



**THE TOP**

**30**

**Government  
Innovations**

**of 2017**



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# Introduction

*“Imagination is not only the uniquely human capacity to envision that which is not, and, therefore, the foundation of all invention and innovation. In its arguably most transformative and revelatory capacity, it is the power that enables us to empathize with humans whose experiences we have never shared.” - J.K. Rowling*

Government is rarely accused of having too much imagination. More often than not, it is spoken of in terms of red tape, stifled creativity, lack of resources, and layers of bureaucracy and old-fashioned legacy thinking.

We here at GovLoop know quite well that those perceptions of government are simply outdated and wrong. And that’s because we know of what Rowling speaks when it comes to the public servants who make up government – their capacity to “envision that which is not,” as well as their capacity “to empathize with humans whose experiences [they] have never shared.” If there’s one thing we know at GovLoop, it’s the drive, will and innovative ability of those who choose to serve in government.

In a year that has been turbulent in politics and the changes facing government, the public sector has not wavered when it comes to forging ahead with innovation that better serves the public. And that’s what we’ve chosen to highlight in this, our last guide of the year: The Top 30 Government Innovations of 2017.

Across six areas – cloud computing, cybersecurity, digital customer service, IT modernization, procurement and workforce – we’ve found, at all levels, programs, leaders, technologies and more that are truly changing the face of government. In an era of increasing cyberthreats, workforce changes and uncertainty, these innovations are better serving citizens, creating efficiencies, doing more with less and helping communities.

In the following pages, we also highlight statistics across government in terms of workforce, leadership and technology data, as well as pioneers in leadership and innovation from our Next Generation of Government Training Summit, and take a look ahead at what government trends we can expect in 2018.

So dive in to the rest of this guide, and let your imagination, as Rowling recommends, transform the world in front of you.

# GOVERNMENT DATA: BY THE NUMBERS

## Workforce

**1,868,027**

Total civilians employed  
in federal government

**21,631**

Work outside the U.S.  
or U.S. territories

**56.7%**

Men

**43.3%**

Women

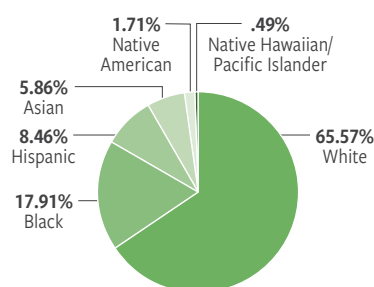
**9.46%**

Have disabilities

**26.15%**

Have Veterans'  
preference

### Workforce Breakdown:



The number of  
women in the Senior  
Executive Service  
**increased by 5%**  
from 2008 to 2015.

### Best Places to Work

#### Innovation category

The Innovation category measures employee perceptions of efforts to improve the way work is done, including their own personal motivation to promote change and the support and rewards they receive for promoting new ideas.

1	NASA	79.6	78.2	1.4
2	INTELLIGENCE COMMUNITY	70.2	30.6	30.6
3	DEPARTMENT OF HEALTH & HUMAN SERVICES	67.0	65.0	2.0
4	DEPARTMENT OF STATE	65.9	66.1	-0.2
5	DEPARTMENT OF THE AIR FORCE	63.7	64.2	-0.5

#### Effective Senior Leadership category

The Effective Leadership: Senior Leaders subcategory measures the level of respect employees have for senior leaders, satisfaction with the amount of information provided by management and perceptions about senior leaders' honest, integrity and ability to motivate employees.

RANK	AGENCY	2016	2015	CHANGE
1	NASA	66.6	64.1	2.5
2	INTELLIGENCE COMMUNITY	54.9	56.0	-1.1
3	DEPARTMENT OF HEALTH & HUMAN SERVICES	52.5	49.8	2.7
4	DEPARTMENT OF LABOR	52.4	49.9	2.5
5	DEPARTMENT OF STATE	52.1	51.3	0.8

#### Pay category

The Pay category measures how satisfied employees are with their compensation.

RANK	AGENCY	2016	2015	CHANGE
1	NASA	70.4	67.5	2.9
2	INTELLIGENCE COMMUNITY	65.7	66.9	-1.2
3	DEPARTMENT OF STATE	64.8	60.6	4.2
4	DEPARTMENT OF COMMERCE	62.5	60.9	1.6
5	DEPARTMENT OF LABOR	62.4	60.3	2.1

### Top 5 States for Gender Equality

Methodology: states scored in 3 categories [economy, leadership, and health], scores averaged to create an index value → final ranking.



## Cybersecurity

### Center for Digital Government's Annual List of Best in Cybersecurity Innovation

#### State Government:

State of Arizona,  
security program

#### County Government:

Oakland County, MI,  
information security program

#### City Government:

City and County of Denver,  
2016 elections

#### Education:

Houston Independent  
School District

### Reported Federal Cyber Incidents

FY 2014:

**69,851**

FY 2015:

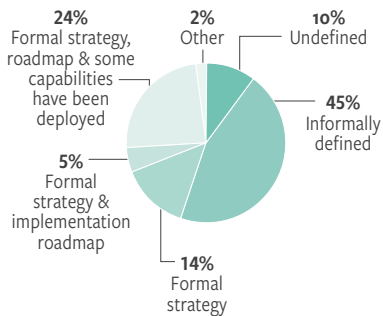
**77,183**

FY 2016:

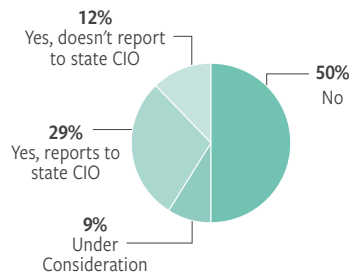
**33,632**

## IT Infrastructure

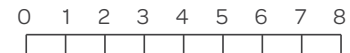
### What is the current status of digital government in your state?



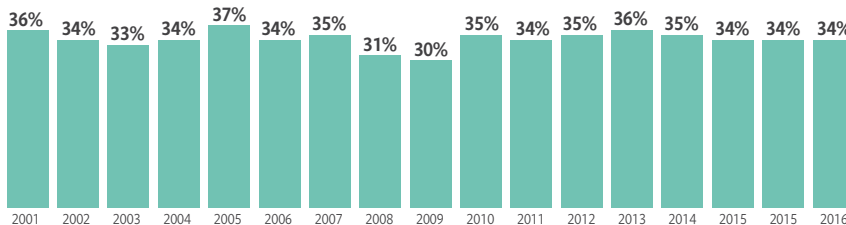
### Does your state have a Chief Data Officer (or equivalent)?



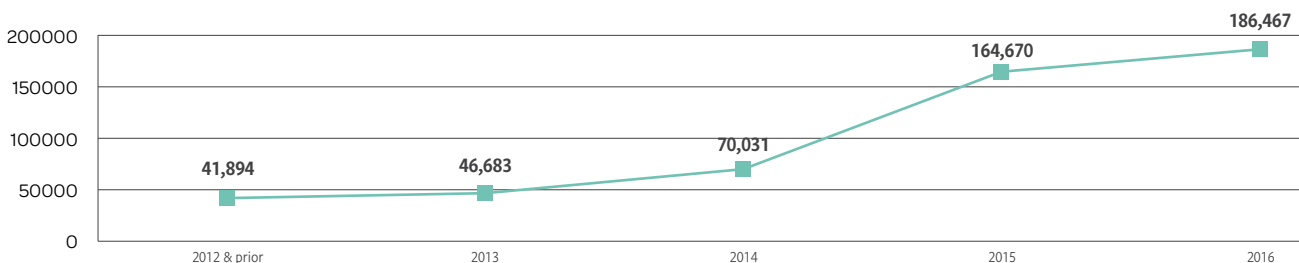
### Number of agencies with at least one Digital Services Expert hire and/or one full time hire onto a U.S. digital service team:



### Federal Spending on IT Infrastructure (Percentage of Total IT Spending), 2001-2017

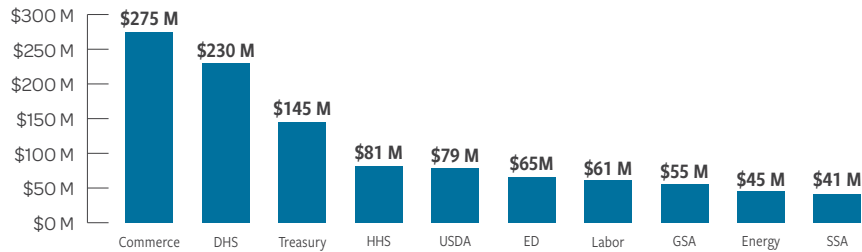


### Data sets available on Data.gov increased by over 400% from 2012-2016

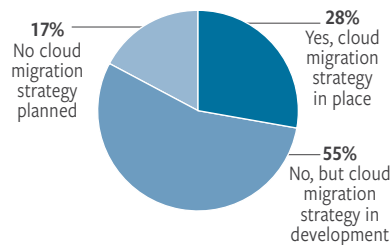


## Emerging Technologies

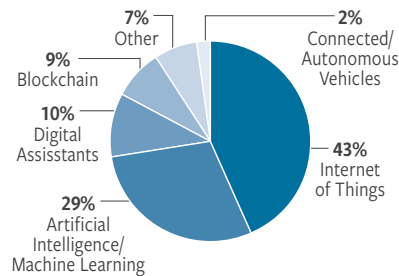
### Total Cloud Spending for Top 10 Civilian Agencies, FY 2016



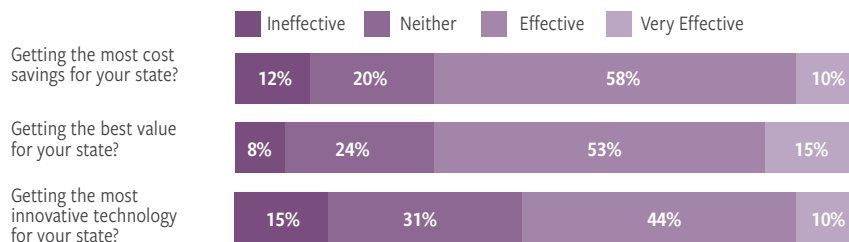
### Does your organization have a strategy to migrate legacy applications to the cloud?



### What emerging IT area will be the most impactful in the next 3-5 years?

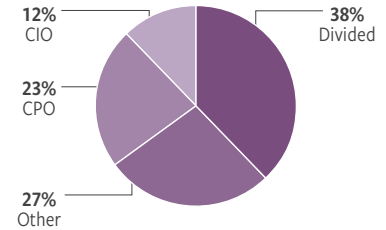


### How effective would you say your current IT procurement process is, considering the following:

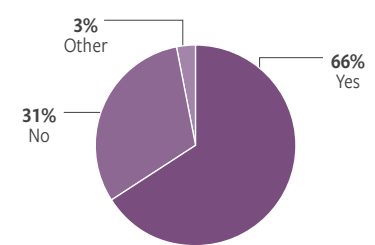


## Procurement

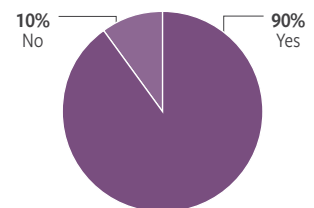
### In your state, all IT procurement is handled by:



### Does the state CIO's office have authority over all state IT purchases, even if they do not "own" IT procurement?

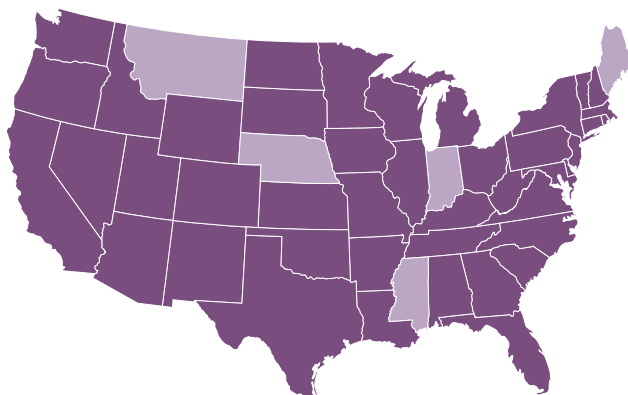
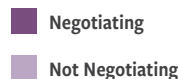


### If your state uses negotiation during IT procurement, has that been beneficial?



## Who is Negotiating?

This map demonstrates that most states are using some kind of negotiation, running the spectrum from negotiation of terms and conditions to negotiating with finalist vendors in descending order of highest scoring. However, it is made clear that the concept of negotiating in IT procurement is alive and well in our states.



## Sources

bestplacestowork.org;  
247wallst.org; opm.gov;  
govtech.com; gao.gov;  
2017 NASCIO Survey, October  
2017; State of Federal  
Information Technology;  
NASCIO and NASPO State IT  
Procurement Negotiations;  
Report to the President on  
Federal IT Modernization

# Cloud Computing



## Using Facial-Recognition to Improve Community Safety in Washington County, OR

GOVLOOP'S TOP **CLOUD COMPUTING** INNOVATION OF 2017

**M**igrating to the cloud and taking advantage of shared services offers significant benefits and a wide range of services for government organizations. Cloud computing provides a simple way for agencies to access servers, storage, databases and other application services. The cloud also combats inefficiencies by streamlining data storage, facilitating data integration and allowing departments to share a common infrastructure. The flexible, dynamic nature of cloud computing also allows government to move more quickly, be more agile and easily scale and replicate successful programs and applications.

Because cloud-service platforms own and maintain the network-connected hardware and infrastructure, agencies are able to significantly cut operation and management costs. With numerous flexible payment models, government agencies can pay for the exact resources and services they use when they need to use them.

As more government entities have migrated to the cloud, industry leaders have ramped up their cloud-based offerings. Many have even tailored their platforms to a government audience, with a focus on meeting high security standards and other compliance frameworks. The proliferation of these tools and services in a government-specific context has facilitated cloud migration efforts and improved agencies' ability to analyze data and respond to a growing number of cybersecurity threats.

Government organizations have also seen remarkable cloud innovations at the federal, state and local levels, developing creative solutions to advance their missions and provide better citizen services.

Our top cloud innovation from 2017 is in Washington County, Oregon, to improve policing and community safety. Law enforcement officers began using the cloud-based facial

recognition technology Rekognition, a learning-based image analysis program. The software would allow police to match pictures of suspects against their database of mugshots to help identify alleged criminals quickly and accurately.

In an interview with GovLoop, Chris Adzima, Senior Information Systems Analyst at the Washington County Sheriff's Office, explained how he uploaded over 300,000 booking photos from the county's jail management system and indexed them through Rekognition.

From there, the department was able to build a user interface to make it easy for law enforcement officials to take advantage of the facial-recognition service. Deputies could upload pictures directly from their phones, do a quick search and receive immediate results with more than 80 percent accuracy.

As more machine-learning capabilities are added to the platform over time, the department can also expect even higher accuracy in matching results. The development of such technology also has promising, far-reaching implications for community safety as a whole.

By implementing facial-recognition and cloud storage services, police departments throughout the country could further expand the suspect database and facilitate collaboration across county and state lines. An ongoing project for the Washington County Sheriff's Office, called Help Me Home, aims to allow people in the community to register their loved ones into the database. Individuals at high risk of getting lost — such as elderly people with Alzheimer's or children with autism spectrum disorders — also could be quickly found and identified.





## 4 MORE AWESOME CLOUD COMPUTING INNOVATIONS

### StormSense Project in Virginia

This year, the Virginia Institute of Marine Science (VIMS) installed approximately 25 additional water-level sensors—tools recording information about tide cycles—in the Virginia Beach, Hampton Roads and Chesapeake Bay regions. Many tide gauges had previously been installed throughout the state by the U.S. Geological Survey under a federal grant meant to help communities ravaged by Hurricane Sandy in 2012.

The [StormSense Project](#) is a flood forecasting research initiative, meant to enhance the capability of communities to prepare and respond to the disastrous impacts of sea-level rise in ways that are replicable, scalable and sustainable. Through cloud technologies, StormSense aggregates data from different sources—metrics on wind, air pressure, precipitation and water levels—to pave the way toward a more streamlined and automated approach to flood monitoring and predictive modeling.

### Maryland Total Human-services Information Network

This year, Maryland invested over \$200 million [to build a new platform](#) to bring data analytics to social services. Maryland's Total Human-services Information Network (MD THINK) is a cloud-based data repository that makes it easier to share information across departments.

MD THINK allows departments to break down data barriers and silos between and within state agencies, while maintaining rigorous security controls for sensitive client information.

The first phase of this service will focus on sharing information between the state's human resources and health departments to help vulnerable children and families in need. Caseworkers will also be provided with tablet devices, allowing them to input data in the field instead of having to return to a central location.

With MD THINK, the state aims to analyze data on poverty, unemployment and other metrics to determine how best to direct social services and crucial resources in a holistic manner.

### FDA's Move to Microservices

The Food and Drug Administration (FDA) has been steadily implementing cloud computing over the last two years, with approximately 10 percent of the agency's applications and services currently in a cloud environment and most new development taking place in the cloud. Using cloud services is part of the department's overall strategy to develop an agile microservices framework, which will allow the FDA to move away from department silos to [a shared service model of development](#). Microservices are an approach to application development in which a large application is built as a suite of modular services.


One of the FDA's centers specifically worked on developing an infant formula tracking database using the cloud. The FDA's cloud advisory board found an existing vendor with the FDA to provide product development on a software-as-a-service cloud platform. Using this technology, the FDA was able to rapidly develop and release its new database in nine months, from conception to production.

### USAID's Revamp of Data on the Cloud

The U.S. Agency for International Development (USAID) mission of promoting development and democracy throughout the world depends on the collection and distribution of field data. Because much of USAID's raw data originates in remote areas of the world, however, many agency workers traditionally have had no standardized way to transmit, input and access information.

To mitigate this information and standardization problem, USAID [turned to the cloud](#). For the past two years, the agency has collected and compiled open data to a centralized website called the Development Data Library (DDL). This year, USAID decided to migrate this information to a secure but public cloud.

USAID has the aim of migrating all data and site information to the cloud by the end of 2018. Cloud computing and open data will provide an easier, automated way to include details on raw data sets and allow users to create their own visualizations on specific data sets.



Amazon  
Machine Learning

# AMAZON WEB SERVICES

# BUILD ON



aws

Event ROI



REAL TIME  
DATA



Amazon EC2

Model Repository

Product  
Usage

Lead  
Flow

Developers



## Cloud Computing Spurs Public Sector Innovation into the Future

An interview with Doug VanDyke, Director of Federal Civilian and Nonprofits, Amazon Web Services

**B**y now, much of the public sector is aware of the enormous benefits that cloud computing technology can provide. Cloud computing helps government organizations increase innovation and resiliency while reducing costs; it also helps agencies become more agile and innovate in order to better serve their citizens and achieve their missions. But what's not as well known is the fact that government organizations leveraging cloud are also spurring innovation in the private sector.

To better understand the newer ways in which cloud computing is spurring innovation and agility in government, GovLoop sat down with Doug VanDyke, Director of Federal Civilian and Nonprofits at Amazon Web Services.

"One of the greatest advantages of cloud computing is enabling the government to use the newest innovations at a very rapid pace," VanDyke said. "This means that cloud services can help government agencies deliver their mission more efficiently and modernize their infrastructure without a substantial upfront capital investment. This circumvents the long procurement process for hardware and other technology so the government can undertake more projects much faster."

In 2018 and beyond, continued use of cloud computing will enable government to innovate even more, VanDyke pointed out. "By having quick access to secure and highly scalable resources and infrastructure, the government can experiment. Cloud gives them the ability to scale up multiple environments at the same time to figure out which works best for their needs."

One example of this innovation is the Center for Medicare and Medicaid Services (CMS). Right now, CMS is working to bring online five years of records, from 50 states, totaling over 70 terabytes of data. "In the past, moving this kind of data would create a log jam," VanDyke said. "But moving this data to the cloud, and allowing access to this data for analytics, is going to enable CMS to converge disparate datasets and crack down on waste, fraud, and abuse. They will have new insights into their data."

Additionally, VanDyke explained that cloud is beneficial for agencies because it pushes them towards a more agile method of project management.

"For a long time, government has been doing waterfall projects. These projects take many years and millions of dollars to determine if they will be successful or not," he said. "Unfortunately, many of these have failed at a tremendous expense to government agencies and taxpayers. But with cloud computing and lower costs, the government can figure out what areas are going to succeed and which areas aren't, and very quickly course correct without large investment failures."

But the trend VanDyke was most excited for in cloud computing was the ability for large government datasets hosted in the cloud to spur private sector innovation as well as public sector innovation.

One example he cited was NEXRAD (Next-Generation Radar), a network of 159 high-resolution S-band Doppler weather radars operated by the National Weather Service (NWS), detecting precipitation, atmospheric movement, and disseminating that data in 5-minute intervals from each site. Using the AWS Cloud, VanDyke explained, it enables exact severe storm prediction, so researchers, commercial enterprises, and private sector startups can study and see what the impact of weather is going to be across multiple sectors.

"Many government datasets are available on the AWS Cloud," VanDyke said. "These datasets can be accessed by researchers, entrepreneurs, or anyone who is interested in analyzing how federal tax dollars are spent, and this spurs a lot of creativity in the private sector."

Whether through open data initiatives, public safety modernization, education reform, citizen service improvements or infrastructure programs, more and more local governments are turning to AWS to provide the cost-effective, scalable, secure, and flexible infrastructure necessary to make a difference.

The AWS Cloud provides solutions to support government's unique requirements and missions, and also helps create an environment for innovation, VanDyke said. "Our cloud services can be employed to meet mandates, reduce costs, drive efficiencies, and increase innovation across civilian agencies, the intelligence community, and more." In an era of doing more with less, cloud computing will help government agencies meet their mission and deliver better services, at a lower cost, to citizens.

# Cybersecurity

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## Building Out a Cyber Civilian Corps in Michigan

GOVLOOP'S TOP **CYBERSECURITY** INNOVATION OF 2017

Most people are aware of the concept behind a volunteer fire department. When a fire disaster breaks out and there aren't enough full-time firefighters to combat the flames, a trained volunteer corps of firefighters can supplement the effort, and hopefully bring the fire to a halt with their help.

Michigan is taking the concept of the volunteer fire department and applying it to another effort to protect citizens' safety: It's created and is rapidly expanding a volunteer civilian cyber corps.

The Michigan Cyber Civilian Corps (MiC3) is a group of trained cybersecurity experts who volunteer to provide expert assistance to enhance the state's ability to rapidly resolve cyber incidents when activated under a governor-declared state of emergency, and the group includes volunteers from government, education and business sectors.

While the group was created in 2013, Michigan has made the expansion of this corps a priority in 2017, realizing that cybersecurity threats to government are accelerating at an unforeseen pace. As of the NASCIO conference in early October, MiC3 had 64 members. But it's hoping to bump that number to 200 by the end of 2018 — a goal Michigan is pursuing “aggressively,” said Rajiv Das, Michigan's Chief Security Officer, in an interview with GovLoop.

Membership to the volunteer corps is open to information security professionals who are residents of the state of Michigan. Applicants are also required to have two years of direct involvement with information security, preferably security operations, incident response and/or digital or network forensics.

What's also inspiring about the program is Michigan's dedication to making sure it gets replicated in other states across the country. “We have had interest from about 15 other states in how to start one of these in their state, and in fact just last week we had five visitors from Montana, and I've actually been invited to Washington state to give a talk to them on this in December,” said Paul Groll, Deputy Chief Security Officer for the state of Michigan.

The impact of this group of cyber volunteers is only set to grow. Just this October, Michigan Gov. Rick Snyder signed legislation that will make it easier to call on and deploy the corps and expand its reach so it doesn't just help Michigan-level government, but so it can help local governments, nonprofits and businesses across the state in the case of a breach or cyberattack. Previously, the corps could only be activated if the governor declared a “cyber state of emergency” — which has yet to happen.

Lastly, the volunteer corps doesn't benefit just the government, but the entire cybersecurity community across Michigan.

“Michigan has cybersecurity experts who are out there in these loosely knit communities who really don't have any way to know each other unless they happen to attend the same conference or something,” Groll said. “So the corps started these monthly conference calls and we chat about what's going on, what's coming in our programs, and there's just a lot of general networking and team-building and questions and answers, all of which is great for cybersecurity in Michigan.”



## 4 MORE AWESOME CYBERSECURITY INNOVATIONS

### 18F's New Login Platform for All

It's no secret that passwords are a problem. Generating strong ones is difficult, and remembering complex passwords across different sites can be impossible for citizens.

That's why the U.S. Digital Service and 18F launched login.gov, a single sign-on solution that enables citizens to access services across agencies with one username and password.

As the [team at 18f](#) writes, "Traditionally, each agency — and even bureaus within agencies — have built their own login systems from scratch with various levels of usability, security, and privacy. The result has been an inconsistent, confusing, or unreliable user experience, which is of primary concern when people are being asked to enter personally identifiable information. The login.gov team has ... created a system that meets the design, performance, and experience people are used to having when logging into their email or any top tech industry website."

### Real-Time Situational Awareness in Los Angeles

L.A. is a big city with a big cybersecurity problem. With over 40 governmental departments, 35,000 employees and over 100,000 endpoints generating 14 million security events daily, the city was struggling with siloed information and was unable to create a holistic view of all cybersecurity events..

That's when Timothy Lee, Chief Information Security Officer, decided time was ripe for a more complete view. He helped [create and launch](#) an Integrated Security Operations Center (ISOC), which coordinates across the 40 city departments. The ISOC also provides real-time situational awareness through a portal that coordinates among city departments; the Multi-State Information Sharing and Analysis Center; the FBI; and the U.S. Secret Service.

L.A. was able to transform its patchwork of security measures into a cohesive, all-encompassing cybersecurity strategy.

### DHS's Dashboard Visibility for Cybersecurity

The identification of security risks can be one of the biggest hurdles in security data and information that government faces. That's where the [Continuous Diagnostic Mitigation](#) (CDM) program comes in. CDM establishes a baseline approach for agencies to improve their end-to-end security posture, allowing visualization into where and when security breaches are occurring.

In 2017, DHS became the first federal agency to [officially implement](#) a CDM program. As part of this movement, DHS has launched a federal continuous diagnostics and mitigation dashboard that compiles summary feeds from all agency cyber CDM dashboards, which will give it a broad never-before-seen view of the government's cyber posture day to day.

"[DHS] will be receiving feeds from those agency dashboards," Jeanette Manfra, assistant secretary of cybersecurity and communications at DHS, said to Federal News Radio. "That allows us to ... better prioritize vulnerability management."

### NYC's New Cyber Command

New York City is cracking down on cyber crime with the [launch](#) of a brand new Cyber Command. Mayor Bill de Blasio signed the executive order creating the command in July, establishing this specialized unit. The Cyber Command is designed to set information security policy and standards, provide cyber defense and incident response and issue guidance on cyber defense and information risk to the mayor and other city agencies on a 24/7 basis.

"Centralized cyber defense and accountability will enable the city to better protect its residents from cyber threats," de Blasio wrote in his executive order. "Protecting the city of New York's information infrastructure is vital to the proper functioning of the city."

The Cyber Command is still in its early stages, but is making movements with the [recent addition of Quiescence Phillips](#) as deputy chief information security officer.



# *YOUR CLOUDS. NOW SIMPLIFIED.*

Increase security, visibility, and  
performance in multi-cloud environments  
for Federal Agencies.

 **bmc**  
MULTI-CLOUD



# Navigating the Future of Government IT

An interview with Jeremy A. Wilson, Federal Chief Technology Officer, BMC

With more than 20 billion devices predicted to be connected by the year 2020, managing a seamless and secure IT enterprise will be no small feat in the federal government's increasingly complex environment. Operations teams work to keep systems running efficiently while security teams must ensure that those systems remain secure, up-to-date and comply with federal regulatory standards. When these competing priorities lack integration, it can create significant gaps that can make organizations more vulnerable to security threats and negatively impact the overall operational efficiency of the agency.

That's why government agencies are turning to BMC solutions to link IT Security and IT Operations teams together to work with shared accountability, processes and tools to ensure that security is not sacrificed while maintaining a commitment to uptime and performance.

These solutions will enable both teams to become more agile and move to a proactive security position for both on-premises or cloud services. It will also allow the teams to more readily embrace key business initiatives related to managing the impact of digital transformation, the Internet of Things, and continuous delivery of services. These vital initiatives, however, can create significant security concerns if they lack rigorous and adaptable controls.

To learn more about how government agencies should navigate the future of increasingly complex IT environments, GovLoop interviewed Jeremy A. Wilson, Federal Chief Technology Officer at BMC, a global leader in innovative software solutions with a core focus on digital enterprise management. BMC solutions ensure continuous improvement, innovation, and a competitive advantage for digitally driven enterprises, from mobile to mainframe.

Seamless collaboration between IT Security and IT Operations is imperative to effectively mitigate security threats. That's where BMC SecOps comes in, it allows for critical vulnerabilities to be prioritized and remediated and compliance violations to be systematically addressed through an integrated and automated approach across all environments. "Think of SecOps as a management approach that bridges the gap between security and operations teams, in much of the same way that DevOps unifies software developers and operations professionals," Wilson said. "Without this collaboration, agencies will not be able to effectively keep up as security threats rapidly evolve and become more sophisticated."

Having the capability to understand relationships between data center assets and multi-cloud services from a single perspective is another important consideration. Analyzing data from multiple

cloud vendors isn't easy. Agencies must have the proper analytics tools in place so they can make fact-based decisions to anticipate and shape business outcomes to avoid undue risk and cost. Additionally, traditional approaches to security and compliance fail in multi-cloud environments, and are often ignored in the race to continuously deliver new applications.

BMC's Discovery for Multi-Cloud solution provides IT with better visibility into how the infrastructure enables the digital business. The solution automates asset discovery and application dependency mapping to build a holistic view of all your data center assets, multi-cloud services, and their relationships.

With automated discovery and dependency mapping, you can formulate and execute a plan to resolve known vulnerabilities with the least amount of risk. "It helps you evaluate business impact more quickly and conclusively, and then respond to critical events with a reduced risk of incorrect assessment," Wilson said. "It can proactively identify trends, abnormalities, and security vulnerabilities and automatically remediate vulnerabilities before they impact the business."

The need to efficiently measure performance is also critical. That's where BMC TrueSight AIOps, powered by Artificial Intelligence (AI) and Machine Learning (ML), fits in. The solution improves the overall quality and performance of digital services running in multi-cloud environments by analyzing the infrastructure and automatically applying predictive analytics.

"TrueSight AIOps uses sophisticated algorithms along with real-time performance monitoring, and uses automation to perform triage and remediation," Wilson said. "It's driven by analytics and can dynamically identify patterns and trends in digital data that are otherwise unrecognizable."

By combining these tools from BMC, government agencies now have the capability to strengthen their overall security posture, gain better visibility of their organizational assets, and embrace AI and ML capabilities to improve the quality and performance of their digital services.

As government looks to 2018 and beyond, agencies must embrace new methodologies to keep up with this digital transformation and drive their missions forward without sacrificing security, visibility, and performance. When agencies can meet their security and operational objectives without sacrificing the agility needed to deliver better services, everyone wins.

# Digital Customer Service

## PBGC's Website Gets a Revamp

GOVLOOP'S TOP **DIGITAL CUSTOMER SERVICE** INNOVATION OF 2017

The Pension Benefit Guaranty Corporation (PBGC) website recently underwent a complete technical and design overhaul to better engage the diverse users who accessed the site for pension and benefit information. While PBGC had a fully functional website, it hadn't been redesigned in six years. In the interim, organic content and functionality growth had negatively increased the complexity of the website.

Through the site's ForeSee customer satisfaction surveys, the web team knew it was time to update. "The comments over time showed some recurring issues," Michael Rucki, Division Manager of Communications and Website Services, said. "Many people said it felt cluttered. The navigation confused them and the homepage was very messy. We heard them on that."

But before diving into the redesign, they made sure to understand exactly what users wanted from the website. Not only did they analyze data from the website satisfaction surveys, they also referenced traffic and navigation data from Adobe Analytics and Google Analytics. Additionally, they reached out to internal stakeholders at PBGC, including customer service representatives and subject matter experts about their interactions with customers.

Their investigation uncovered a wide user base, including new users, people seeking pension payments, and pension practitioners seeking detailed information.

To meet those diverse needs, the team focused on simplifying navigation to disparate content. "We tried to make it simple to use, no matter what brought somebody to PBGC.gov on a given day," Rucki said. "But, it was more than just a look and feel issue; it was also determining how we talk to someone when we don't know what they're looking for."

In addition to simplifying language and navigation, they also ensured any content was readily available in different formats. User data showed that increasing traffic came from mobile devices, yet the previous site did not have a reliable mobile interface. The new website, created with Drupal, is responsive so it can easily be viewed on various devices.

So far, the redesign is getting positive reviews. But despite early success, the team isn't stopping their efforts. Using these and other feedback mechanisms, they're learning where the new design meets expectations and where it could still be improved. For instance, after learning that print functionality wasn't meeting user needs, they are working to update their content to be printer-friendly.

Not only are they reacting to feedback, but the web team is also looking to the future. "If you're not updating your site all the time, then you're already in the past," said Web Communications Specialist Rigina Pietrowski.

Rucki agreed. "It's a constant cycle," he concluded. "Whether it's a small, immediate tweak or an interesting idea that becomes something for a future release, we're always trying to improve the customer experience. We want make sure the website is always helping PBGC with its mission of protecting America's pensions."

*"Whether it's a small, immediate tweak or an interesting idea that becomes something for a future release, we're always trying to improve the customer experience. We want make sure the website is always helping PBGC with its mission of protecting America's pensions."*

**Michael Rucki, Division Manager of Communications and Website Services, PBGC**





## 4 MORE AWESOME CUSTOMER SERVICE INNOVATIONS

### Hurst, Texas' Where We Live App

In 2016, the city of Hurst, Texas, launched its “Where We Live” mobile app as a way to gather service requests from citizens on the go. But what began as a simple request-tracking system has in 2017 grown into a robust platform for Hurst residents to engage with city government. While constituents can still track issues like street light repairs, today they can also use the app to pay utility bills or traffic citations, discover new local businesses or even find a new pet for adoption.

But more than the variety of services it conveniently offers in one mobile location, what really makes this app customer-centric is the city’s commitment to constantly improving it with feedback from citizens. Most recently, an interactive parks map and calendar of city events were added to the app due to citizen requests.

### St. Louis Park, Minnesota's Web Content Strategy

Before St. Louis Park, Minnesota, revamped its web presence earlier this year, it maintained 2,845 web pages. Today, that number has been cut to 500. That reduction was made after a [deep-dive of Google Analytics information](#).

What they found was surprising but actionable – nearly 30 percent of website visitors weren’t residents of the city, and another large segment of web traffic came from the city’s own government employees. That led them to rethink their approach to the website “customer” – expanding who they served and how they crafted information to meet those different cohorts.

The reduction in website complexity is just one benefit of the city’s new customer-focused content strategy. The [new website](#) is also easier to navigate, with plain language instructions and easy-to-identify transactional services like utility bill payment or permit requests. Users like city clerks in search of more detailed agendas or policy guidance are directed to tailored pages with more specific information.

### HIV.gov's Suite of Digital Tools

When it comes to healthcare, government’s service role is two-fold. In some cases, government is directly responsible for providing medical care. In others, it’s governments job to inform citizens so they can effectively engage in their own health. This latter task is where HIV.gov has especially excelled with its new suite of [digital tools](#).

Not only does the program use multiple online and social media platforms to spread its messages, it also [highlights other effective social campaigns](#). Those examples, coupled with a repository of best practices and weekly virtual office hours, empower other organizations and individuals to effectively engage citizens in the fight against HIV.

Finally, the program focuses on constant improvement. HIV.gov gets feedback directly from constituents through an [annual survey](#), in order to discover how it can “better elevate and enhance messaging about HIV in America.”

### Citizens Can Ask TSA

By 2015, it was apparent that public perception of TSA was a problem. Long lines of confused and disgruntled passengers plagued airport security teams. Today, the reality is different, thanks to a multifaceted campaign to improve customer experience across TSA’s many touchpoints, including online and at airports.

The most-used service is AskTSA. Via multiple social media platforms, passengers can ask the agency any question about air travel. The most common question is what items can be carried aboard an aircraft, but the service will navigate users to the answer of almost any question as fast as possible.

To date, the AskTSA program has responded to over 330,000 inquiries with an average response time of 20 minutes. Demand is only growing. In fact, the now 15-person team has witnessed a 179 percent increase in volume since January 2016 alone.

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# Refining Value from Government Data With Machine Learning and More

An interview with Dave Shuman, Industry Leader, Cloudera

With the exponential growth and increasing complexity of public sector data, it becomes more critical that governments at all levels are able to employ a strategy to analyze and leverage the wealth of information contained within. The public sector must modernize and adopt platforms for machine learning and data analytics that will allow them to drive insights, enhance services, and strengthen security across their enterprise.

To understand how government can better tackle data collection and curation, to glean insights through a broad spectrum of tools, GovLoop sat down with Dave Shuman, Industry Leader at Cloudera, a leading platform for machine learning and analytics.

Government organizations have enormous data resources, Shuman noted. In fact, Shuman said, it's the responsibility of the government to collect and curate that data in a way such that it positively impacts the life of its citizens.

"We like to say data is the new oil," Shuman said. "Data is an asset in the same way that we're managing any other natural resource that we have within our borders. And that's the obligation of our government to curate this for its constituency so that we can use this to our benefit, like any other natural resource."

So today agency leaders and program management professionals must seek practical, secure, and effective methods to extract the valuable information captured in their data repositories—from legacy systems to real-time data streams. While some in the public sector have mastered big data management, others still have a way to go, and the ability to quickly interpret information separates those who will excel in data management from those who will struggle.

If agencies seek drive mission success in today's environment, they must collect and create a community around their data; build models that refine value from the data; and then serve the insights and models.

In order to open the information to users and create a community based on data discovery, the public sector must modernize its platforms and adopt a new approach to properly collect and store the data, Shuman said.

"The public sector needs to collect data in its native form, and allow users who have the proper authorization to explore the data

using a broad spectrum of tools," he said. "Doing so then opens us up to an incredible community to innovate on that data."

But curation and collection is not enough. Government must also work to build models that then refine value from the collective and curated data.

That's where machine learning comes in. Machine learning is a method of data analysis that automates analytical model building. It provides popular functionality like recommendation engines, predictive maintenance, and is a cornerstone of future internet of things (IoT) workflows.

By adopting machine learning, it's possible for government to quickly and automatically produce models that can analyze bigger, more complex data and deliver faster, more accurate results – even on a very large scale. And by building precise models, an agency has a better chance of identifying mission opportunities, detecting fraud, or avoiding unknown risks.

Cloudera can help the public sector apply machine learning to their valuable data sets to gain better insights, as well as curating raw data, and enabling security and governance on that in such a way that government can still protect the data, but also allow it to be used in all these different types of applications.

"Cloudera is the modern platform for machine learning and analytics," Shuman said. "Our tools are built on a core of an open source architecture, an incredible community of smart intelligent developers globally that are helping to design frameworks that we all get to benefit from."

Additionally, with billions of sensors, smart machines and connected devices generating data every second, IoT is placing unprecedented demands on organizations' data storage, processing and analytic capabilities. Bringing data together on a modern platform and applying new models will allow agencies to derive insights through machine learning.

"Cloudera is focused on the promise of big data – exploring it, combining different datasets, and analyzing them in innovative ways. By doing that, governments at all levels can discover new and valuable insights that enable better decision making and most importantly, better services for citizens," Shuman concluded.

# IT Modernization

## Social Security Administration Modernizes IT Platform

GOVLOOP'S TOP IT MODERNIZATION INNOVATION OF 2017

The Social Security Administration (SSA) is an integral part of every American's life. In fact, in 2016 alone, 66 million people received benefits from SSA programs. Sixty-two percent of aged beneficiaries received at least half their income from Social Security in 2015. On top of that, checks sent out by the Social Security Administration represent approximately 5 percent of U.S. GDP.

"That means SSA can't tolerate a failure," said Rob Klopp, IT Executive and Modernization Leader of the Klopp Technology Group and former Chief Information Officer of the Social Security Administration.

In an interview with GovLoop, Klopp shared how he and his team transformed SSA's Disability Case Processing System (DCPS) to a modernized, cost-effective and user-friendly IT platform. SSA partners with state disability determination services (DDS) to evaluate disability status. The DDS use various customized IT systems to process disability claims.

DCPS is an SSA initiative to develop a common system for all DDS organizations to simplify system support and maintenance, as well as improve the speed and quality of the claims process.

In its formative years, prior to 2017, the DCPS modernization project was outsourced to a contractor and ran at high costs. "SSA spent \$300 million over the years on the contractor trying to modernize this system," Klopp said. The legacy software at SSA was also becoming increasingly complex and difficult to maintain for IT staff.

While it sounds like a huge IT overhaul, the impetus for SSA to modernize DCPS was clear. The SSA identified three key drivers: complicated legacy systems, the cost of running these legacy systems and the need for a user-friendly interface.

So the SSA rebuilt the entire DCPS team from scratch. The key was using the most modern IT tools, deploying in the cloud and leveraging agile development methods. "You need to use the most modern software tools. That's what made the difference for us," Klopp said.

Using agile methods, IT professionals on the project could better connect with the customers they were trying to serve. "When you're trying to modernize, you need to change the way people work. So we had our IT team move away from legacy influences. We moved the entire project team so they were co-located and could easily practice agile methods. That was a huge part of the success," said Klopp.

The project is delivering value incrementally with more DDS's signing up after each new release. "We treat the DDS's as customers and invite them to sign-on to the program," Klopp said. As more and more DDS's convert from their legacy technology, the SSA will reduce IT and significantly improve the working environment for staff, which will significantly improve the experience SSA provides to the public.

"The disability determination process has become much more efficient," Klopp said. "Now we have a better environment for caseworkers, and it's more effective for the American public."

*"You need to use the most modern software tools.  
That's what made the difference for us."*

**Rob Klopp, IT Executive and Modernization Leader of the Klopp Technology Group**



## 4 MORE AWESOME IT MODERNIZATION INNOVATIONS

### NASA's Livestream of the Solar Eclipse

As the solar eclipse crossed the country on Aug. 22, more than 1 million people visited NASA's eclipse livestream during the peak of the event. This is a pretty big deal, considering that – on any normal day – the most-visited government websites see around 2,000 to 3,000 visitors. What's more, the livestream went off without any hitch.

The livestream was made possible largely thanks to IT modernization through cloud infrastructure. Not knowing how many visitors to anticipate, it was especially important to have a cloud model that could scale infrastructure for a distinct event in an easy and relatively inexpensive way.

### Veteran Affairs' Paper Extraction Process

The Veterans Affairs Department (VA) recently started digitizing its older, inactive paper records. This modernization effort is expected to save taxpayer dollars through reduced leased office-space that houses these records.

The new “paper-extraction” process ensures that when a claim is filed, the veteran's electronic record is already available in VA computer systems, reducing processing time for benefit claims from veterans and their survivors. Previously, when a veteran filed a new or supplemental claim, the retired paper files were boxed and shipped to a central site. This was then scanned into the VA's systems before work would even begin on the new claim.

Nearly 2 million inactive files were housed in 33 regional offices around the country before the change. But as of April 14, more than 500,000 files have been collected from eight regional offices for scanning. Once the records have been digitized, the VA will archive and store them in less expensive storage.

### Nebraska's Move in IT Consolidation

States like Nebraska are changing the IT consolidation game through hybrid centralization, where agencies use the apps that are familiar to them and the IT staff manages the backend – think servers and networks. Centralization is the consolidation of an organization's technology resources that, when done correctly, can improve administrative tasks and security, and make data management easier while saving costs.

Nebraska's hybrid centralization model is consolidation of enterprise functions and applications to the central IT group – the Office of the CIO. This allows the agency to maintain autonomy over its own application enterprise while leaving the IT grunt work to the experts. The project ultimately cut costs by as much as 20 percent with faster service and increased efficiencies. Additionally, the state has eliminated at least 70 servers so far.

### Houston's Telehealth Efforts

Ambulance rides can be costly for patients, service providers and local governments alike. That's why officials in Houston decided to find a way to decrease the number of unnecessary trips. By 2017, the Emergency TeleHealth and Navigation (ETHAN) Project was in full effect.

Using tablets, first responders can now collect information on patients and even initiate a video chat with an emergency physician from the field. This physician can then provide medical advice and possibly avoid a costly trip to the emergency room. Additionally, the physician can help the patient schedule a doctor's appointment for a later time instead.

Previously, 911 calls resulted in the patient being rushed to an emergency room regardless of necessity, which meant an ambulance was unavailable to respond to what might be more urgent calls. Project ETHAN ultimately cut time spent dealing with non-urgent cases by up to 50 percent.

# End-of-life issues?

Most cyberattacks exploit well-known vulnerabilities lurking in software and hardware that have reached end-of-support or end-of-life. If you don't know what's on your network, you have no idea how vulnerable you are.

“Until you know what IT assets you have and their end-of-life dates, you're still in reactive mode.”

– Clark Campbell  
VP for Federal, Flexera

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# Transforming Cybersecurity Postures From Reactive to Proactive

An interview with Clark Campbell, Vice President, Federal, Flexera

**M**odernizing IT infrastructure, including hardware and software, is top of mind for government agencies going into 2018. It's a beast of a task — the federal government alone spends more than \$80 billion on IT each year, and much of that goes toward operating and maintaining legacy systems.

Some have already started the modernization journey, but one of the biggest challenges agencies face is understanding what applications are running on their infrastructures, as well as the end-of-life and end-of-support dates for those software and hardware assets. End-of-life refers to when a product ends its useful life, and end-of-support refers to when a vendor stops servicing it.

To better understand what organizations can do to better track the current and future state of their IT assets, GovLoop spoke with Clark Campbell, Vice President of Federal at Flexera, a company that provides software and hardware lifecycle support and maintenance.

There are billions of dollars' worth of hardware and software in use across all of government that is either obsolete or on the verge of no longer having support from vendors, which means no more software patches, maintenance, replacement parts or other upgrades. The concern is that older hardware and software assets are favorite targets of cybersecurity threats looking to gain entry into systems holding sensitive information. They also are difficult and expensive to maintain.

"Understanding what your end-of-life and end-of-support dates are — so you know what will happen a month from now, six months from now or a year from now — allows you to prioritize things," Campbell said. "There are certain systems that have national security information or personally identifiable information, so it's imperative that agencies know when those systems have reached end-of-life or end-of-support."

If agencies don't know these dates for their infrastructure, it's harder to spot weaknesses. Too often, agencies are reactive rather than proactive when it comes to securing their IT systems, Campbell said. For example, although many agency cybersecurity administrators seek out information about system vulnerabilities according to National Institute of Standards and Technology guidelines, those findings often come too late and are incomplete.

Campbell stressed the need for agencies to understand the end-of-life of hardware and software products, and to prioritize cybersecurity and budgetary matters around those events.

"Every hardware and software vendor has those dates," he said. "But commercial and federal organizations usually don't have that information available to them and properly aligned to their existing infrastructure. That information drives cybersecurity and budgetary issues — they are directly related."

The problem isn't that public-sector organizations are lacking data, Campbell noted — in fact, they might be described more accurately as being overloaded with data. The challenge is that they lack actionable intelligence with which to set priorities and execute mitigation efforts. Agencies must find a way to draw a common operational picture from the troves of data at their disposal, and that's easier said than done. But having a clear view of all end-of-life and end-of-support dates across the enterprise is one way to ensure that government systems are outfitted with needed security features and adequately supported by vendors and employees.

In today's increasingly digital environment, agencies need to know what's actually on their networks. Having this type of information on hand can empower agency leaders who want to optimize the performance of their IT assets or ensure they've installed current software patches. Those who don't know what's on the network can't know how to what extent their agency is vulnerable to cyberthreats.

"Gathering that information, aggregating it, normalizing it, deduplicating it and aligning it to a catalog of end-of-life data is not only difficult for the federal government," Campbell said. "Commercial organizations struggle to do this, too. For this reason, Flexera provides this capability for financial, healthcare, federal and insurance institutions."

Flexera specializes in providing extensive IT support information, and the company has acquired more than 60 federal sole-source awards as a result. Flexera's solutions can help an agency replace aging hardware and software assets before they become obsolete and avoid IT purchases that will soon reach end-of-life or end-of-support status. They also help agencies enforce IT configuration and "shadow IT" policies.

Moving into 2018 and beyond, agencies should strive to better track and document end-of-life and end-of-support information in their quest for modernization. This level of visibility and actionable intelligence will enable agencies to better manage existing and future IT systems.



# Procurement

## Connecting Startup Technology to the City

### GOVLOOP'S TOP **PROCUREMENT** INNOVATION OF 2017

Since 2014, San Francisco has been building and revising a program that could significantly enhance the technology procurement process for city governments across the country. The city's Startup in Residence (STIR) program connects technology startups to city departments in a 16-week collaborative process where the two entities work to address a problem the city wants to solve.

The initiative is designed for early-stage technology companies looking to sell to the government market. At the end of the 16 weeks, if all goes well between the startup and the department, they can enter into contract negotiations.

STIR has already shown its benefits in several West Coast cities. For example, a company called Binti helped San Francisco's Human Services Agency (HSA) [streamline the foster family placement process](#). And this fall, officials announced that STIR would spread to Washington, D.C., with the city operating as an East Coast hub.

"Departments have unmet needs for technology that are always incredibly urgent and timely, and yet, in order for them to get a solution, they either have to purchase something off the shelf, or they have to go build it in-house," said Dee Prasad, Program Manager for STIR, in GovLoop's recent State & Local Guide. The expectation is that STIR will enable agencies to procure innovative technology faster by working directly with startups.

The first iteration of STIR came in the form of a 2014 pilot called Entrepreneurship in Residence. That successful run paved the way for a three-year grant extending the STIR program to Oakland, San Leandro and West Sacramento in California. As stated [on its website](#), "The core mission of STIR is to bring together government and startups to explore ways to use technology to make government more accountable, efficient and responsive."

"Our business is to get to 100 cities in five years," Prasad said.

"We're going to start growing from regionally to nationally as a first step in that process. But we've seen that this model can be utilized.

Theoretically, STIR will become more effective and appealing to partners as it expands to new city markets. That's because, as Prasad explained, governments anywhere in the country will have the opportunity to negotiate deals with successful startups offering a service that interests them, regardless of where the startups hail from. In this way, STIR could streamline the government technology procurement process.

"As the network grows, you're creating that ecosystem of people who now understand and feel more comfortable working with startups, with approaching their technology challenges in more modern ways," said Krista Canellakis, Deputy Innovation Officer of San Francisco.

Other STIR success stories include [Preschool2me](#), user-friendly technology designed to engage parents and childcare providers in Oakland, and [Appledore](#), a mobile platform coordinating homelessness information in West Sacramento. By December 2016 — the most recent data available — STIR had received 265 applications and worked with 20 startups through 19 departments in four cities, [according to its website](#). Participating cities have awarded 15 government contracts as a result of the program.

*"The core mission of STIR is to bring together government and startups to explore ways to use technology to make government more accountable, efficient and responsive."*

**Startup In Residence Website**





## 4 MORE AWESOME PROCUREMENT INNOVATIONS

### **Santa Clara County, California, Efficient Procurement**

In the early 2000s, the county of Santa Clara, California, was forced to begin rebounding from budget cuts that followed the dot-com bubble. A team handled much of the county's procurement process manually, despite the fact that Santa Clara is the sixth most populous county in the state. But Director of Procurement Jenti Vandertuig, who took over in 2004, has worked to overhaul the system's inefficiencies.

In 2014, Santa Clara unveiled its Procure-to-Pay Project, a cloud-based software that allows the county to manage suppliers, processes, budgets, approvals and payments for operations. Vandertuig's office has set a goal for fiscal year 2017 to expand capabilities and embrace digital transformation. For example, the county approves 95 percent of requests for goods and services within a day.

### **Charlotte, North Carolina's Inclusive Procurement**

After Keith Lamont Scott, a 43-year-old black man, was killed in September 2016 by a black police officer in Charlotte, North Carolina, the city erupted with protests over racial disparities.

In an effort to address economic divides, especially along racial lines, the City Council pledged a \$1 million investment in workforce development for disadvantaged communities. Shortly after, the [Charlotte Business INclusion office](#), a promoter of diverse economic development in the city, applied for a spot in poverty nonprofit [Living Cities'](#) next [City Accelerator](#) cohort.

Charlotte will direct the \$100,000 from City Accelerator toward eliminating barriers that prevent minority-owned businesses from obtaining city contracts. "We know diverse and equitable communities tend to be more economically and civically vibrant and experience more growth," said Julie Bosland, Living Cities' associate director for public sector innovation, [in an interview](#) with Route Fifty.

### **DHS' Acquisition Innovations**

Many government agencies place a high value on agile procurement, but for a few, speedy acquisition processes are essential. The Homeland Security Department (DHS) is among that group.

In an effort to improve the department's procurement process, DHS launched the [Acquisition Innovations in Motion \(AliM\)](#) program, a series of initiatives. AliM is the procurement part of the agency's larger Unity of Effort Initiative, directed at making DHS "greater than the sum of its parts." Specifically, AliM sets out to institutionalize more active engagement with industry, partly through monthly vendor outreach and other strategic industry sessions.

AliM has also established the Procurement Innovation Lab (PIL), which provides the DHS acquisition community a virtual space to experiment with new techniques for improving the procurement process. According to [its web page](#), PIL improves efficiency and effectiveness of procurements by lowering entry barriers, shortening time-to-award, encouraging competition and increasing the likelihood of successful outcomes.

### **GSA's Blockchain Efforts**

The General Services Administration's (GSA) [IT Schedule 70 Operations](#) has big plans for the future. Recently, it's put the finishing touches on a blockchain-based [proof of concept](#) that could, if implemented, fundamentally change its acquisitions process. Blockchain is a digital ledger in which transactions made in cryptocurrency are recorded publicly.

Currently, IT Schedule 70's [FASt Lane program](#) can process new contracts in about a month on average. But Jose Arrieta, IT Schedule 70 Operations' Director, said he believes a blockchain overhaul could get that number down to days.

Using blockchain, the GSA can review vendor-submitted financial information almost instantaneously. And because it becomes the system of record for an entire offer, it should drastically reduce the time it would otherwise take to prepare a pre-negotiation letter.



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# Integrating Customer Experience Throughout Your Agency

An interview with John Duckwitz, Client Success Team Lead, Granicus

**F**or many government organizations, creating superior digital services is only half of the innovation battle. They also need to make the public aware of those services and engage citizens in their use.

According to John Duckwitz, Client Success Team Lead at Granicus, “The biggest challenge is engaging with citizens where, when and how they want to communicate.” Granicus provides strategic support and tools to help agencies engage citizens through digital communications. In a recent interview with GovLoop, Duckwitz explained how government agencies can create better services with a targeted, multichannel approach to citizen outreach.

From renewing a driver’s license to filing federal tax returns, there is a full spectrum of services citizens expect from government. It’s up to agencies to figure out how to ensure that each touchpoint meets growing citizen expectations and aligns with their organizational missions.

For the government communicator — the person engaging with the customer and delivering those services — the biggest challenge lies in “owning the touchpoints that are within your sphere of influence, and making sure you’re collaborating with the other departments in your agency,” said Duckwitz.

The first step for agencies aiming to improve customer experience is to clearly define their desired outcomes and priorities. Those goals range from enhancing public awareness, to increasing citizen engagement to transforming online services.

Next, agencies should expand their reach and try to get ahead of the digital communications curve. “Ask yourself if you’re offering the public as many opportunities as possible to connect with your agency,” Duckwitz said. “Communicate via social media, offer people the ability to find and easily access services on your website and proactively follow up with constituents.”

The third step is focusing on growing citizen engagement, which means identifying the right channels to connect with your audience and choosing the right type of content. This can involve personalizing communications and using clear and relatable imagery that drives your agency’s desired outcomes. Using data analytics — such as testing email open rates at different times of the day or assessing if people are navigating to the correct tools on your website from the information they receive via email or SMS — also plays a key role in helping to iterate content over time and make communications more effective.

To truly improve the way they meet the demands of a wide and diverse citizen audience, agencies must engrain customer service across every department and ensure that services flow across multiple channels. Creating an agency-wide culture of customer service is the responsibility of every employee.

Duckwitz offered several examples of this idea in action. The National Health Service Corps (NHSC), for instance, demonstrated how a holistic, multichannel effort can successfully improve citizen engagement and impact public health. The NHSC’s Corps Community Month campaign, one of the winners of the 2017 Granicus Digital Strategy Awards, aimed to create awareness of the federal program in order to recruit healthcare providers to serve communities in need and reach patients with limited access to care. Through targeted outreach and a multi-pronged approach, the NHSC increased its number of supporters by over 500 percent and created a full engagement experience for over 410,000 program participants.

Granicus also recognized the Centers for Disease Control and Prevention (CDC) for its rapid emergency response to the Zika virus. Knowing that a majority of smartphone users access health and travel information on their phones, the CDC used Interactive Text to provide international travelers with critical information about Zika risk and prevention. The program reached 20,000 subscribers in six months, and survey results indicated high customer satisfaction rates with the texting initiative.

Finally, Duckwitz described Leon County, Fla.’s campaign aimed to inform and prepare its residents for emergency weather events like hurricanes and tropical storms. In a far-reaching awareness and digital communications campaign, Leon County sent out over 1 million emergency notifications and communicated the importance of staying connected in times of emergency. As a result, Leon County saw an increase of 5,341 citizen subscribers to its GovDelivery Communications platform — increasing the number of prepared citizens for future emergency-related events.

As these case studies demonstrate, the key to customer service success in 2018 and beyond is a strategic, multichannel approach to engagement.

As Duckwitz emphasized, “Agency priorities and individual mandates might change, but the most important thing is maintaining a consistent user experience and high level of customer service throughout your entire organization.”



# Workforce

## Federal Tech/Cyber Hiring & Recruitment Event

GOVLOOP'S TOP **WORKFORCE** INNOVATION OF 2017

If all goes as planned, Beth Killoran could have new IT hires reporting to work at the Health and Human Services Department by Dec. 25. The HHS Chief Information Officer used an unconventional approach for hiring this time around — one that represents a first for the federal IT community.

Killoran and her team made on-the-spot, initial offers during the federal government's massive, two-day hiring fair in Montgomery County, Maryland, this November. The first-of-its-kind event brought together more than 1,800 job seekers from 40 states and hiring managers from 33 federal agencies, including five from the intelligence community.

The ultimate goal is to fill 500 IT and cybersecurity positions governmentwide, said Margie Graves, Acting Federal CIO and Chair of the CIO Council. When the event kicked off Nov. 6, organizers expected to make about 50 job offers that week, with significantly more offers being made post-event. The fair was a joint effort by the CIO Council, Office of Personnel Management and Office of Management and Budget.

It's still too soon to say, but if the hiring numbers are strong the government would consider hosting similar events in different parts of the country, as well as at major events like RSA's annual security conference.

Prior to the event, applicants registered online, submitted their resumes via USAJobs and were invited to take an assessment. From there, they were rated and ranked to determine their job qualifications, and their names were submitted to agencies for review. Agencies were granted direct hire authority to expedite hiring for cybersecurity positions.

This innovative approach to hiring in government is a big deal for many reasons. First, hosting an event of this magnitude requires serious collaboration among government agencies and hiring managers. Second, this hiring fair is proof that government can do fast-track hiring, even for positions that require security clearances.

During the event, Jason Gary, CIO at the Education Department, met with applicants from various states who have backgrounds in education. One job seeker, in particular, was motivated to join the department after experiencing a ransomware attack, Gary said. The individual wants to protect other education institutions against similar incidents.

But the time period between recruiting applicants and their official start dates can be a long road in government. For example, in a [2017 State of Federal IT report](#), many CIOs said that they had identified well-qualified candidates for cybersecurity positions, but those candidates ended up taking other jobs — often in the private sector. CIOs attributed this to multiple issues with the federal hiring environment, including the process taking too long and applicants having to navigate a confusing website and application process. The hope is hiring times will be reduced through events like the tech/cyber fair.

The event is the first of a long road, said Veronica Villalobos, OPM's Principal Deputy Associate Director. "We expect that this is going to be a place where we will draw talent for months to come," Villalobos said.



## 4 MORE AWESOME WORKFORCE INNOVATIONS

### **Boston Salary Negotiation Workshops**

In 2015, the city of Boston launched a series of workshops designed to empower women in the workforce by giving them research tools, communications skills and strategies to negotiate their salaries.

That in itself was innovative. But what stands out this year is how much the workshops impacted attendees. In a [2017 report](#) titled “Gaining Ground on Equal Pay: Empowering Boston’s Women Through Salary Negotiation Workshops,” the city interviewed 50 of the nearly 1,800 women who attended the workshops to find out their true impact.

The report found that 87 percent of women who completed the workshops took action by identifying target salaries, and nearly half either negotiated increased compensation in their current job or obtained a competitive salary for new jobs, according to a city news release. They also benchmarked the correct compensation level for various positions and started conversations about equal pay with their supervisors and co-workers.

### **Washington Workforce Analytics**

The Evergreen State has an entire section on its [Office of Financial Management](#) website dedicated to data on retention, talent acquisition, compensation and workforce demographics. The graphics are interactive, easy to decipher and allow users to display data based on the information most important to them.

Plus, a number of the graphics include notes that pull out key trends, like the fact that people of color comprise 20 percent of the executive branch and 33 percent of executive branch employees are under 40 years old. This is a big deal, because most organizations don’t make workforce statistics publicly available and in a format that people can easily use. Next steps for the state include creating interactive dashboards for HR professionals to better track workforce trends and compare data among state agencies.

### **Indiana’s Chief Data Officer Expands Resources**

Governments at all levels have added chief data officers to their ranks over the last few years. But the Hoosier State is taking its data efforts a step further.

“We have an agency that was spawned out of IT to ... help us use our data better [and] make better decisions,” said Indiana Chief Information Officer Dewand Neely to GovLoop. “And we were now able to make that an official agency.” In 2017, the state is going beyond just having a CDO but giving him the personnel resources to take on big projects.

Known as the [Indiana Management Performance Hub](#) (MPH), the agency is headed by the state’s chief data officer and is one of the first of its kind in government, Neely said. MPH is currently working on analytics projects that address critical issues like the [opioid epidemic](#), [education and workforce development](#) and the likelihood of [crashes on state roadways](#).

### **OPM Career Webinars**

Navigating the federal hiring process can be daunting. This is especially true for job-seekers who aren’t familiar with federal resume writing and know little about the government’s official employment site, USAJOBS.

That’s why the Office of Personnel Management (OPM) hosted a series of free webinars this year to help applicants with federal resume writing, interviewing and finding and applying for positions on USAJOBS. The series of trainings were especially timely this year for IT professionals participating in the [Federal Tech/Cyber Hiring & Recruitment Event](#).

The “[Writing Your Federal Resume Webinar](#),” for example, broke down each section of a job opportunity announcement. Attendees learned how to review a job announcement to determine if they are qualified and how to tailor their resumes to important requirements in the announcement. It also included a quick overview of the resume builder on USAJOBS.gov.



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## Why Security Standards Matter for All Government Devices

An interview with Kimberlee Ann Brannock, Senior Security Advisor, HP

In this age of rapid technological innovation, organizations face many obstacles to ensuring cybersecurity. The rise of internet-connected devices is just one thing that's forced agencies to rethink in 2018 how they secure technologies and their related endpoints that operate on their networks.

Much of this is due to the rise of the Internet of Things (IoT), which is expanding in size and scope. Gartner estimated there would be about 8.4 billion connected devices in use in 2017, and that number is projected to rise to almost 21 billion by 2020. The challenge for agencies is ensuring security practices can keep pace. To learn more about what agencies can do to demonstrate due diligence in endpoint cybersecurity in 2018 and beyond, GovLoop spoke with Kimberlee Ann Brannock, Senior Security Advisor at HP.

"IoT expansion, in general, leads to a lack of standards, as well as competing standards," Brannock said. "There's vendor lock-in, there are proprietary devices, there are private networks, and all of this makes it hard for devices to share common security protocols."

In recent years, several major hacks have been the direct or indirect result of IoT infiltration. For example, attackers made off with more than 70 million credit and debit card numbers from Target in 2013. In another case, a distributed denial of service (DDoS) attack in 2016 by the Mirai botnet — one of the strongest ever recorded — shut down a number of highly-trafficked internet sites in the United States by gaining access to consumer devices like internet protocol (IP) cameras and home routers.

Many older technologies — like printers, for example — have many thinking these devices are not of concern. However, printers are being built with internet-connecting capabilities, and they're often overlooked as potential cybersecurity risks, Brannock said. In reality, they pose the same danger of unauthorized entry as more recognizable network endpoints, like personal computers, that can easily connect to the Internet. "HP is observing the digital world and the physical world colliding, and we need to more adequately address security in association with the devices in this equation," she said.

"We have lots of examples in the news about some type of security event, including those that lead to major data leaks, or even items that are classified as data breaches," Brannock added. "Historically, there was this attitude that when certain devices,

such as a printer, were brought into an environment, it wasn't a big deal. It's now a big deal. They're programmable, intelligent devices, just like any other PC. It's become more important to protect those devices."

That's especially true for government agencies that aren't able to yet fully address the nuances of endpoint security. And, similar to consumers, agencies run the risk of unknowingly purchasing inadequate products. Since there is little in the way of industry standardization, Brannock said, inexpensive devices often include subpar components that are difficult to secure comprehensively.

HP is working to change that. As a leading industry voice for security standards, HP encourages manufacturers to enhance cyber sophistication and endpoint standardization.

Brannock noted that it's imperative agencies learn about contemporary cybersecurity issues, and that they only procure devices where security innovation is evident and to use devices that offer lock-down features, have better access controls and can prevent unauthorized personnel from printing certain data.

"The way organizations are operating in this modernized digital workplace, they're not printing as much," Brannock said. "But the documents they do decide to print are much more valuable."

To help agencies do better on this front, HP includes state-of-the-art security measures in its devices. And because of the added control features, the devices can also help government save costs.

The other priority for HP is education and awareness of standardization issues and endpoint vulnerability. Brannock explained that HP has sought to steer agencies away from porous security measures in their procurement processes that could put their mission at risk.

"There are a lot of brilliant, talented people in government, and part of addressing this issue is just making them aware," Brannock said. "There should be awareness, education and training campaigns, to help make people aware to include security in the procurement process and to be aware of better cyber hygiene. As security is in our DNA, HP is excited to be taking part in that endeavor."

If government is receptive to these lessons and implements tighter requirements as a result, 2018 and the years beyond will be safer for it.



# Meet the Next Generation of Government Leaders and Innovators

*Each year, the government community convenes in Washington, D.C. for GovLoop and Young Government Leader's Next Generation of Government Training Summit to learn leadership tips, gain inspiration from their colleagues and figure out how they can impact the next generation of government leaders. And since 2010, the summit's NextGen Public Service Awards have recognized exemplary public-sector leaders for their dedication to improving and invigorating government. Read about this year's 2017 winners to get inspired – and make sure to get information about the 2018 Next Generation of Government Training Summit in August [here](#)!*



## EXEMPLARY LEADER

### Olivia Benford

*Parental Engagement Director,  
Pharr-San Juan-Alamo  
Independent School District*

Olivia spearheads eight literacy centers for parents whose children are in the Pharr-San Juan-Alamo school district in Pharr, Texas. These literacy centers provide GED and ESL classes. Olivia started new classes run by more than 75 volunteers on different hobbies, which turned into a great incentive for parents to attend literacy courses and boost engagement and enrollment. The centers grew from 1,700 attendees to 5,000!

But with the rapidly growing program came an increased demand for volunteers and budget. Olivia presented statistics on how the program was developing, how it meets the needs of parents and how it has impacted student achievement and community engagement to secure the future of the program. Without her leadership and passion, she wouldn't have been able to build a community of learners.



## INNOVATOR

### Erica Reott

*Chief Strategy Officer, National  
Center on Birth Defects and  
Developmental Disabilities, Centers  
for Disease Control and Prevention  
(CDC)*

Erica leads strategy for CDC's National Center on Birth Defects and Developmental Disabilities. In this role, she charts the course for the center, working with leading scientists to develop and implement the center's strategic plan – a roadmap to a world where babies are born healthy, children reach their full potential and everyone thrives.

Last year was an extremely challenging year for CDC and for the National Center on Birth Defects and Developmental Disabilities as the world confronted the challenge presented by Zika. Reott was deployed to CDC's Emergency Operations Center to lead the development of a key response intervention – the Zika Prevention Kit (ZPK). Reott conceptualized, prototyped and tested the ZPK among target audiences in the territories. Working with others in the Zika Response, and with the CDC Foundation, Reott worked to ensure that 5,000 kits were in the hands of pregnant women by day 39 of the response – record time. Over 21,000 kits have been distributed to date.





#### COURAGEOUS CHAMPION

### Ryan Ruggiero

*Realty Specialist, General Services Administration (GSA) Mid-Atlantic Region, Public Buildings Service, Real Estate Acquisition Division*

Ryan's 3.5-year tenure with GSA Mid-Atlantic Region overflows with a resume that retirees would envy. Last year, she rolled out the Automated Advanced Acquisition Program (AAP), a web-based leasing tool that enables building owners to electronically submit offers, thus reducing offer submission time and government evaluation time. She led and participated in lease negotiations with a combined contract value of \$30 million, securing \$3 million in savings. She also trains and mentors others, volunteers inside and outside the office and has earned recognition from her colleagues for her outstanding contributions.



#### SILENT HERO

### Alba Tarre

*Assistant Department Director, City of Miami Beach, Florida*

In her role in Miami Beach's Office of Housing and Community Development, Alba helps the homeless find shelter, deals with contractors on job sites, addresses flooding in affordable housing units and helps families find mental health.

Homelessness is specifically a major problem that Alba tackles. Under Alba's direction, Miami Beach radically changed its strategies to address homelessness, resulting in more robust street engagement (involving members of the faith community), improved individual care plans, data collection to track chronically homeless clients, new platforms for police engagement and more cost-effective transitioning of people from homelessness to personal stability. Through her efforts, the last HUD Point in Time Survey showed self-identified homelessness had dropped from 2,000 to 133 in January 2017.



#### ADVOCATE

### Elizabeth Phillips

*Physical Scientist, Environmental Management, Energy Department*

Elizabeth has advocated for mercury research to clean radioactively contaminated soil throughout her 30-year career in public service. The accomplishment she is most proud of is advocating for the Mercury Field Research Center at the Department of Energy Oak Ridge Site. Her vision was to create a site where remediation technologies could be tested before investing millions of dollars on the actual remediation. The plans for mercury remediation include treatment and disposal of mercury-contaminated buildings, soil treatment and surface water treatment.

# NEXT-GENERATION HYPERCONVERGENCE



## The Platform for Federal Datacenter Modernization

With Pivot3, federal agencies can consolidate any mix of application workloads on a single platform to deliver breakthrough application performance at any scale, across the entire organization.

Learn more at [www.Pivot3.com](http://www.Pivot3.com)





# Next-Generation Hyperconvergence: The Platform for Federal Datacenter Modernization

An interview with Jeff Forte, Vice President, Federal Sales and Eric Oberhofer, Federal CTO, Pivot3

**T**oday, federal agencies are more reliant than ever on IT to accomplish missions and agency business. The current reality is that IT is not merely automating and digitizing processes that were once paper-based and manual – it is actually overhauling how agencies view and execute their missions, which requires powerful IT capabilities that can perform at all levels, at all times.

Much like corporate enterprises that increasingly rely on digital technologies to overhaul their businesses, today's agencies are also under pressure to reimagine how technology can help advance their missions in far more efficient and innovative ways. To achieve this, agencies must first determine how they invest in modernization initiatives that support future growth and new technologies, while simultaneously leveraging the IT infrastructures they already have. This is not easy because many federal data centers tend to be collections of siloed systems and infrastructures that combine old and current technology.

To discuss these issues, and how next-generation IT infrastructure can help federal government better modernize, GovLoop sat down with Pivot3, a leading provider of hyperconverged infrastructure (HCI) solutions, and gained insights from Jeff Forte, Vice President, Federal Sales and Eric Oberhofer, Federal CTO, Pivot3. They explained why HCI – which tightly integrates storage, compute, network and virtualization resources into a single piece of commodity hardware orchestrated by a software-defined architecture – is an ideal platform for federal IT modernization, and how agencies can leverage Pivot3's unique technology to consolidate multiple, mixed application workloads on a single platform, while also integrating with existing infrastructures and IT investments.

In addition to unifying fragmented infrastructures, HCI also orchestrates them to be far more efficient from a resource perspective, which provides easy-to-scale, easy-to-operate modernization solutions.

HCI solutions have been successfully applied to a targeted set of standalone workloads such as virtual desktop infrastructure (VDI), web farms and data protection. The current generation of HCIs, however, has not seen much adoption as a core data center platform supporting a diverse mix of consolidated workloads. Forte explains, "The current generation of HCIs lack the ability to guarantee performance levels to varying tiers of workloads, making it very complex to consolidate workloads onto a single

platform." Moreover, Oberhofer emphasized that a lack of high-end performance was also a limitation of some HCIs in the datacenter.

Pivot3 recognized these shortcomings of current generation HCIs and purpose-built its Acuity HCI platform to overcome those limitations, positioning it as a core data center platform.

Pivot3 Acuity is the industry's first and only hyperconverged software platform that combines the performance of NVMe PCIe flash and the simplicity of advanced, policy-based QoS, along with a comprehensive set of data services such as patented erasure coding, to expand the possibilities of what businesses can do with HCI. Now Agencies can confidently consolidate a broader set of workloads on to a single infrastructure platform and deliver guaranteed performance to the applications that drive their missions. Acuity's architecture also efficiently manages multiple storage tiers ensuring Pivot3's systems can be used as the foundation for agencies that want to use hyperconverged as a consolidation platform for multiple workloads with mixed I/O profiles, according to IDC.

Additionally, Acuity doesn't require datacenter managers to refresh all their technology at once. Many agencies will still have applications and programs that have their own infrastructure, and will need to co-exist with a converged environment. As such, Pivot3 enables agencies to start with what only what they need, with the ability to scale compute and storage independently to meet specific application requirements as their environment grows. The result is a modular approach to IT infrastructure that offers an ideal mix of performance, capacity, flexibility and price.

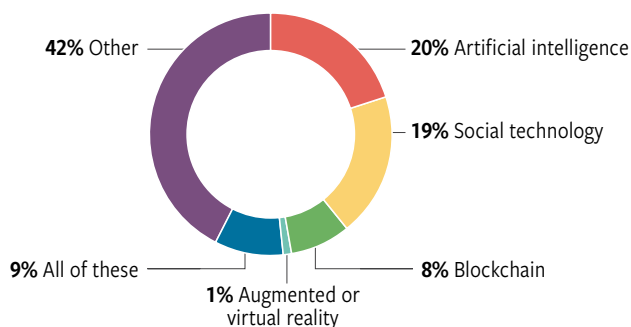
The same positive outcomes agencies are able to realize from HCI in areas like virtual desktops, shared storage, and workload consolidation can help them in meeting many IT modernization goals, like scalability, availability, performance, security, cost, and efficiency. As HCI evolves with more next-generation capabilities, these benefits become even stronger, making Pivot3 HCI well-positioned to handle the use cases that move agencies toward modern technology solutions that not only reduce the cost and complexity of traditional IT environments, but also act as a natural extension of the data center into the cloud.

For federal agencies seeking to confront tightened budgets while keeping pace with the rapid rate of technological innovation in 2018 and the years to come, Pivot3's next-generation hyperconvergence is the smart path forward.

# A Look Ahead at 2018

## GOVLOOP POLL

*Which of the following innovations does your agency plan to pursue in 2018?*



**D**o you remember when you first heard terms like cloud computing and Internet of Things? They seemed so futuristic just a few years ago, right?

But as the hype winds down and innovations like cloud and IoT become embedded in government's everyday operations, you've probably heard more chatter about the next newest things: blockchain, artificial intelligence for citizen services, virtual and augmented reality and social technology — to name a few.

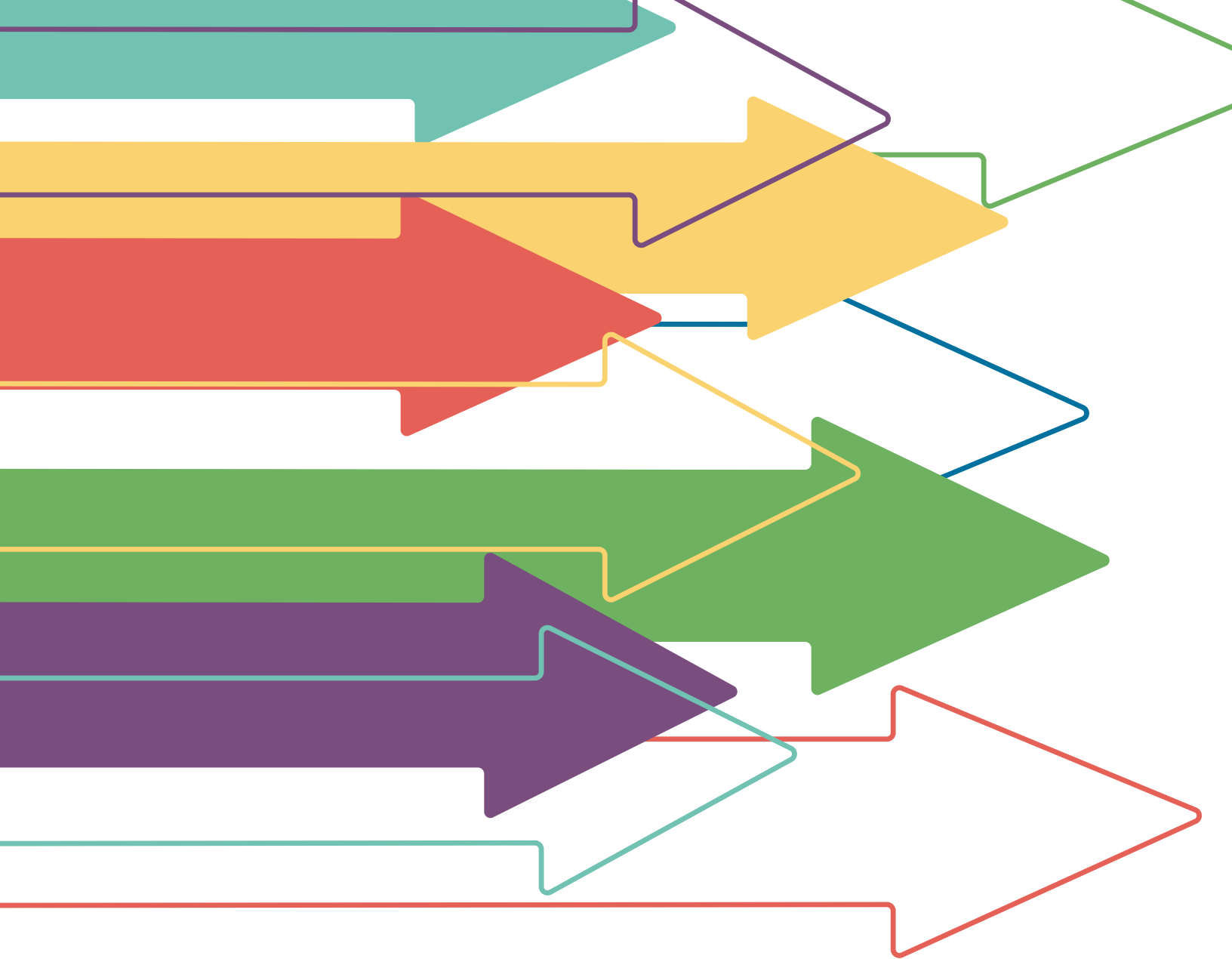
Expect to hear more about these technologies in 2018.

To build momentum into the coming year and beyond, the General Services Administration launched a new interagency program called Emerging Citizen Technology. The program fosters collaboration among more than 1,500 federal managers, startups, small businesses and

civic organizations. The goal is to develop public service modernization initiatives through the evaluation, testing and development of emerging technologies.

The program is gaining traction as more agencies share how they are using emerging technologies and what their plans are for the future. To help advance government adoption of AI, blockchain and other budding technologies, GSA created an online [Emerging Citizen Technology Atlas](#) that showcases potential use cases, current programs and resources for getting started with those solutions.

For example, the Centers for Disease Control and Prevention has worked on several proofs of concept based on blockchain technology, with plans to build real applications in 2018. Specifically, the CDC's Center for Surveillance, Epidemiology, and Laboratory Services is focused on using blockchain to better track opioid abuse.



At the state and local levels, you can expect to see even more uses cases of blockchain and other emerging technologies in the coming year. For example, Delaware lawmakers passed a bill that will allow companies to “create and maintain corporate records, including stock ledgers, on a blockchain to better track and verify stock ownership and improve transaction time,” [according to a state blog](#).

In 2018, there will also be more investments in IT modernization and consolidation. Government agencies are now moving from the discussion and planning phase to actually carrying out large-scale projects that will continue into next year. There will be an increased focus on moving modernized systems to the cloud or operating them using a shared services model.

On the workforce front, expect to see greater efforts geared toward hiring and retaining employees, particularly cybersecurity and IT professionals. This has been an ongoing challenge in government, but the increase in sophisticated cyberattacks is forcing agencies to proactively recruit through on-the-spot hiring fairs and other means that enable them to get job-seekers on board faster.

To augment the workforce, agencies will invest more in technologies like analytics, machine learning and automation. In their most advanced forms, these investments will help to streamline human decision-making, in part by presenting leaders with actionable data.

As agencies familiarize themselves with emerging technologies over the next year, be on the lookout for more pilot programs and use cases that benefit government employees and the citizens they serve.

# INTEGRATION AND DIGITAL TRANSFORMATION

## Transformation begins with connectivity

Getting where you need to be isn't always easy. Technologies like cloud, mobile, analytics, the Internet of Things (IoT), dynamic apps and big data have spurred a digital revolution.

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## Scaling Digital Transformation in Government for Impact

An interview with Chris Borneman, Vice President and CTO, Software AG Government Solutions

**T**oday, most government organizations are pursuing digital solutions to meet new citizen and employee demands. Citizens want the same accessibility and ease of use in government solutions as they get from the private sector, and they want customer service, delivered anytime, anywhere. Also, public servants increasingly expect their government jobs to have the same perks and efficiencies as jobs in the private sector – things like “bring your own device” programs, the ability to telework, and new platforms to make working easier.

Collectively, the effort to meet these rising expectations is called digital transformation. Digital transformations in government are not easy or automatic — they are a journey. Still, tools and methods are available to accelerate strategic planning and execution, while providing a means to improve user experiences and maximize resources. So how can an agency skillfully achieve digital transformation, and what tools do they need on their path?

To learn more about how an innovation engine that connects cloud services can help the public sector with digital transformation, GovLoop spoke with Chris Borneman, Vice President and CTO of Software AG Government Solutions, a company that takes a “special forces” approach to solving complex IT challenges quickly and efficiently for the federal government.

In particular, Software AG offers their webMethods Integration Platform to help government integrate systems on-premises, in the cloud or in a hybrid combination.

“webMethods is an innovation engine for connecting all of your various internal, external systems, and cloud services together,” Borneman explained. “It helps government do that in a way that’s fast, clear, simple, and wraps in the right levels of security and scalability.”

webMethods has a series of capabilities that can accelerate digital transformation in government. In fact, Software AG [recently released a report highlighting 10 essential innovations that webMethods can help implement for the public sector:](#) microservices; DevOps; bi-modal IT; cloud migration; streamlining analytics; machine learning; APIs; the Internet of Things; dynamic apps; and big data.

In terms of what the public sector is dealing with, Borneman said some of the biggest opportunities can be seen in better managing microservices and APIs.

Conceptually, a microservice is a portion of a complex application that is a discrete amount of self-contained business functionality, meaning the run-time server, the configuration and the business logic are deployed as a single unit. These units can be developed, tested, deployed, upgraded, retired and so on without having to deploy the entire application at the same time. Additionally, microservices can scale up or out individually as needed.

“Selecting the right integration platform for microservices upfront can help you reduce long-term maintenance costs and make your whole initiative a success,” Borneman said. “Traditionally technology deployment in the public sector has been monolithic and deployed as one large system. Microservices encourages flexibility, speed and agility in deployment.”

APIs are also a critical tool for the public sector. An application program interface (API) is a set of routines, protocols, and tools for building software applications – in short, it specifies how software components should interact. They are the tools that let you easily expose your unique data and services in web apps, mobile apps and other connected devices. In government and in the private sector, APIs have become the standard way of connecting applications, data and devices, providing services directly to partners and creating new models for doing business.

“Additionally, APIs enable you to capitalize on the Internet of Things (IoT), hybrid integration— and mobile-first initiatives, all of which have growing importance in the public sector,” Borneman said. “But when you put your APIs out there, it’s critical to retain control and manage them effectively – there’s a security and scalability concern.”

Software AG’s webMethods API Gateway enables agencies to securely expose your APIs to third-party developers, partners and citizens for use in web, mobile and IoT applications. With webMethods API Gateway government can easily create APIs, define Service Level Agreement (SLA) policies, and publish APIs to a portal.

When it comes to the trends of digital transformation, such as microservices, APIs, and more, Software AG provides guidance to government customers.

“Not only have we created the tools to help you create your own services, but we also created the tools to help you consume those services so you have your full monitoring, your full traceability, your full configuration management, and full security,” Borneman said.

# Conclusion

From watching the eclipse online via NASA, to making sure government contracts are more inclusive, to better staffing cybersecurity departments, to reducing processing time for veterans, government has achieved an incredible amount in 2017. Despite challenges old and new, nobody is slowing down the public servants who want to help citizens live the best lives that they can. For that, we thank each and every government employee who is out there in the field doing their best work. As evidenced by the dozens of examples in this guide, your innovations are truly making an impact and a change.

**We can't wait to see what you accomplish in 2018.**

## About GovLoop

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 250,000 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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## Authors

**Catherine Andrews**, Senior Director, Editorial

**Joe Antoshak**, Editorial Fellow

**Francesca El-Attrash**, Staff Writer

**Nicole Johnson**, Senior Technology Writer

**Irene Koo**, Editorial Fellow

**Hannah Moss**, Senior Editor and Project Manager

## Designers

**Kaitlyn Baker**, Lead Graphic Designer

**Megan Manfredi**, Junior Graphic Designer







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

P: 202.407.7421

F: 202.407.7501

[govloop.com](http://govloop.com) | [@govloop](https://twitter.com/govloop)