bureau uses for reporting housing and population statistics — think areas like New York City, Los Angeles or Cleveland.

Municipalities generally take responsibility for parks and recreation services, police and fire departments, housing services, emergency medical services, municipal courts, transportation services (including public transportation), and public works (streets, sewers, snow removal, signage and so forth).

Whereas the federal government and state governments share power in countless ways, a local government must be granted power by the state. In general, Mayors, city councils and other governing bodies are directly elected by the people.

Confused yet? That's OK. Differentiating among the types of government is confusing, NACo's Namey said. "People expect their government to provide services, but there's not a great understanding of who provides those services and how they are provided," he said. So how do you make sense of all these different types of government?

One way to think of the structure of government is to think less of the branch of government and more about the service, Namey said. For example, think about the investments that counties make in roads and bridges and think of what they do to keep people safe. "The functions of county government run from A to Z," he said.

To that end, many state and local governments are rethinking their websites and services to be more citizen-focused and less focused on a strict interpretation of the structure of government. Or in simpler terms, if a resident is looking to buy a fishing and boating license, they don't necessarily care that two different state agencies issue them. They just know they need both and it would be more convenient if they could get them on the same web page. This end-user mindset is often referred to as human-centered design (HCD).

One government entity that is putting HCD into action is the New York City Department of Education. One of the big challenges for parents in the city is making sure their kids go to the right high school. But the right high school could be in a different district, county or even municipality. To help parents streamline their online school searching efforts, the department created a portal, the [iZone](#), where students and parents could learn more about schools, take quizzes to help put them on the right track and talk to the right school official all in one place. The portal has been a huge success for both the school districts and parents.

To make iZone happen, the department had to update the basic structure of not just its website, but how the government was reacting to the challenge of placing kids in the right schools. Various departments and agencies statewide had to work together.

And it's not just HCD that is having a major impact on the way state and local government websites are structured. As technologies such as cloud and data analytics make their way into states, processes and procedures that used to take individual employees hours or even days to complete can now be done in a matter of minutes. This move to automation is changing the way government operates and is making some positions in government obsolete.

"IT is now the bottom line driver, rather than a top line driver," ITIF's Atkinson said. "In other words, most of the focus of IT has previously gone into adding new functionality to government. But I really think that the next wave of e-government is automating a lot of what's going on in government — changing the way government is structured so that it can be more efficient."

NASCIO's Robinson agreed. "State and local governments are at this really transformative moment in history, where the older generations are leaving and the younger ones are bringing in new technologies that are fundamentally changing the way government operates," he said. "It's an exciting time, but one that is going to be difficult because government is slow to want to change. And ushering in a whole new way of doing things and processes is scary!"

# State of Massachusetts



**Capital**

*Boston*

**Population**

*6.8 million*

**State since**

*1788 (6th)*

**Area**

*10,555 sq mi*

**State Desert**

*Boston cream pie*

**Fun Fact**

*Boston Common became the first public park in America in 1634*

Following the passage of the Affordable Care Act (ACA) in 2010 the Massachusetts Department of Health and Human Services had to restructure. Before ACA, MassHealth combined the Medicaid and the State Children's Health Insurance Program in the commonwealth. Since ACA, it provides health care coverage to 1.3 million of its most vulnerable residents and ACA subscribers.

The additional participation caused MassHealth's productivity and customer service experience to falter.

The work to reform MassHealth began in January 2015 as part of the fiscal 2016 budget process, which also called for major cuts in spending. The updated structure brings in new talent to MassHealth and creates greater organizational emphasis on customer service and better integration of behavioral health and other supportive care. To facilitate that collaboration, the new alignment created the position of Chief of Behavioral Health and Supportive Care. That person will push for more reforms to better coordinate and integrate care for behavioral health, physical health and long-term services in addition to supporting the elderly and people with disabilities.

The restructuring also created a new unit within MassHealth that will lead a shift away from the current payment system, which is based on the number of services provided, and toward new payment models focused on keeping people healthy and lowering overall costs.

"This is an important step to creating a sustainable Medicaid program and improving how we serve the state's most vulnerable residents," said Marylou Sudders, Secretary of Massachusetts' Executive Office of Health and Human Services, in a [press release](#). "These changes will put the emphasis on improving the effectiveness and quality of care provided."

All of these changes to the basic structure of the agency will go a long way to rein in spending and improve the customer experience.



# Townships of North Dakota



In 1982, former Speaker of the House Tip O'Neill said, "All politics are local." He couldn't have imagined then the hyper local governments in North Dakota.

The state, which ranks 47th in population, boasts the most governments per capita in the country, with new [Census Bureau data](#) tallying 2,666 governing entities — about 39 per every 10,000 residents. In fact, more than [1,300 civil townships](#) crisscross the state, some home to only a few residents — only 225 recorded populations of at least 100 in the 2010 Census — and another 942 fire protection, water and other special districts also span its boundaries.

What does all of this mean for the structure of government? In essence, it means the traditional structure of a city, which would have separate finance, transportation and city works departments might fall to one person. In September 2012, *Governing* discovered a city official — Chuck Thacker — in rural Felson Township who not only manages the township's budget, but if a farmer wants to dig around a ditch, he ensures they have a permit. And when roads flood in the spring, he takes on public safety duties. Basically, he is the one-stop shop for city services.

Having so many governments may appear to be inefficient, but it's not. The townships don't have complete autonomy, while more urban areas in the state that mirror other U.S. cities do. And the state's special districts — as the name would imply — usually perform a very narrow, specialized service that doesn't overlap with other agencies' services. The result is a system of local governance responsive to citizens, but at a cost lower than what is typical in other areas.

**Total Population**

757 thousand

**State since**

1889 (39th)

**Number of Cities**

2,666

**Smallest City**

Maza, pop. 5

**Fun Fact**

About 87.7% of the state's land is agricultural private property.

How-to:

## Different Government Structures

# Structure Cheat Sheet:

Here's a quick cheat sheet so you know the difference between a county and a township at a glance.

Similarly, state governments can also be difficult to understand structurally. However, the Independence Hall Association did note that all 50 states have a Governor, state legislature and court system.

### Governors

---

In every state the Governor is chosen by popular vote and most serve four-year terms. More than half of the states have term limits on the number of times an individual may be elected. In general, Governors have the authority to issue executive orders, prepare the state budget, make appointments, veto legislation and pardon criminals. In states that tend to concentrate powers in the hands of a few, Governors have broader authority and more powers.

### State legislatures

---

Every state has a bicameral, or two-house, legislature, except for Nebraska, which has a unicameral body. State legislatures vary in size from 20 to 400 members and are not necessarily in proportion to the size of the state's population. For example, New Hampshire has 400 members in its lower house.

### State courts

---

Each state has its own court system, and most have a state supreme court. State Judges have the final voice in the vast majority of cases in the United States since more come under state rather than federal jurisdiction. Most states have two types of courts — trial courts that handle issues from traffic fines to divorce settlements to murder, and appeals courts that hear cases appealed from lower courts.

The Independence Hall Association found that local governments could be broken into four distinct categories:

## Counties

Counties are usually the largest political subdivisions, and their primary function is to administer state laws within their borders. Among other duties, they keep the peace, maintain jails, collect taxes, build and repair roads and bridges, and record deeds, marriages, and deaths. Elected officials called Supervisors or Commissioners usually lead counties.

## Municipalities

City, town or borough governments get their authority to rule from the state. Today, about 80 percent of the American population lives in municipalities, and municipal governments affect the lives of many citizens. Municipalities may have elected Mayors, or they may be managed by appointed City Managers.

## Townships

These units of government do not exist in about half the states, and they have different responsibilities in those that have them. A township may simply be another name for a town or city, or it may be a subdivision of a county.

## Special Districts

These units of government have special functions. The best-known example is the local school district, but other types are growing in number, especially in heavily populated areas where county and city governments may be overloaded with work.

### Fun Fact:

**The average state constitution is four times longer than the U.S Constitution.**



# Turning Mobile Phones Into Citizen Engagement Portals

An interview with Natalie Fedie, Vice President, Client Success, GovDelivery

**“People’s satisfaction with government goes up if services are easier to access and they see a return on their tax dollar investment,”**

**Natalie Fedie**

**T**eens and young adults are often accused of being addicted to their phones, but they are not alone: 90 percent of Americans own a mobile device with text messaging capabilities. And more than 60 percent own a smartphone. The average smartphone user checks their phone 110 times a day.

If you want to reach a specific population and reach them fast, text messaging is the easiest and most effective method. And that’s not just for parents trying to keep track of their teens. Governments are also seeing a powerful increase in engagement by going mobile.

GovLoop spoke with Natalie Fedie, GovDelivery’s Vice President of Client Success. GovDelivery is a digital communication platform provider for government.

“Governments are using mobile technology to offer real-time information to people where they are,” explained Fedie. For example, King County Parks in Seattle has a mobile app where hikers can get map access anyplace, anytime and on any device. “That level of access has been a real benefit to the King County Parks.” Taking it to the next level, organizations like Michigan DNR are allowing hunters to text in and request information on their nearest check location, regardless of whether they have internet service or a smartphone. This provides a better level of service to the DNR’s customers, while allowing the DNR to more effectively monitor and control the deer population.

The key to text notification success is to match the message to the medium – a tactic that is especially critical in an emergency. “The Federal Communications Commission recommends keeping phone

calls to a minimum during an emergency. A text message is a great way to communicate warnings, but also tell citizens where to go and other life-saving information,” said Fedie.

With text messaging, government communicators have about three seconds to get a citizen’s attention. “We work with customers to make sure they are grabbing attention quickly and able to maintain that attention throughout the mobile lifecycle,” said Fedie.

For example, let’s say a city was trying to get riders to take a different bus route. After the initial alert asking riders to take an alternative bus route, the city would ask for feedback. Text messages would prompt users to answer: Was the new route successful? Was the alert helpful? How did it impact your commute? “Text messaging allows you to keep the end user engaged throughout the process,” said Fedie.

72 percent of adults are less than four feet from their phones at all times, and 97% of text messages are read within 15 minutes of being sent. Text alerts allow governments to engage citizens in a real-time manner wherever they are. “People are not chained to the desks anymore. They are on the move. What text alerts do is eliminate the barrier to citizens receiving information and services from government,” said Fedie.

It’s not just citizens that get a boost for the easy access mobile provides. “The ability to do two-way communications and receive survey information or instant feedback from users has been really helpful. It’s hard to get people to respond to surveys. So having that ability to instantaneously respond to communications has allowed government to get better feedback,” explained Fedie. For example, One Region Forward promoted a text message survey

on bus stops and flyers, engaged the public, and instantly received public input on its proposed plan for the Buffalo Niagara region.

However, text alerts are not perfect in every situation. Fedie said she works with clients to learn when and where text alerts will be most effective. “We’ve found text alerts work best when you’re trying to reach a specific audience, like younger people or low income audiences who may not have internet access.”

Additionally, mobile is used most effectively in partnerships with other communication outreach best practices. “Mobile enhances the other digital channels that governments use. Organizations should be using text messaging in combination with their other digital channels, like email and social, to reach as many people as possible.”

Simply put, text messaging enhances citizen engagement. “People’s satisfaction with government goes up if services are easier to access and they see a return on their tax dollar investment,” explained Fedie. “If they have to go into an office, wait in a long line with a lot of government workers behind the desk, there is a very real perception that the government is not using their tax dollars effectively. But if they get a text alert warning them that wait times are long and they should reschedule their visit online, their customer experience is drastically improved. By seeing government be smarter about investing in technology, it’s really a win/win situation for both government and the taxpayer.”

# Regulation



**When it comes to regulations, state and local governments are beholden to the federal government. More than 30 percent of a state's budget comes from federal funds. In this section, we will break down the types of government regulations and explore how state and local governments go about implementing them.**

# Understanding State & Local Regulation

Fourteen federal departments are considered regulatory agencies, meaning agencies that are responsible for passing down legislation to a given sector of government — such as state and local entities. The Environmental Protection Agency and the Social Security Administration are two examples. In other words, those 14 agencies are responsible for setting the parameters, regulations and restrictions on how appropriations should be spent to implement federal programs. And although other agencies can also impose regulations on the government, those 14 are the most common contributors.

So how do the regulations work? At the most basic level, the federal government imposes two types of regulations on state government. The first is programmatic funding for the delivery of services. “With programmatic funding, states are the strategic business partners with the federal program agencies to deliver federal programs on behalf of the federal government to their citizens,” explained Robinson. As we mentioned earlier, more than a third of state and local budgets comes from money that the federal government provided to execute programs. Those funds often come with stipulations for how they can be implemented.

In fiscal 2015, the federal government provided more than \$600 billion to states to deliver programs on its behalf. “Programmatic services like Medicaid and [Medicaid Management Information Systems], health information and [the Supplemental Nutrition Assistance Program] for food stamps are some of the federal programs funded by the federal government that the states actually act as the delivery partner” for, Robinson said. “There are very clear rules, roles and responsibilities that are all outlined in that area.”

For states to be better equipped to effectively manage the programmatic funding, Robinson said they need to update, streamline and modernize their integrated eligibility determination systems. These systems handle the process that states go through to verify if a resident is eligible for a service, such as Medicaid or SNAP.

For example, the Ohio Governor’s Office of Health Transformation is updating its eligibility determination for health and human services programs. The old system was fragmented, overly complex and relied on outdated systems. In a release on the [Ohio Academy of Family Physicians](#), “There are more than 150 categories of eligibility just for Medicaid, and two separate processes to determine Medicaid eligibility based on disabling condition. The lack of standardization has led to work around solutions developed county-by-county, and presents great challenges for automation. Ohio’s Enhanced Client Registry Information System (CRIS-E) System, which supports eligibility determination for Medicaid and the other primary public assistance programs, is more than 30 years old. The current system is not capable of meeting the processing standards for the additional Ohioans who enrolled in Medicaid in 2014 as a result of federal health care reform.”

States are looking for eligibility determinations to happen in one spot, but that is currently not happening nationwide. “You have these silos of services. The role of controlling and approving those projects often rests within different agencies or even the federal government themselves,” said Robinson. “States all aspire to create shared systems with interoperability that can leverage existing systems to provide new services.”

The second major area of federal regulation on state and local governments comes in the form of compliance.

One of the biggest compliance areas is centered on how state and local governments attain, store and manage data. “States are currently dealing with lots of regulations around the handling of data. Federal agencies want to make sure that data is secure and that privacy is protected when handling data, but the compliance regulations can create some tension because they are not harmonized,” Robinson said.

The lack of uniformity in federal regulation standards can result in some complexity for state governments, because they can’t apply one solution to the same business problem outlined in the regulations. In an ideal world, states would be able to treat X dataset the same across all the federal agencies compliance regulations, but that’s not happening now. “The federal agencies haven’t gotten together to coordinate their demands on the states on these regulatory environments,” said Robinson. “And so they all come up with these stovepiped approaches, which causes additional expense and additional challenges at the state level.”

Atkinson is seeing the same problem at the local level. “The federal government doesn’t always do a very good job of working with localities when mandating shared systems. Our report, [U.S. Government is Making it Possible to Dump Identifiers Tracking Contracts](#), on e-government found that federal funding creates data incompatibility with state agencies. For example, the Substance Abuse and Mental Health Services Administration gives grants to local governments, but each health services has different reporting requirements.” In addition, reporting requirements in one state are going to be different than another state, so states and local government can’t build shared systems and they can’t share data across state lines to figure out what’s working and what’s not.

State and local governments often challenge new compliance regulations. For example, the implementation of a regulation such as EPA’s new Clean Water Rule, which extends federal jurisdiction over tens of millions of acres of private land that had been regulated by the states, has the potential to create tremendous delays and costs for not just the states, but the counties too. This argument has made its way to the U.S. Supreme Court.

The Clean Water Rule would empower the U.S. Army Corps of Engineers and EPA to micromanage any creek, pond or prairie pothole with a “significant nexus” to a “navigable waterway.”

“If the regulation goes into effect, then it will have far reaching implications on county governments too because they are the ones that would actually have to maintain the roadside ditches and infrastructure that supports the Clean Water Rule,” said Namey.

[According to the Wall Street Journal](#), Ohio, Michigan and 16 other states challenged the rule, and a three-judge panel of the U.S. Court of Appeals for the Sixth Circuit ruled 2-1 that the “petitioners have demonstrated a substantial possibility of success on the merits of their claims” and that a stay is needed to silence “the whirlwind of confusion that springs from the uncertainty” about the rule’s requirements.

However, despite the complications that federal regulations can cause for state and local governments, Robinson said, “these regulations have to be prioritized because, again, these large environments like Medicaid are critically important to service delivery to citizens. They’ve got to be treated with a high degree of respect and investment to make sure that they are available.”

# State of Illinois



**Capital**

*Springfield*

**Population**

*12.9 million*

**State since**

*1818 (21st)*

**Area**

*57,914 sq mi*

**State Dance**

*Square dance*

**Fun Fact**

*Illinois boasts the highest number of personalized license plates.*

There are about 566,000 underground storage tanks (USTs) nationwide that store petroleum or hazardous substances in the United States. If these tanks were to leak, they could contaminate groundwater — the water that more than half of the people in this country drink daily. To avoid such a catastrophe, EPA issues strong compliance regulations on USTs. However, it is up to the states to actually inspect and fix the tanks, and react when leaks do occur.

In July 2015, [EPA updated its USTs regulations](#) and gave states 90 days to comply with the new requirements. Many had to scramble to implement the updates. But the Illinois Office of the State Fire Marshal, which was responsible for making sure that the compliances were enacted, was prepared. According to [a memo](#) to the Governor, the state would have to update only its:

- ▼ Monthly walk-through Inspections of UST Facilities: This required a change from the current Quarterly Equipment Inspection required at UST facilities.
- ▼ Regulations and maintenance and testing practices for testing of spill buckets every three years and testing containment sumps with sensors every three years.
- ▼ Regulations and equipment inspection practices for inspecting overfill prevention equipment every three years.

Illinois and other states also must provide performance data on the USTs to the federal government. EPA requires the state to send data on the number of active and closed tanks, confirmed releases, initiated and completed cleanups, facilities in compliance with UST requirements, and inspections.



# School Districts of Georgia



**Public School Student Population**  
1,756,553 (in 2015)  
**Number of Schools**  
2,267  
**Number of Teachers**  
113,441  
**Graduation Rate**  
78.8%

The federal government requires that all states have school programs dedicated to providing an education to children with special needs. In April 2015, the Education Department's Office of Special Education Programs updated its regulations to provide more clarity in three key areas. First, the department updated its classification of the eligibility standard for students. Second, it updated the compliance standards for classrooms. And third, the new regulations provided a more thorough explanation of the subsequent years rules, which lets children with special needs stay in school past the age of 18. The new compliance regulations also included a section on the consequences local education agencies (LEAs) face if they fail to effectively carry out the new compliances.

Immediately following the requirements update, Georgia's Department of Education updated its [2013 Handbook for Special Education Directors: Fiscal Compliance and Accountability](#), a manual for the state's more than 100 school districts and special needs teachers. The handbook offered the most up-to-date information so that schools could stay compliant with the new federal requirements, including how much money each school should be spending on special-needs students.

"Federal allocations to LEAs are based on a formula provided in the regulations," the handbook now states. "The United States Department of Education, Office of Special Education Programs sends the state allocation to each State Educational Agency (SEA) in the winter. A restricted set aside amount (about 10%) for state discretionary and administration is deducted from the [Individuals with Disabilities Education Act] grant with the remaining funds (90%) distributed to LEAs. The LEA formula has three parts — a base allocation of 75% of the FY 1999 allocation amount with any remaining funds for flow-through being distributed based on each LEA's general population (85%) and poverty (15%)."

Failure to properly understand these requirements could cost the state grant money or other types of support. Georgia's handbook goes a long way toward alleviating those concerns.

How-to:

## Government Regulations Implementation

# Regulation Cheat Sheet:

There is no one way that state and local governments go about implementing federal regulations. But one thing that could help the process is a better understanding of how agencies create a new regulation.



**Fun Fact:**

You can find every single government regulation on the Government Publishing Office's CFR database.

Below is the process [EPA](#) uses to issue new regulations or guidance. The regulations process at other agencies is very similar.

Step 1:

## **An Agency Proposes a Regulation**

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The agency researches the issues and, if necessary, proposes a regulation, also known as a notice of proposed rulemaking. The proposal is listed in the Federal Register (FR) so that the public can consider and comment on it. The proposed rule and supporting documents are also filed on [Regulations.gov](#).

Step 2:

## **The Agency Considers Your Comments and Issues a Final Rule**

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Generally, an agency considers the comments received when the proposed regulation was issued. The agency then revises the regulation accordingly and issues a final rule. This final rule is also published in the FR and on [Regulations.gov](#).

Step 3:

## **The Regulation is Codified in the Code of Federal Regulations**

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Once a regulation is completed and has been printed in the FR as a final rule, it is codified when it is added to the Code of Federal Regulations (CFR). CFR is the official record of all regulations the federal government has created. It is divided into 50 volumes, called titles, each of which focuses on a particular area. Almost all environmental regulations appear in Title 40. CFR is revised yearly, with one-fourth of the volumes updated every three months. Title 40 is revised every July 1.

# KRONOS for GOVERNMENT

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# How Workforce Management Tools Help in a Disaster

An interview with Rock Regan, Director of Industry Marketing & Strategy for Public Sector & Education at Kronos

**“Cities think we have to respond. But at the end of the day, tracking is a critical component. When you put these plans together in advance, and you know where the reimbursement buckets come from, you are much better equipped to track finances.”**

Rock Regan

Wildfires, tornados, snowstorms – when disaster strikes, first responders are the first to rush to the scene. However, making sure the right first responders are in place is imperative to a government’s successful response to a disaster. A raging fire wouldn’t be quelled if only police officers answered the call. So how do you ensure the right personnel are on site? To get those answers, GovLoop sat down with Rock Regan, Director of Industry Marketing and Strategy for Public Sector and Education at Kronos, a workforce management software and services company.

“There are many different facets to responding to an emergency or a disaster,” explained Regan. “The best way to understand disaster response is to think of the response in three different buckets: pre-disaster, disaster and post-disaster.”

One of the best ways to ensure state and local agencies have the correct staff in place during an emergency is to implement an automated workforce management solution like Kronos. “First responders have different rosters based on different types of emergency events,” said Regan. “With automation, they can immediately access a roster and have the system make the calls to deploy the right people on the scene fast.”

Regan said automation allows first responders to:

- ▼ Create various schedules based on different disaster scenarios ahead of time. Those events can include certifications or other requirements for personnel.

- ▼ Provide the acting commanders the ability to make real-time decisions about which personnel they need.
- ▼ Get remote access to workforce data, including personnel from a laptop or mobile device.

“Commanders can, with a push of a button, change the current work schedule and make sure that an automated call goes out to recall the right personnel,” said Regan.

However, having the right people in place is only half of the equation for first responders in a crisis. The other half is making sure those first responders are tracked and paid properly. But it’s not easy. The payment of personnel in a disaster can be complicated because FEMA and other federal agencies sometimes reimburse state and local governments for disaster costs. “Typically overtime costs are allowed to be reimbursed,” explained Regan. “If a city has a police force schedule, the city is responsible for paying them 8 hours a day. But then any time on top of that, FEMA would contribute funds. Understanding how you’re going to leverage the personnel and then how you track that becomes pretty critical in terms of how the city or the county gets reimbursed.”

In addition, cities typically struggle with post-disaster audits because their manual processes can be cumbersome and lack detail. These audits can take place up to 10 years after the disaster or emergency actually occurred, risking reimbursement funds. However, with automated documentation of labor hours, getting the true reimbursement can be

much easier. “If you don’t have automation up front, it’s too late once the disaster starts,” said Regan. “Without automation it’s almost impossible to get the full reimbursement. I think the benefit of the Kronos system is that users are actually able to go in and specifically print out a report of all the hours that could be reimbursed based on a lot of the FEMA guidelines.”

Regan noted that tracking workforce labor is often overlooked: “Cities think we have to respond. But at the end of the day, tracking is a critical component. When you put these plans together in advance, and you know where the reimbursement buckets come from, you are much better equipped to track finances and survive an audit.”

In the end, workforce management tools help the city respond effectively to a disaster both during and after the event. “Communities like to prepare for the physical stuff of a disaster – things like drills and training programs, but they often overlook the backend,” said Regan. “Automation takes care of the administrative burdens of these types of events. Trying to catch up to the administrative requirements after the fact is almost impossible. Building automation into the process beforehand takes care of that burden.”

This means more time for your employees to focus on what really matters: helping citizens. Workforce management solutions allow state and local governments to be much more responsive, flexible and accurate during a disaster. And in the end, that efficiency saves lives.

# Technologies



It may seem obvious, but a city with the square mileage and population of New York City has a much more substantial budget than, say, Des Moines, Iowa. However, both cities need and want the same new technologies. In this section, we will look at how smaller cities can compete with their larger counterparts.

# Understanding State & Local Technologies

The good news for smaller governments is that the price to play is going way down," said Stephen Goldsmith, Professor of government at the Harvard Kennedy School of Government. "The price of cloud and data analytics tools has come down so dramatically in the past few years that smaller states and local governments are now turning their attention to these technologies."

NASCIO's Robinson agreed. "Cloud technologies are one of the great equalizers of our day, because state and local governments no longer have to build everything themselves; they can contract for a service," he said. "Take a payroll system, for example. A few years ago, if a state even considered buying a new payroll system, they would need to first build the software and hardware, train their employees and then implement the system. Now all that's taken care of by the cloud provider. It's so much easier for state and local governments to try new technologies and implement solutions."

In addition, smaller states and localities can be more open to innovation because they are far less bureaucratic.

One of those states is Wyoming. Wyoming has the smallest population in the United States and the smallest state government, with just 300 IT employees. To compare, New York City's IT department has more than 1,200. Despite its size, however, Wisconsin's IT team is one of the most innovative.

"We have a startup-type culture in our state agency," said state CIO Flint Waters.

He credits the startup culture to a lack of entrenched bureaucratic hierarchy. "There is a direct line of communication between the state's IT world and the legislators in Wyoming," Waters said. "If we have obstruction of statutes that are problematic for innovation, we can talk directly to our legislators. It's why Wyoming is one of the best places for innovation, for startups and for corporate structures — it's because of that agility."

But not every small state or locality is as fortunate as Wyoming. "The biggest barrier for small states and local governments isn't the desire for new technology, but resources," said NACo's Namey. "They simply don't have the same funding as their bigger counterparts. Just remember that California's economy alone is the eighth largest economy in the world."

One way that smaller governments are able to play the technology game is by partnering with other agencies or the public sector. For example, the National Institute of Standards and Technology hosts the annual Global Cities Team Challenge. According to NIST, the challenge "partners communities and innovators together to encourage collaboration on a range of issues from disaster response to energy management to mass transit improvement. The goal is to help

small communities and businesses connect to improve resource management and quality of life by using effective networking of computer systems and physical devices, often called the Internet of Things (IoT) or cyber-physical systems."

More than 180 corporations and organizations are helping cities implement IoT programs in transportation, energy, disaster resilience, public safety, health care, and education to promote better lifestyles. "We are trying to get these technologies down to our everyday life," said Sokwoo Rhee, Associate Director of Cyber-Physical Systems at NIST.

NIST isn't the only organization reaching out to small states and local governments to create innovation. Bloomberg Philanthropies is also actively engaged in creating a tech revolution at the local level with its Mayors Challenge. The challenge asks local government to propose bold solutions and incentivizes local leaders to think creatively, test new approaches and identify groundbreaking innovations in any policy area — from public health to sustainability to arts and culture. Already 500 cities have accepted the challenge since it started in 2014.

Making a push to enter competitions like the Mayors Challenge or other e-government programs is essential for small communities because their residents are demanding more digital services than ever. "Governments need to be able to be responsive to citizen expectations for two main reasons," Goldsmith said. "First is the overall satisfaction of citizen increases exponentially if they can get the services they need in the form they want. Second is trust in government is at an all-time low, so if governments can be responsive and innovative, it can curb the negative perception many Americans have about government. Staying current helps government erode dissatisfaction and improve citizen engagement."

Another way to increase a small state or city's reach into the world of technology is to create centers or hubs of innovation. That's exactly what North Carolina did when it created the iCenter in 2013. The facility allows both the state and local governments to come in and test new technologies before they purchase them.

"When I came into the state from the private sector with the Governor, we realized pretty quickly that the agencies within the state were running technology in silos," said North Carolina CIO Chris Estes. "The iCenter is really about implementing the 'try before you buy' scenario."

Through innovation centers, smaller governments are able to get a taste of new technologies without having to invest in them first.

Innovation is never easy, and for small state and local governments, the challenges to stay current can be very difficult, but Robinson, Atkins, Goldsmith and Namey agree it's "very possible to be innovative even in the smallest community."

# State of Arkansas

Arkansas ranks 33rd in the country in terms of population size. But that hasn't stopped the Natural State from embarking on aggressive technological innovation to help provide online services to residents. Based on the fact that more than 45 percent of the state's website traffic currently comes from mobile users, officials are on the right track.

To make sure the right information is in the hands of constituents, the Arkansas Department of Information Systems brought together several agencies to figure out what services people wanted and needed for mobile use.

The new platform, called [Gov2Go](#), is available for iOS and Android operating systems. The app tracks deadlines and issues reminders for common transactions such as property tax payments and license renewals. According to [Government Technology](#), the more citizens use it, the smarter the platform becomes about their individual needs. Two-way text messaging provides automated responses to frequently asked questions and hands users off to live agents if they need more assistance. The function uses natural language-processing technology linked to multiple government databases to deliver appropriate responses to citizen questions.

What's more the new and improved website and mobile apps are not just making the process easier for the public, they are saving the state millions of dollars too. Last year, the website and apps had 1.2 million visitors, resulting in transactions that saved the state \$309 million.

The dedication to online services had made Arkansas a 10-time winner of the Government Technology Best of the Web award.



#### **Capital**

*Little Rock*

#### **Population**

*3.0 million*

#### **State since**

*1836 (25th)*

#### **Area**

*57,179 sq mi*

#### **State Nickname**

*The Natural State*

#### **Fun Fact**

*Arkansas contains over 600,000 acres of lakes and 9,700 miles of streams and rivers*



# County of Chesterfield, VA



Chesterfield County, VA., is the home of the state capital, Richmond. It's also home to an innovative approach to transparency and openness. The county has worked to make its website, [Chesterfield.gov](http://Chesterfield.gov), as open as possible for residents to view financial information, details on county permit activity and even procurement data.

And the innovation and commitment to openness don't stop with the website, the county has also created mobile-first platform that seeks to bring the same transparency to mobile users.

For the past two years, Chesterfield has received an A+ score from the Sunshine Review, a national nonprofit organization dedicated to government transparency, for the transparent nature of the [open government website](#).

But officials are not resting on their laurels. Early in 2015 the county invested in an app and site upgrades. They revamped the sites menu structure and overhauled the library department's HTML webpages on the county's Microsoft .NET content management system. Now you can find a book easier than ever from one of the county's public libraries.

In addition, "residents can pay taxes, utility bills and court expenses online with confidence, given the measures used by the county to protect customer data," according to Government Technology, which named Chesterfield a finalist for its innovative technology website awards. "Tools include multiple firewalls, a custom authentication model and Secure Sockets Layer (SSL), which secure transactions with https when customers submit personal information."

#### **Population**

316,236 (in 2010)

#### **County since**

1749

#### **Largest Community**

Chester

#### **Area**

437 sq mi

#### **Fun Fact**

Falling Creek was the site of the first lead mines in America.

How-to:

**New Technologies On a Small Scale**

# Technology Cheat Sheet:

Finding ways to innovate and be technologically current and responsive can be especially difficult for small governments. Resources are tight, there are fewer employees, and training and development can be scarce. But there are some quick and easy things every small government can do to innovate like their larger counterparts.



## 1. Start with your end user in mind

Use the insight from those who handle service delivery to identify and understand consumers who won't or can't engage with you. What is missing that would make their job easier? Is it a cloud solution? Analytics?

## 2. Bring the thinkers together

Small governments might not have a big network of innovative thinkers internally, so they need to form networks of people from the private and nonprofit sectors who can help come up with innovative strategies.

## 3. Start small and call everything a pilot

Think flexibility. Cities and states don't have to break the bank when it comes to investing in new technologies and solutions. Remember it's easier to back off from a risky project if things go terribly wrong or significant opposition arises than it is to dump a large legacy system.

## 4. Find a friend in industry

To get projects to scale faster, consider teaming up with another community or a private-sector company. Collaborating with a partner can generate more and better ideas on how to address the challenge. This approach also spreads the risk and some of the costs.

## 5. Create a small innovation fund

We know resources are tight, but small governments are more likely to try something new if there is money set aside for creativity and experimentation. Ask the City Manager to budget a small pool of money to be spent on creative ideas for which groups of employees and perhaps community partners can compete.

## 6. Show your results

Often, small cities don't want to invest in a new technology if it isn't a total success. But governments can learn a lot from small failures as long as they are measuring progress along the way. [Western City](#) magazine recommends asking these key questions:

- ▼ Given our goals, what has gone well?
- ▼ What has not gone so well?
- ▼ How did we respond to inevitable problems?

### Fun Fact:

**The first city to be considered truly IoT-enabled is Dublin, Ireland. Ranked as one of the smallest major metropolitan cities in Europe, the city is home to only half a million residents, but has more than 2 million sensors that track everything from parking spaces to air temperatures.**

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The Palo Alto Networks logo is positioned on a dark grey, tilted rectangular background. It features a white icon of a network diagram with three vertical bars of increasing height on the left, followed by the word "paloalto" in a lowercase, sans-serif font, and "NETWORKS" in a smaller, uppercase, sans-serif font below it.

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# Saying Goodbye to Siloed Security

An interview with Kenny Holmes, Public Sector Security Evangelist, Palo Alto Networks

**“Ultimately a security platform and framework allows agencies to change from a detection posture to a prevention posture. We cannot sit back and just wait for the bad guys to come.**

**Kenny Holmes**

Palo Alto Networks Unit 42 threat research team released its 2015 Application Usage and Threat Report (AUTR) analyzing and correlating data from more than 7,000 organizations over a 12-month period gaining broad visibility into critical trends. Findings show SaaS-based applications grew 46% in three years, 79 unique remote access applications were found with more than 4,400 organizations using five or more. Over 40% of email attachments and nearly 50% of all executables were malicious while over 10% of all malware activity is macro-based. The average time to weaponization of a world event – creation of cyber threats exploiting things everyone is talking about – was 6 hours. According to [Security Planet](#), on average the government fends off 60,000 cyber-attacks a day.

To better understand how state and local governments can create a stronger security posture, GovLoop spoke with Kenny Holmes, Public Sector Security Evangelist at Palo Alto Networks, pioneer of the enterprise-level next generation platform.

Holmes stated that attackers use all different tactics and applications to gain entry to networks – from sophisticated techniques to simple phishing attacks. Government agencies attempt to thwart these attacks by deploying a myriad of solutions, but these solutions are often released in a vacuum without thought to the agencies overall security posture.

Holmes explained that agencies often try to solve cybersecurity issues with piecemeal, siloed solutions because in part they don't have visibility across their networks. “We realized that governments faced a major challenge in getting proper visibility into their networks, desktops, and increas-

ingly the cloud. They need to have that foundation to move into an automated prevention-based approach.”

In order to improve visibility for agencies, Palo Alto Networks decided to stop focusing on ports and protocols and instead looks at security from the applications, users and content perspective. Organizations believed that web and email are the only way attackers are getting in, and invested in security for just those vectors. But many threats use legitimate applications to get onto the network. “Agencies need to be able to connect applications, users and content together, as this gives them the ability to shrink the attack surface,” explained Holmes.

Shrinking the attack surface can go a long way in helping state, city, and county CISO's feel a little more secure. “From a CIO perspective a breach can decimate your budget, personnel, and the public's faith,” said Holmes. “Citizens are legally obligated to continue doing things like paying their taxes, so it's our job to make sure that information is safe – and just as importantly that the public trusts that the information is safe.”

One of the ways state and local governments can gain the public trust is to use a cybersecurity framework like the to help create a stronger security structure. “If you understand the effort behind how the NIST security framework was developed, you should recognize why it should be used pervasively,” said Holmes. While states are not mandated to follow the framework, many are adopting its best practices, as the framework allows them to put proper gap analysis in place to measure effectiveness. “Ultimately a security platform and framework allows agencies to change from a detection posture

to a prevention posture. We cannot sit back and just wait for the bad guys to come. We have to make it cost so much to breach the infrastructure that they're going to move on. Meanwhile we share this threat data with the global community called the [Cyber Threat Alliance](#) allowing every participant to secure and defend itself against these same attacks”, said Holmes.

In order to ensure that infrastructure is as secure as possible, Palo Alto Networks recommends a platform approach due to its visibility and automated defenses. “We built a platform that looks at networks, endpoints, and the cloud as one,” said Holmes. “A platform its highly-automated and natively integrated.” He added that, “every time additional capabilities are added, they requiring little to no intervention providing full visibility across the entire platform.”

One state that has taken advantage of Palo Alto Networks approach to security is Wisconsin. The Badger State's security plan emphasizes visibility across the network, endpoint, and the cloud from a software-as-a-service perspective. “In Wisconsin, they were able to implement these security measures while lowering operational spend, or operational activity,” said Holmes. “It was a tremendous example of how security can be improved with little or no additional operational costs by eliminating other point solutions and previously manual or home-grown processes.

Ultimately, by organizing and monitoring an entire network through an integrated platform approach, rather than a collection of individual security products, an agency can be much more secure and efficient.

# Emergency Response



State and local governments are first on the ground during emergencies. Whether it's a fire, floods or other natural disasters, it's up to the state and local governments to assist. To create better response times, cities are investing in new technologies. In this section, we will look at how first responders are empowered at the state and local levels and what steps they are taking to be more innovative.

## Understanding State & Local Emergency Response

First responders are there when it matters most. Per [U.S. Homeland Security Presidential Directive 8](#), “the term ‘first responder’ refers to individuals who, in the early stages of an incident, are responsible for the protection and preservation of life, property, evidence and the environment,” the directive states. First responders are emergency management, public health, clinical care, public works and other skilled support personnel (such as equipment operators) who provide immediate support services during prevention, response and recovery operations, it adds. In the United States, the vast majority of emergency responders are employed at the state and local levels.

By way of background, collectively the country’s more than 3,000 counties spend roughly \$70 billion each year on public safety and related court activities. However, overall appropriations for public safety programs have declined by almost 50 percent in the past 10 years. [NACo](#) has named this drop in funding as one of its critical issues for 2016. According to the [NACo issue brief](#), counties are struggling to maintain current levels of emergency responsiveness because:

- The federal contribution to state and local criminal justice service is very small (only 3.3 percent of the amount spent by state and local governments, according to a 2008 report by the Bureau of Justice Statistics), but it is a much-needed spark that allows state and local governments to test new initiatives and to coordinate across the justice system to find solutions that work.
- Crime prevention is absolutely central to the nation’s continuing economic recovery. Businesses do not invest where crime flourishes, and individuals often need support, treatment and tools for stable employment if they are to become productive members of society who contribute to our nation’s economic vitality.
- U.S. Department of Justice grant programs have been the catalyst for many initiatives that have brought about cost savings in taxpayer money, reduced prison and jail overcrowding, combated the cycle of recidivism, and reduced the rate of further growth in the criminal justice system. Further reductions in these programs, coupled with less state funding and reduced local revenue for local courts, corrections, law enforcement, juvenile justice and other assorted agencies, limits our nation’s ability to fight crime, manage better outcomes for youth, efficiently administer our diverse criminal justice system and achieve the highest level of public safety.

Despite the budgeting issues, state and local governments are investing in technology to make sure first responders are as responsive as possible in a crisis. In Colorado, the Office of IT maintains the communication network for first responders. “We are using the cloud to make sure that digital trunked radio sys-

tems are always running,” said Tauna Lockhart, Chief Communications Officer for Colorado. “Firefighters and state patrollers need that operability across very rugged terrain. Our state has 203 towers that communicate with each other to make sure that when people are in critical situations that they have coverage on their two-way radios. In case of an emergency, the radios have to work, there isn’t an option. So we spend time and resources to ensure that our system is as secure and reliable as possible.”

Similarly, as New York City prepared for Super Bowl XLVIII, the city’s [Fire Department](#) (FDNY) turned to geospatial-enabled iPads to stay connected and informed. FDNY used ArcGIS Online — a mapping technology — to deliver approved pre-plans and intelligence data via maps and mobile apps that could be shared anywhere, anytime. FDNY was able to deploy a mobile solution to help inform field users, making information readily available, whether they accessed it from a tablet, desktop browser or smartphone. “The Super Bowl was the first time we had the opportunity to provide situational awareness and information to the commanders in the field, utilize mobile and get it done in a fast manner. We didn’t have a lot of time with the Super Bowl; we really had to move quickly to get the application out. The application offered us the opportunity to make that happen in record time,” said Joel Golub, FDNY’s CIO and Deputy Commissioner for Technological Development.

And it’s not just individual communities that are looking to technology to improve communications and response times for first responders. Communities are teaming up across boundary lines to ensure success — especially when it comes to natural disasters like wildfires. Record droughts in 2015 created an environment ripe for wildfires. The Fellows at Code for America developed an easy-to-use application that brings together a variety of checklists and fire tools in an actionable form. The app is called Prepared.ly and it allows residents to calculate their proximity to risk during a wildfire and interact with local fire departments. “With the app, you can send a direct message to the fire department. You can also text yourself reminders of activities that you need to accomplish like cleaning up the yard to prevent wildfires,” said Emily Wright Moore, a Code for America Fellow.

In the past few years, the technology in the hands of first responders has changed dramatically. The change marks a major shift in the way that state and local governments are able to respond to disasters. And first responders will have their hands full going into 2016. [Emergency Management](#) magazine predicts that “El Niño will continue to rain down heat, flooding and tornadoes on the Central and Southern United States. We have seen a spring like breakout of storms already in a time of year where snow and ice should dominate the news. With these warm, moist conditions persisting in the New Year, it will be a long six months until El Niño’s impacts start to dwindle.”

# State of Washington



A record drought, low snowpack and critical fire weather brought Washington state the worst-ever wildfire season in 2015. In fact, the state reported that more than 1,500 fires burned more than 1 million acres and caused more than \$347 million in damages. And although the damage to the environment was previously unheard of, the state didn't lose a single civilian resident to the blazes. That's because of the effort the state took to communicate with residents through many different channels and mediums.

To inform the public about wildfire hazards, ongoing fires and damages, the state optimized the [InciWeb portal](#), also known as the Incident Information System. The portal logged incidents by location, type, who responded and whether they were contained or still active. Several states created the portal to provide the public a single source of incident-related information and a standardized reporting tool for the public affairs community.

Washington residents could also look to the portal for the most up-to-date information or archived data. For example, the site allows users to search by incident, status or date going back years and crossing state lines.

In addition to InciWeb, the state also reached out to residents via social media networks, especially Twitter using the handle @waDNR\_fire. The feed has more than 13,000 followers and provides not just active fire information, but also tips on how to prevent future wildfires.

**Capital**

*Olympia*

**Population**

*7.2 million*

**State since**

*1889 (42nd)*

**Area**

*71,362 sq mi*

**State Nickname**

*The Evergreen State*

**Fun Fact**

*The oldest operating gas station in the United States is in Zillah*



# County of Hamilton, OH

**Population**

806,631 (in 2014)

**County since**

1790

**Largest City**

Cincinnati

**Area**

413 sq mi

**Fun Fact**

Hamilton County  
has 69 political  
jurisdictions.

In an emergency, you can now text 911 in 100 cities nationwide. Cities in Michigan, California and Utah are all piloting new technology that allows emergency call centers to receive text messages in three ways.

First, said Trey Forgety, Director of Government Affairs at the National Emergency Number Association (NENA), call centers can use TTY, or Text Telephone — a legacy system that pretty much every phone already has. TTY is used to receive messages from people who are deaf and disabled.

The second option involves setting up a web portal to display text messages. “These two approaches are considered shortcuts,” [Governing](#) reports. “While they give call centers a quick on-ramp to accepting emergency calls by text, experts say, they fall short of what today’s technology can offer. Under each of these scenarios, phone calls would still be preferable because they have better location-targeting capabilities.”

The third option is arguably the best, but it also costs the most — to the tune of \$3 billion — to upgrade all 6,000 call centers nationwide. It’s called next-generation 911, and it uses IP standards. It works so well because the technology allows call centers to integrate not just texts, but also photos, videos and other attachments. Next-generation 911 also lets the call centers geo-locate and provide scripted responses.

Hamilton County, Ohio, is already experimenting with the technology. On an average year, the 911 call center receives more than 680,000 calls. In the first day, the center received four text messages asking for help. County officials expect the numbers to greatly increase as awareness expands throughout the community.

How-to:

## Communication During a Disaster

# Technology Cheat Sheet:

**Whether it is a flood, fire or manmade disaster, it's up to state and local governments to be the true first responders during a disaster. Part of that responsibility means communicating clearly with the public before, during and after a disaster strikes.**

### **Fun Fact:**

**Cincinnati created the first city-run ambulance service in 1865.**

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And in case you were wondering who communicating first responders are, the Homeland Security Department crunched the numbers and found:

- ▼ There are more than 1 million firefighters in the United States, of whom about 750,000 are volunteers.
- ▼ Local police departments have an estimated 556,000 full-time employees, including about 436,000 sworn enforcement personnel.
- ▼ Sheriffs' offices reported about 291,000 full-time employees, including about 186,000 sworn personnel.
- ▼ There are more than 155,000 nationally registered emergency medical technicians.

Here are five tips for communicating effectively during a disaster:

## 1. Prepare

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Disasters are not the time to forget your agency's password to Twitter or the backend of your fire portal system. Before a disaster hits, make sure your staff knows when and how to communicate with the public. Develop and document a communication plan in case of emergencies, and practice the procedure before a real emergency happens.

## 2. Follow the leader

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Nothing infuriates the public more than when the government provides conflicting messages during a disaster. An agency needs to have one voice in a crisis. Make sure you have appointed a spokesperson who will be responsible for providing the official message.

## 3. Be in the room

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Government webmasters and managers of communication channels should have a seat in emergency operations centers to integrate communication efforts with other government functions and be a direct part of the response effort.

## 4. Be clear and concise

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A disaster is not the time to be witty or clever. Provide the information necessary to the public in a very direct way. In addition, vet the information for accuracy and clarity before disseminating it. Never release a notice based on conjecture or unverified data.

## 5. Follow up

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Communication doesn't end when the situation clears. Tell people where they can get more information or whom they should contact going forward.

# Workforce



**The state and local workforce is graying. In five years, roughly 40 percent will be eligible to retire. To maintain government business as usual, states and localities must recruit, hire and retain differently. In this section, we will look at the current government workforce and highlight how agencies plan to transform in the next few years.**

# Understanding State & Local Workforce

More than one-third of Pennsylvania's workforce will be eligible to retire in the next five years, and the commonwealth's retirement rate is lower than the national average. Local governments report even higher retirement numbers, with the percentage eligible to retire in the next five years hovering around 50 percent.

Even more troubling, the Bureau of Labor Statistics found that the average age of a state employee is 49. James Honchar, Deputy Secretary for Human Resources and Management for Pennsylvania, calls the graying of the state's workforce the "silver tsunami."

"From 2008 to 2014, Pennsylvania's state workforce shrunk by over 3,000 employees. That means we had 3,000 less salaried employees over that six-year period," Honchar said. "We did see some layoffs, but in most cases, those were individuals that attrited through, meaning they resigned, retired or they moved into the private sector, and we never replaced them."

Although the wave of retirements is changing the look of state and local governments, Honchar noted that he didn't expect Pennsylvania or any government to look to fill every single position. "In today's economy, when you have a relatively larger increase in retirement, you tend to get state and local governments to try to slow down the replacement of those individuals from a cost savings perspective."

NASCIO's Robinson agreed. "If you're in an agency such as the Department of Transportation or human services or revenue or whatever one of our agencies might be, obviously their desire is to try to have a succession plan to fill those positions to make sure that they have continuity of government," he said. "However, when you look at it from a larger perspective, we don't want to necessarily do a one-for-one replacement. The way you achieve savings in state government — if you're not going to raise taxes — is to not hire as many people, and not have as many people on your payroll. Reducing the staff size also means a reduction in benefits costs."

"We do have an aging workforce, but we're not so quick to say, 'Well, let's come up with a plan to make sure we fill all these jobs,' because we recognize that there's a savings," Honchar continued.

But just because state and local governments won't replace every single retiring employee doesn't mean they don't want or need to capture their institutional knowledge. One of the best ways to share knowledge across generations is through mentoring. Pennsylvania is four years into a program that pairs cross-generational mentors and mentees for one year. "What makes this program different," said Honchar, "is that through the course of the year, the mentor has to offload one program or project process to the mentee, so that at the end of the year, the mentee is now trained or actively managing a product that was previously under the control of the mentor. This process allows us to share institutional knowledge in a very natural and effective way." The program has been so successful there is a months-long waiting list to sign up.

Local governments are also looking to mentoring to help train the next generation of government workers. In Tallahassee, Fla., the local government is leading a drive to identify more than 1,000 community mentors. Mayor Andrew Gillum calls the initiative a "mega drive" to help inspire, educate and inform the next generation of workers.

One job for which HR departments across state and local governments can't hire fast enough is cybersecurity. "The lack of trained IT professionals is constraining state and local governments' abilities to make those strategic decisions security decisions," Robinson said. "Many states have created paid internship programs to try to attract that next generation of cybersecurity professionals into government. But right now they are really struggling. In our annual survey we found that more than 67 percent of state CIOs listed trained security amount the most difficult skills to find in a potential employee."

There is no magic bullet to filling the cyber vacancies, but the NASCIO report did have some ideas to help increase interest in working for government:

- ▼ Hire IT-focused recruiters to aggressively pursue top talent.
- ▼ Offer tuition reimbursement for university and IT academy graduates who work in the public sector.
- ▼ Provide fast-track career advancement for innovative IT workers.

One of the biggest challenges for state and local governments when it comes to recruiting the next generation of government employees is what Honchar describes as the "uncool vibe of government. Students are not interested in coming to work for government because they think it's boring and bureaucratic. But we know that's not true. We have to find ways to change their minds."

Deborah Blyth, Chief Information Security Officer at the Colorado Governor's Office of IT (OIT), said her coworkers have done a lot to try to boost recruitment. "Our HR and communications team have done a lot of work to help market what is it that we do here at the Governor's Office of Information Technology," Blyth said. "We talk about how far and how big and broad is our reach. We discovered the newer generation of workforce wants a job that means something. Millennials want to have an impact that's broader than just a paycheck. I talk to candidates about what they'll be helping us build, what they will have exposure to — it excites them. I think what we're doing is very innovative. We just need to tell that story more."

As the baby boomers retire, state and local governments must adapt to a new and younger workforce. "It won't be business as usual for government going forward," noted Robinson, "and that's a good thing."

# State of Pennsylvania



## **Capital**

Harrisburg

## **Population**

12.8 million

## **State since**

1787 (2nd)

## **Area**

46,055 sq mi

## **State Motto**

*Virtue, Liberty and Independence*

## **Fun Fact**

*Pennsylvania is the first state to list their web site URL on a license plate.*

Pennsylvania, like many states, is graying. The average age of a new hire for the commonwealth is 37, well above the national average overall. To slow the graying of its workforce, Pennsylvania has embarked on a new campaign to attract, retain and hire the next generation of state workers. Here are the three steps it took:

- 1. Hired an Enterprise Recruitment Expert.** The expert reports directly to the Secretary of the Office of Administration and is in charge of implementing a strategy that focuses on the generational recruitment initiative. The position requires someone with both private- and public-sector recruitment experience.
- 2. Created a new internship program for commonwealth employment.** The Enterprise Recruitment Expert is in charge of the program, which allows university students in their sophomore, junior or senior years and up to three years after graduation to have an internship with Pennsylvania's state government. The internships are not career-specific, but rather focus on bringing students in at the grassroots level. The bonus — other than gaining some government experience to flaunt on a resume — is that the internship leads to a full-time, salaried position upon completion. The first class of 65 interns will start in the spring.
- 3. Created a generational taskforce.** The commonwealth reached out to current employees under the age of 30 and asked them to participate in activities including focus groups and recruitment strategy development sessions. One of the projects that came out of this taskforce was the first promotional video aimed at attracting the younger generation.

# Bloomberg What Works Cities

**Launched**

April 2015

**Funding**

\$42 million, 3 years

**What it is**

Annual initiative that helps 100 mid-sized cities enhance their use of data.

**Fun Fact**

Mike Bloomberg's first charitable donation was a \$5 check to his college's alumni association.

Cities can't always hire the talent they need to innovate. But they can partner with companies, nonprofits and other governments to share resources and expand the workforce without hiring anyone new.

In April 2015, Bloomberg Philanthropies launched the What Works Cities initiative to help 100 American cities enhance their use of data to engage citizens and make them more efficient.

So far, 13 cities, including Kansas City, Mo.; Anchorage, Alaska; and Denton, Texas, have been selected to participate. The initiative works by pairing cities with leaders in the field of analytics. Organizations such as the Harvard Kennedy School, the Sunlight Foundation and the United Kingdom's Behavioural Insights Team are all signed up as city partners.

The program is designed to help cities nationwide improve their use of data and evidence in making decisions. "Participating cities are using the [What Works Cities Standard](#), a roadmap to results-oriented governance, to guide their efforts," said Harvard's Goldsmith, who is also part of What Cities Works. The roadmap, developed in conjunction with leaders in the field, includes four pillars that cities can target to expand their use of data, he said:

- ▼ Commit to getting better results for residents by using data and evidence.
- ▼ Measure progress and engage citizens along the way.
- ▼ Take stock to measure progress, learn, and make corrections and improvements.
- ▼ Act on data and evidence for all major decisions.

The program has already been successful. For example, Kansas City used the initiative to help enhance its open data platform, "KCStat," by establishing a quarterly Department Stat report. Department Stat embeds performance goals into a system at each city department, measuring their progress to ensure that their operational targets are aligned with the city's strategic objectives.

How-to:

## Millennial Recruitment

# Recruitment Cheat Sheet:

Attracting the next generation to government can be difficult, but there is good news: A 2015 study by Deloitte Consulting found that the number of students getting degrees in public administration is up. Still, government HR workers need to sell the benefits of public-sector work to them.





Here are seven advantages to highlight about working at the state and local levels:

## A flexible work environment

The California Department of Human Resources encourages the use of teleworking and telecommuting when they're viable options and clearly defines the benefits to employees and managers. More than a quarter of California's workforce is eligible to telework.

## Work that matters

A survey showed that six in 10 millennials want work that matters. State and local government employees get to do work that has an impact on the lives of their neighbors. HR managers need to hype the mission of government and the power it has to change lives.

## Retirement fund

While many private-sector companies are shedding 401(k) benefits and other retirement packages, state and local governments are not. The Center for Retirement Research out of [Boston College](#) tracks employee benefits at the state and local levels. For the past two years, government employee pensions have grown steadily.

## Student loan payment assistance

New York City offers full and partial scholarships to full-time employees participating in graduate studies in areas such as education, nursing, law, business administration, engineering, computer science, social work, public health and public policy analysis.

## Paid internships

The University of Maine's [Maine State Government Summer Internship](#) program offers college students a 12-week crash course on working for the government. If students successfully complete the internship, they can apply for full-time positions upon graduation.

## Mentoring

Retiring employees have vast institutional knowledge of how government operates. All 50 states and many local governments provide mentorship opportunities for new hires to capture some of that information. [Tempe](#), Arizona, has one of the most robust programs in the country. Almost every single employee is involved in mentorship in some capacity.

## Government organizations for young workers

North Carolina launched the Young Employees Initiative, not only to better understand the needs of millennials, but to address them. Employees mostly in their 20s at various state agencies serve on an advisory committee, conducting studies and making recommendations on issues important to their peers. The initiative gives young employees a voice.

**Fun Fact:**  
The [International City/County Management Association](#) found that more than 60 percent of City and County Managers and other chief appointed local officials were older than 50.

# Security



Utah, Texas, Oklahoma and Detroit were just a few of the governments that experienced cybersecurity breaches in 2015. The nature of security has shifted in government from a totally reactionary stance to one in which states and localities are trying to mitigate risk. In this section, we will look at how state and local governments are currently dealing with cybersecurity challenges and what solutions they are looking to for the future.

# Understanding State & Local Security

When I talk to my fellow Chief Information Security Officers, every one of them agrees that a security breach is not something that might happen to us or could happen to us, but it's something that we will experience," Colorado's Blyth said. "To that end, the government's perspective on cybersecurity must also shift."

Cybersecurity has been a top 10 priority for state CIOs for the past 10 years, according to [NASCIO](#). Despite the clear need and desire for increased cybersecurity best practices and frameworks, however, many state and local governments are still struggling to implement strong cybersecurity governance structures. "Most states don't have the enterprise means to support cybersecurity," NASCIO's Robinson said. "Governments currently don't have the ability to share decision-making around their cybersecurity direction even within their own governments, let alone across boundaries."

A [NASCIO study on cybersecurity governance](#) found the three elements necessary for a robust cyber governance stance:

- ❖ CISOs should manage the strategic, risk management and regulatory/compliance functions.
- ❖ Enterprise-level Privacy Officers should help determine which datasets should be protected and why.
- ❖ A security executive should be employed to manage technical and operational aspects of security.

Besides sharing best practices and cyber resources, state and local governments might want to consolidate IT departments to one central office. "States are moving more and more towards a centralized cybersecurity organizational model," said Robinson. "I think having the stakeholders, having a very broad view of that is very important."

A consolidated approach also helps government roll out cyber frameworks across all the various agencies. "There is a growing adoption and implementation of states who are using [the NIST cybersecurity framework](#) and or the Center for Internet Security's (CIS) [20 Controls for Effective Cyber Defense](#)," Robinson said.

The frameworks give state and local governments something to measure security success against and hold them accountable — something that hasn't been possible before. "We cannot rely on the regular compliance of agencies around protecting data," Robinson said. "States and locals have a whole set of policies and rules that are in effect, but they don't have the resources or the oversight to make sure that employees are actually doing the right thing. The CISO office says there's a set of 10 things you must do. Well, who's checking?"

By bringing all the cybersecurity efforts under one roof, governments can reduce the diversity of efforts and procedures.

In addition to consolidation, another trend making waves in state and local government is the adoption of advanced cybersecurity analytics. "The bad actors are out there. States don't really have the ability to go on offense, but they can

use advanced cyber analytics and other analytic capabilities to share breach information," said Robinson. "Soon states and local governments will have the ability to share breach information more rapidly and efficiently. This is going to be really important going forward."

Many states are only dipping their toes in the advanced cyber analytics area, but some have seen their cybersecurity budgets and awareness increase. "In 2012, the state of Colorado had \$6,000 allocated to information security improvement annually," said Blyth. "Colorado's Integrated Office of Technology put together a Colorado Information Security Advisory Board who helped create [Secure Colorado](#) — our vision of how we would strategically implement security improvements across the state. Now that Secure Colorado program was extremely effective in getting us funding, because if you fast forward to 2015, our budget for security improvements across the state is now \$5 million annually."

Colorado saw a huge increase in funding, but security still amounts to only a small portion of a state or local government's budget. According to [InfoSecurity](#) magazine, "the typical state or local government agency spends less than 5% of its IT budget on cybersecurity, compared to over 10% in the typical commercial enterprise."

And despite the increase, Blyth said funding is still her biggest challenge. "The biggest barrier to cybersecurity is funding," she said. "But if you can put together a strategic plan that outlines a multiyear journey of what you would do if you had an appropriate level of funding, and then you get the right input into that plan, and then you go and you make that business case as a multiyear strategy, you're going to be much more successful at procuring that funding. It's not easy, but it's possible."

Last year, states made major progress toward becoming securer, but they have a long way to go. "The bad actors are real professionals," Robinson said. "At the state and local level, a lot of us are just figuring out this security thing, but we are making real strides."

[Ohio's CIO, Stu Davis, agreed](#). "From a technology standpoint, there is a ton of disruption that government needs to understand, most significantly around cybersecurity," Davis said. "Sharing information and communications needs to be a priority to serve the public. The risk management aspect and governance process that helps state and local governments communicate will put us in a good place. Focusing on cybersecurity is crucial to protect the communication and shared information as it becomes more technological."

**In the end, states and counties are the record keepers from cradle to grave. To be successful, they need to make sure that all that information remains secure. Going into 2016, "securing the data that is consistently being digitized is a top priority," Davis said.**

# State of Colorado



Colorado is tackling security as a united force. The Centennial State brought all 17 executive branch IT departments under one consolidated agency in 2012. Through standardization on how the office approaches security and how it manages risk across the executive branch agencies, it now has “a team in place that’s able to assess risk consistently across these agencies, bubble it up to the right level of management and makes decisions on how to continually reduce the risk,” Blyth said.

Additionally, Colorado’s OIT created agency risk report cards that openly show agencies how they are performing from a risk management perspective against their peers and against the office’s enterprise goals. “It’s been a great tool for us to create open dialogue and to make effective risk-based decisions. We’ve also been able to garner some partnership for risk reduction in a consistent manner,” Blyth said.

The consolidated nature of Colorado’s security posture also allows the state to easily implement a cohesive cyber framework across all 17 departments. In 2015, the state began following [CIS’ 20 Controls for Effective Cyber Defense](#). “This gives us a framework to make sure that we are putting the right security controls in place to help us fend off the most common types of attacks and to be in a position to be able to fend off emerging types of attacks,” Blyth said.

As part of the framework, the state has undergone several cybersecurity exercises in which it has tested the internal security incident response plan and its overall statewide emergency response plan with a cyber component. That way, Colorado’s OIT can use its “muscle memory” in the face of a real incident.

**Capital**

*Denver*

**Population**

*5.5 million*

**State since**

*1876 (38th)*

**Area**

*104,094 sq mi*

**State Nickname**

*Centennial State*

**Fun Fact**

*The 13th step of the  
state capital building in  
Denver is exactly 1 mile  
high above sea level.*

# County of Montgomery, MD



In Montgomery County, Md., security is by the books. The county has about 1.1 million residents within 507 square miles, \$2 billion in annual revenue and about 10,000 employees.

"The jail system, emergency calls, police and fire departments all operate within a single cybersecurity system," said Keith Young, Enterprise Information Security Officer for the county. "There is a great deal of complex sensitive data that could kill someone should the information be leaked." To help combat the risk, Young looked to universities.

He tapped young, qualified candidates from local universities "who possess the credentials and experience, but lack the job experience that can give them jobs in cybersecurity."

Interns work 40 hours per week alongside seasoned IT professionals and get experience handling technical operations, incident response, risk analysis and policy development. Interns could earn up to \$45,914 a year, according to a [posting on the county's website](#).

The paid interns nearly double the security staff for Montgomery County. Young wants to work with the county's Department of Economic Development to create a long-term, formal program. The county has had tremendous success by tapping the resources found in universities in the form of full-time internships. In fact, the program is so successful that the department has a wait-list of interested candidates.

**Population**

1,030,447 (in 2014)

**County since**

1776

**Largest City**

Germantown

**Area**

507 sq mi

**Fun Fact**

Montgomery County is the second richest county in terms of per capita income in the state of Maryland.

How-to:

## Proper Cyber Hygiene

# Cyber Cheat Sheet:

**More than 60,000 government employees in Tennessee had their personal information compromised after a hacker breached the state's health records in 2014. And Tennessee was not alone. Nearly every state and many counties also had breaches in 2015. To better protect government systems, state and local employees must pay close attention to cyber hygiene best practices. Cybersecurity is now everyone's job.**

To help government employees maintain cyber vigilance, the [Center for Internet Security](#) released tips for creating a more secure environment:

## Securely Configure Your Systems and Devices

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The "out-of-the-box" configurations of many devices and system components are default settings that are often set for ease-of-use rather than security. This often results in vulnerabilities that offer easy targets for hackers to exploit, often using automated programs that scan for holes. To mitigate risk, systems and devices should be configured according to industry-accepted system hardening standards.

## Back Up Your Data

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Be sure to back up your important data so you can retrieve it if your computer fails. Most operating systems provide backup software designed to make the process easier.

## Secure Your Wireless Network

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The first step is to lock down your wireless network with a strong password and encryption. This will prevent people who don't have the password from connecting to your network.

## Secure Your Browser and Browser Add-ons

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Cyber attackers search for programming errors and other flaws in web browsers and associated plug-ins in order to exploit them. These vulnerabilities, if successfully exploited, can give cyber criminals access - and sometimes control over - your computer system. To minimize these risks, keep your browser(s) updated and patched, and set to auto update.

## Protect Your Administrative Accounts

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Administrator or “admin” accounts give a user more control over programs and settings for a computer than a typical user account. If an intruder accesses an admin account, he could potentially take over your computer. Non-administrator accounts, or guest accounts, can limit the ability of someone gaining unauthorized access.

## Use Firewalls

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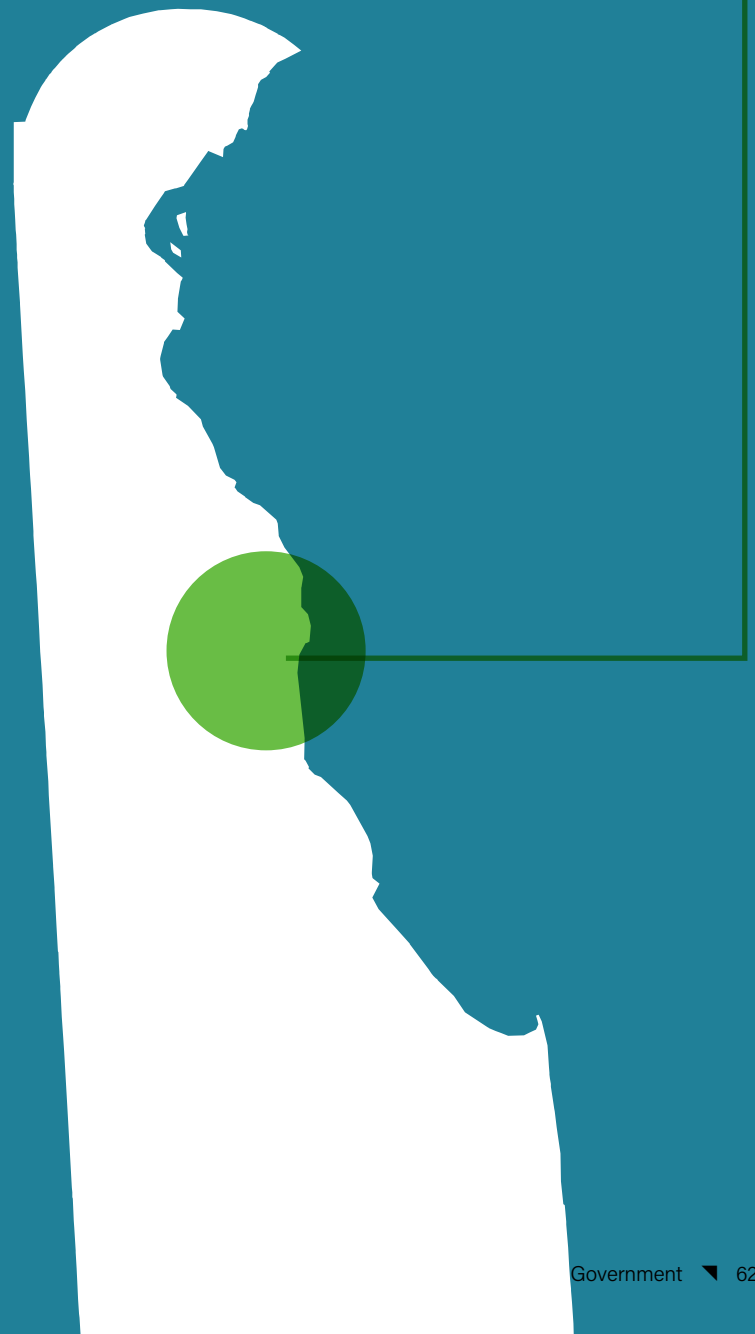
Many computer defaults are set for ease of use, which is convenient not only for us, but also for cyber criminals. Cyber criminals can use weak or unnecessary services as a first step to compromising your computer.

## Update Your Applications, Software, and Operating Systems

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Even though you may be diligent in keeping your software up-to-date, you are still at risk from malware infections. Malware can infect your computer from a variety of different vectors, including compromised websites, malicious attachments in email, and infected thumb drives. This is why strong malware defenses are crucial.

**Fun Fact:**  
The state of Delaware takes security so seriously it has named its information security office the Cyber Squad.



# About GovLoop & Acknowledgments

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GovLoop’s mission is to “connect government to improve government.” We aim to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 200,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to connect and improve government.

For more information about this report, please reach out to [info@govloop.com](mailto:info@govloop.com).

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## Author:

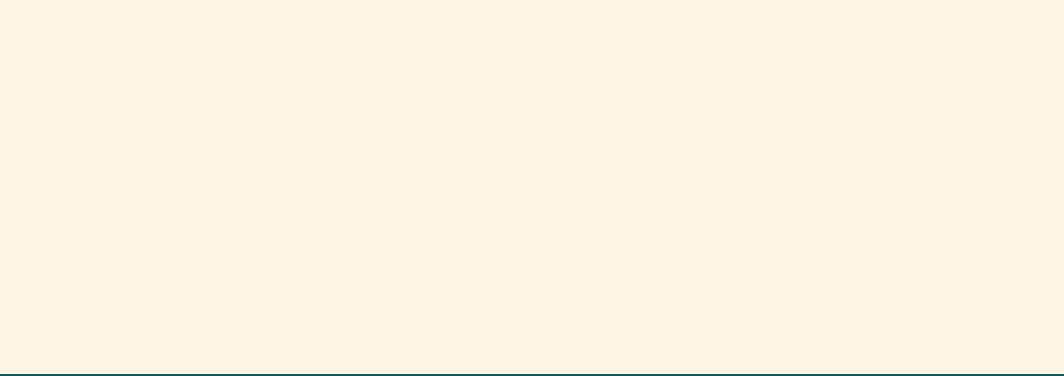
*Emily Jarvis, Senior Online and Events Editor*  
*Catherine Andrews, Director of Content*

## Designers:

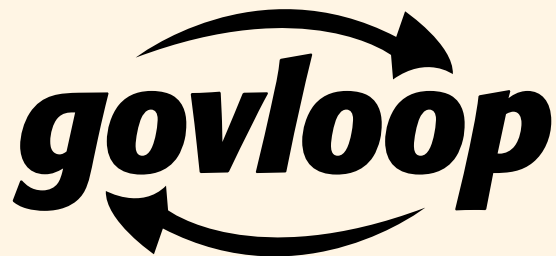
*Jeff Ribeira, Creative Manager*  
*Tommy Bowen, Graphic Designer*  
*Kaitlyn Baker, Junior Designer*  
*Martin Nera, Design Fellow*











1152 15th St. NW Suite 800  
Washington, DC 20005

M (202) 407-7421  
F (202) 407-7501  
[www.govloop.com](http://www.govloop.com)  
@GovLoop