

government  
technology™

gt

Solutions for  
state and local  
government.

JULY/AUGUST 2021

WHAT IT TAKES TO

INNOVATE

A look at breakthrough  
tech making inroads  
in government.

PLUS:

**AI vs. Misinformation:**  
Can bad info be stopped?

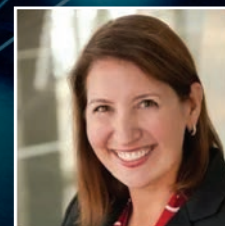


# DIVERSITY & INCLUSION:

## Drawing Parallels Between Business Best Practices and Government

Implementing a diversity & inclusion (D&I) program within a government organization is no easy feat. However, the benefits greatly outweigh the challenges. Making all employees feel included, respected and valued is a great way to build a culture that cares and is involved — something that is proven to improve performance in the corporate world.

The good news: There are many parallels that can be drawn between government and business when it comes to an effective D&I strategy. In this interview, [Katie Juran](#), Senior Director of Diversity & Inclusion at Adobe, discusses how government can foster more diverse and inclusive cultures.



### How can government build an inclusive recruitment strategy, so its workforce better reflects the people it serves? What is a good starting point?

When people feel appreciated and included, they are more creative, innovative and successful. But sometimes teams need guidance. At Adobe, we encourage all our employees to take five simple steps — we call them Adobe For All in Action — as a means of building a diverse and inclusive workplace for all.

The actions are:

- Appreciating the unique
- Amplifying others
- Enhancing the team
- Rethinking routine
- Opening up

Government bodies can create a similar type of framework, as a first step, to help individuals and teams understand what everyday actions they need to take to foster a more diverse and inclusive culture.

### What are some ways government can build a positive workplace culture?

In 2020, we created the Adobe For All In Action Assessment. This five-minute self-assessment helps build inclusion at Adobe by offering guidance and areas to focus on for managers and employees. An assessment like this can help government institutions understand where employees are collectively from a D&I culture standpoint and build a roadmap from there.

Governments should invest in programs meant to drive change both within their organization and the industry at large. Education will be key.

### How can government agencies avoid “brain drain” and keep their skilled workforce together?

The goal — first and foremost — must be to build a culture where every employee is encouraged to share their unique perspectives, actively participate and engage, and feel included and valued.

At Adobe, we have seven employee networks, numerous clubs and events to build a sense of community. These groups connect employees with similar backgrounds, identities and interests to foster inclusion.

Our advice to government agencies: Do the research to figure out what success means for the bulk of your employee population, and then assess whether reaching this goal(s) is an equal opportunity for all. From there, you can roll out programs and policies to level out the playing field.

### What are some common mistakes organizations make when they set out to improve diversity and inclusion?

Three things come to mind. The first is that diversity and inclusion aren't just about race/ethnicity or gender. Companies must also think about diversity in background, experience, identity and more. Everyone needs to feel included.

Second, training isn't optional. To truly make a culture change within an organization, mandatory D&I training for everyone from the top, all the way down, is going to be important.

And finally, although your diversity and inclusion team may sit within Human Resources, it takes a village. To truly shift culture, diversity and inclusion must be seen as a cross-departmental collaboration committed to listening, learning and taking action.



For more information on Adobe's commitment to diversity & inclusion, [click here](#).

# CONTENTS



In Austin, Texas, emergency personnel are using virtual reality to train for work on a bus-sized ambulance known as the Ambus.

Government Technology (ISSN# 1043-9668) is published monthly EXCEPT FEBRUARY, MAY, AND AUGUST by eRepublic Inc., 100 Blue Ravine Rd, Folsom, CA 95630. Periodical postage paid at Folsom, CA and additional offices. POSTMASTER: Send address changes to: Government Technology, 100 Blue Ravine Rd, Folsom, CA 95630. Copyright, 2021 by eRepublic Inc. All rights reserved. SUBSCRIPTIONS: Subscription inquiries should be directed to Government Technology, Attn: Circulation Director, 100 Blue Ravine Rd, Folsom, CA 95630, 916-932-1300

**COVER STORY**

**14 / Incubating Innovation**  
Veterans of state and local government innovation offices share best practices, insights and lessons learned.

**22 / Fast Track**  
For many states, mobile driver's licenses are the first step toward a unified digital identity.

**31 / Can Tech Weed Out Bad Info Online?**  
Untrue information propagating on the Internet threatens democratic institutions and the public good. Emerging tech tools aim to help government combat the threat.

**48 / Leveling Up**  
Firefighting. Social services. Accessibility. How virtual and augmented realities are changing the way government works.

**COLUMNS**

- 4 Point of View**  
Hybrid workplaces require deliberate efforts to maintain culture.
- 9 Becoming Data Smart**  
Federal plans must include funding for digital infrastructure.
- 10 Four Questions**  
Virginia Beach CIO Peter Wallace on lessons learned from COVID-19 and what comes next.
- 64 Data Points**  
Absent federal electronic IDs, digital driver's licenses are a step in the right direction.
- 66 Cybersecurity Strategies**  
Are we putting too much stock in zero trust?

**NEWS**

- 8 govtech.com/extra**  
Updates from *Government Technology's* daily online news service.
- 12 Big Picture**  
Futuristic farming in Braddock, Pa.
- 58 Spectrum**  
More research, more science, more technology.
- 62 CIO Central**  
Career changes across tech-driven roles in state and local government.

**IN OUR NEXT ISSUE:**

**Bouncing Back**  
The essentials for a resilient gov tech organization.

**From Scratch**  
What would it look like to start an IT shop from the ground up?

**Digital Counties**  
Takeaways from our 2021 survey.




 Publisher: **Alan Cox**, [alanc@govtech.com](mailto:alanc@govtech.com)
**EDITORIAL**

 Editor: **Noelle Knell**, [nknell@govtech.com](mailto:nknell@govtech.com)  
 Managing Editor: **Lauren Harrison**, [lharrison@govtech.com](mailto:lharrison@govtech.com)

 Web Editor & Photographer: **Eyragon Eidam**, [eedam@govtech.com](mailto:eedam@govtech.com)  
 Senior Copy Editor: **Kate Albrecht**, [kalbrecht@govtech.com](mailto:kalbrecht@govtech.com)  
 Copy Editor: **Kali Tedrow**, [ktedrow@govtech.com](mailto:ktedrow@govtech.com)  
 Associate Editor: **Zack Quaintance**, [zquaintance@govtech.com](mailto:zquaintance@govtech.com)

 Associate Editor, Data & Business: **Ben Miller**, [bmiller@govtech.com](mailto:bmiller@govtech.com)

 Education: **Andrew Westrope**, [awestrope@govtech.com](mailto:awestrope@govtech.com)  
 Assistant News Editor: **Jed Pressgrove**, [jpressgrove@govtech.com](mailto:jpressgrove@govtech.com)  
 Staff Writers: **Skip Descant**, [sdescant@govtech.com](mailto:sdescant@govtech.com)
**Julia Edinger**, [jedinger@govtech.com](mailto:jedinger@govtech.com)  
**Katya Maruri**, [kmaruri@govtech.com](mailto:kmaruri@govtech.com)  
**Jule Pattison-Gordon**, [jpgordon@govtech.com](mailto:jpgordon@govtech.com)  
**Brandon Paykarnian**, [bpaykarnian@govtech.com](mailto:bpaykarnian@govtech.com)  
**Adam Stone, David Raths**  
 Web Producer: **Andi Wong**, [awong@govtech.com](mailto:awong@govtech.com)

## Contributors:

Web Producer:

**DESIGN**

 Chief Design Officer: **Kelly Martinelli**, [kmartinelli@govtech.com](mailto:kmartinelli@govtech.com)  
 Senior Designer: **Crystal Hopson**, [chopson@govtech.com](mailto:chopson@govtech.com)  
 Production Director: **Stephan Widmaier**, [swidm@govtech.com](mailto:swidm@govtech.com)
**PUBLISHING**

 Senior Vice President:  
**Kim Frame**, [kframe@govtech.com](mailto:kframe@govtech.com)

## Strategic Account Directors:

**Mark Androvich**, [mandrovich@govtech.com](mailto:mandrovich@govtech.com)  
**Carmen Besirevic**, [cbesirevic@govtech.com](mailto:cbesirevic@govtech.com)  
**Lisa Brown**, [lbrown@govtech.com](mailto:lbrown@govtech.com)  
**Katie Dunlap**, [kdunlap@govtech.com](mailto:kdunlap@govtech.com)  
**Lynn Gallagher**, [lgallagher@govtech.com](mailto:lgallagher@govtech.com)  
**Karen Hardison**, [khardison@govtech.com](mailto:khardison@govtech.com)  
**Kristi Leko**, [kleko@govtech.com](mailto:kleko@govtech.com)  
**Rebecca Regrut**, [rregrut@govtech.com](mailto:rregrut@govtech.com)  
**Lara Roebelen**, [lroebelen@govtech.com](mailto:lroebelen@govtech.com)  
**Kelly Schieding**, [kschieding@govtech.com](mailto:kschieding@govtech.com)  
**Melissa Sellers**, [msellers@govtech.com](mailto:msellers@govtech.com)

## Bus. Dev. Manager:

**Sheryl Winter**, [swinter@govtech.com](mailto:swinter@govtech.com)

## Director of SMB Sales:

**Ron Avneri**, [ravneri@govtech.com](mailto:ravneri@govtech.com)

## SMB Account Director:

**Katrina Wheeler**, [kwheeler@govtech.com](mailto:kwheeler@govtech.com)

## SMB Account Managers

**Dana Kansa**, [dkansa@govtech.com](mailto:dkansa@govtech.com)  
**Lisa Blackie**, [lblackie@govtech.com](mailto:lblackie@govtech.com)

## Director of Sales Administration:

**Jane Mandell**, [jmandell@govtech.com](mailto:jmandell@govtech.com)

## Sales Administrators:

**Janaya Day**, [jday@govtech.com](mailto:jday@govtech.com)  
**Tara Holm**, [tholm@govtech.com](mailto:tholm@govtech.com)  
**Lien Largent**, [llargent@govtech.com](mailto:llargent@govtech.com)  
**Sharon Penny**, [spenny@govtech.com](mailto:spenny@govtech.com)

## Chief Customer

 Success Officer: **Arlene Boeger**, [aboeger@govtech.com](mailto:aboeger@govtech.com)  
 Dir. of Content Studio: **Jeana Bigham**, [jbigham@govtech.com](mailto:jbigham@govtech.com)  
 Dir. of Digital Marketing: **Zach Presnall**, [zpresnall@govtech.com](mailto:zpresnall@govtech.com)  
 Subscription Coord.: **Enie Yang**, [subscriptions@govtech.com](mailto:subscriptions@govtech.com)
**CORPORATE**

## Executive Chairman of the Board:

**Dennis McKenna**, [dmckenna@govtech.com](mailto:dmckenna@govtech.com)  
 CEO: **Cathilea Robinett**, [crobinett@govtech.com](mailto:crobinett@govtech.com)  
 CAO: **Lisa Harney**, [lharney@govtech.com](mailto:lharney@govtech.com)  
 CFO: **Paul Harney**, [pharney@govtech.com](mailto:pharney@govtech.com)  
 Executive VP: **Alan Cox**, [alanc@govtech.com](mailto:alanc@govtech.com)  
 Senior VP of Events: **Jack Mortimer**, [jmortimer@govtech.com](mailto:jmortimer@govtech.com)  
 Executive Editor: **Paul W. Taylor**, [ptaylor@govtech.com](mailto:ptaylor@govtech.com)  
 Chief Innovation Officer: **Dustin Haisler**, [dhaisler@govtech.com](mailto:dhaisler@govtech.com)

*Government Technology* is published by e.Republic Inc. Copyright 2021 by e.Republic Inc. All rights reserved. Government Technology is a registered trademark of e.Republic Inc. Opinions expressed by writers are not necessarily those of the publisher or editors. Article submissions should be sent to the attention of the Managing Editor.

Subscription Information: Requests for subscriptions may be directed to Subscription Coordinator by phone or fax to the numbers below. You can also subscribe online at [www.govtech.com](http://www.govtech.com).

 100 Blue Ravine Rd. Folsom, CA 95630  
 Phone: (916) 932-1300 Fax: (916) 932-1470

Printed in the USA.

# Culturally Speaking

**G**T did a series a few years ago that looked at whether millennials wanted to work for government. Back in 2017, the number of government workers nearing retirement age was concerning to many. Our series aimed to examine what it would take to inject some new workers into government.

One takeaway from several interviewees was the sense of mission that government work offers: being able to have a real community impact is repeatedly shown to weigh heavily in employment decisions.

But as government and the rest of the country starts returning to pre-pandemic activity levels, one lingering issue is how to maintain an engaged workforce. Are employees who are working at home as connected to their organizational mission? How do managers ensure staff know that their work is valued?

Research from Quantum Workplace and the Human Capital Institute identified six characteristics of organizations with “good” company culture: They’re people-driven, high-performing, caring, supportive, innovative and flexible.

Demonstrating a commitment to these values can be harder in virtual environments than physical ones; practices that were working well pre-pandemic don’t necessarily translate to the hybrid work environments that are just now starting to take shape.

At the NASCIO Midyear virtual event in late May, panelists contemplated the enormity of the challenges confronting state CIOs and others in management. “We’ve been through a giant social experiment in the last 15 months,” said Lee Rainie, Pew Research Center director of Internet and technology research, “and we’re heading into an even bigger one.”

The great remote shift of 2020 and beyond proved that technology can capably bridge the productivity gaps many people

feared, but building connection between people is a greater challenge.

“I’m not concerned from a technology perspective,” explained Texas Department of Information Resources Executive Director Amanda Crawford in a discussion about hybrid work, “but from a logistical and management perspective how we’re able to keep cohesive teams.”

Former Delaware CIO James Collins, now an executive at Microsoft, moderated a NASCIO panel on workforce that underscored concerns about culture. Microsoft itself conducted an exhaustive workforce survey with revealing results. Among its findings is that “high productivity is masking an exhausted workforce.” Without the buffer of a commute to serve as a dividing line between work and home, employees report working more after hours, leading to growing concerns about burnout.

The onus is on leaders to be intentional about communicating respect for work-life balance. What can also go far is making an effort to personally connect with employees, and “being very deliberate about being inclusive ... and inviting people to engage,” Collins said, noting that not everyone connects in the same way.

Another piece of advice is to lead with both empathy and authenticity to foster a genuine sense of connection between people and encourage organizational loyalty.

The shift to hybrid work environments requires a shift in mindset as well. Maine CIO Fred Brittain admitted that pre-pandemic, he likely would not have seen the value of the mindfulness training his department recently held. They also held a virtual IT variety show as another way to help staff connect informally. And while every idea won’t speak to every employee, Brittain said, it’s important to “reach for ideas you might never have considered before.” **BT**



# 20

# VDGS

VIRTUAL DIGITAL GOVERNMENT SUMMITS



- Arizona
- Arkansas
- Bay Area
- California
- Chicago
- Colorado
- Connecticut
- Florida
- Georgia
- Hawaii
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Los Angeles
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Nevada
- New Jersey
- New York
- New York City
- North Carolina
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Tennessee
- Texas
- Utah
- Virginia (COVITS)
- Washington
- West Virginia
- Wisconsin

## Spreading Best Practices & **Spurring Innovation.**

government  
technology

**ATTEND/SPONSOR:**  
[events.govtech.com](https://events.govtech.com)



# Making government more agile

How Oakland County, Michigan, rapidly modernized its call center operations with Amazon Connect

The COVID-19 pandemic stretched many state and local government resources beyond their capacity. In call centers, governments faced staffing constraints, higher call volumes, and increased demand for services.

Municipalities like Oakland County, Michigan, grappled with legacy phone systems that did not scale to meet their needs or provide modern capabilities or analytics that helped them make proactive decisions. This was a particularly pressing issue for a jurisdiction like Oakland County, which serves more than 1.2 million constituents and is the second most populated county in the state.

In response, the county turned to [Amazon Connect](#), a cloud-based call center from Amazon Web Services (AWS), to expand its capacity. The solution provides the county with a range of capabilities to improve service delivery and offer timely answers to constituents' questions as vaccine distribution continues.

## Solving call center challenges

Before implementing Amazon Connect, Oakland County had a legacy phone system that did not provide comprehensive analytics. Leaders there also needed to manage an increasingly remote workforce and call center agents who needed a better way to securely connect. According to Mike Timm, the county's IT director, in some ways the challenges were bigger than just technology.

"During an emergency, you have so many different stakeholders and methods of communication," Timm says. "For example, many senior citizens don't have email or may not check it every day. They are accustomed to telephones, so it's really that whole challenge of different people needing to be contacted in different ways."

This also highlights the digital equity issues many communities still face. Some constituents don't have smartphones or computers and only have access to landlines. They may also not have a touchtone phone.

Along with these challenges, EJ Widun, the county's chief technology officer, says an evolving regulatory and public health environment made it difficult for the county to streamline communications.

"It was so fast paced and fast changing. When an announcement would come out (related to the pandemic), we would see huge spikes in call volumes," Widun says.

The county had to be equipped to handle these spikes, but it also needed to stay connected with constituents and provide them with accurate and timely information. To meet these needs and modernize call center operations, Oakland County leaders turned to Amazon Connect.

## The power of Amazon Connect

The county, which already hosted many of its websites on AWS Cloud infrastructure, worked with the AWS team to quickly stand up a new cloud-based call center in just two days.

"There are no servers, so you don't have to go through extensive hardware procurement cycles or sign binding, long-term contracts. Anyone with an AWS account can log into the AWS Management Console, launch an Amazon Connect instance, claim a phone number, and start taking or receiving calls in about five minutes. Since AWS manages the telephony components, customers can scale to thousands of concurrent calls virtually overnight," says Dominic Catalano, a senior specialist solutions architect with AWS.

Amazon Connect is a powerful tool for constituent engagement because it's an omnichannel solution that facilitates voice-based, web-based, and asynchronous communications. The solution also provides robust analytics, including custom dashboards, to track agent performance, wait times, average call times, call volume, and more. Agencies can take advantage of machine learning capabilities that enable features such as automatic call transcription, call categorization, and sentiment



analysis, the latter of which allows agents to better understand the mood and emotions of callers in real time and deliver more responsive service.

Amazon Connect includes a default set of contact flows, which enables quick set-up. Customers also can use a drag-and-drop interface to create different interaction points and prompts and to reconfigure or quickly alter their call center experience.

The solution offers several benefits for Oakland County. Call center staff can log in remotely, which sped time-to-value after implementation and led to more flexibility and business agility for the county. Since Amazon Connect is cloud-based, the county didn't have to procure hardware or undergo a lengthy, complex deployment. Amazon Connect was more cost effective, as well. Because AWS employs a pay-as-you go model, rather than a pay-per-agent fee model, Catalano notes that an agency can onboard hundreds or thousands of agents into Amazon Connect without having to pay anything upfront.

Oakland County essentially used Amazon Connect as a front door, integrating the solution into its legacy phone system to take advantage of the scalability and customization Amazon Connect offers.

"As you think about the drivers of trying to maintain costs, trying to reduce your technical debt, and the other things that come with it, AWS frees up a lot of those things," Widun says. "We were able to expand from 20 or 30 agents to having a hundred agents ready to take calls on peak days and then take that back down. We had real-time dashboarding capabilities and the ability to look at call flows. We really built off our long-standing relationship with AWS."

### Improving call center operations

The county achieved a 75 percent reduction in its cost per call thanks to Amazon Connect's callback feature, which allows residents who dial into the call center to leave their number. This is then put into a queue and routed to the next available agent. Timm says this feature was crucial for better serving senior citizens, who largely prefer to speak to a real person.

"You could reduce your call volume this way or reduce your call times, hold times, and queue size to reduce and minimize costs. Those things are important to us, but at the same time our job as a government unit is to make sure all our constituents can be represented and heard," Timm says.

Before implementing Amazon Connect, constituents experienced dropped calls and tens of thousands of callers were unable to connect to the Vaccine Health Contact Center at all. Now, there are zero calls that are not connected. Oakland County now also has access to historic and real-time analytics that have increased its visibility into call center performance and allowed it to scale service based on demand.

Amazon Connect also has given the county more flexibility to handle constituent calls, allowing it to deliver omnichannel service via phone, email, and voice-based experiences.

"Omnichannel communication is essential. County government is the largest form of government that still has daily interactions with citizens. At a time like this is when we're needed most, having those different ways to relate to all the citizens that fit in your environment is essential," Widun says.

### Advice for those looking to modernize their contact center

Amazon Connect helped Oakland County innovate quickly and more cost-effectively during a time when constituents need them most. Through effective collaboration and a willingness to be more agile, the county created a digital foundation it can build on to advance its call center operations.

"From an IT standpoint, now is the time to bring innovation to your government," Widun says. "This is the time to improve things since you don't have to be limited by the status quo. There's a chance to get investment, to create a better experience for the citizens we serve, and continue to drive that change."

**For more information on how to setup an omnichannel cloud contact center, visit <https://aws.amazon.com/connect/>.**

*This piece was developed and written by the Government Technology Content Studio, with information and input from AWS.*

PRODUCED BY: 

Government Technology is about solving problems in state and local government through the smart use of technology. Government Technology is a division of e.Republic, the nation's only media and research company focused exclusively on state and local government and education. [www.govtech.com](http://www.govtech.com)

FOR: 

Amazon Web Services (AWS) Worldwide Public Sector helps government, education, and nonprofit customers deploy cloud services to reduce costs, drive efficiencies, and increase innovation across the globe. With AWS, you only pay for what you use, with no up-front physical infrastructure expenses or long-term commitments. Public Sector organizations of all sizes use AWS to build applications, host websites, harness big data, store information, conduct research, improve online access for citizens, and more. AWS has dedicated teams focused on helping our customers pave the way for innovation and, ultimately, make the world a better place through technology. [Contact us](#) to learn how AWS can help you with your biggest IT challenges.

[aws.amazon.com/stateandlocal/digital-government](https://aws.amazon.com/stateandlocal/digital-government)

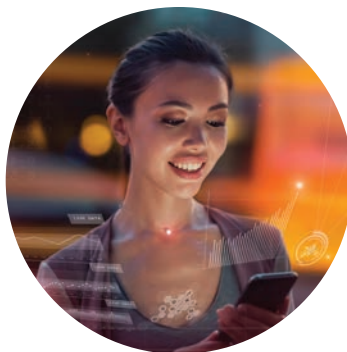


## Cyber Stats

The Cyberspace Solarium Commission is pushing for 30 of its recommendations to move forward this year, but at the annual RSA conference in May, representatives named two as the commission's top priorities. One is a federal cyber incident reporting law, and the second is the creation of a Bureau of Cyber Statistics that would collect and analyze cyber data to help identify broad trends in predicting future threats.

## Get Smart

**The Virginia Smart Community Testbed — a partnership between Stafford County and the Center for Innovative Technology to test emerging tech like 5G, drones and smart flood control — launched May 25. One major goal of the testbed is to improve public safety in the area, driving innovation to bring first responders the best tech available.**



# 2%

The percent tax a New York state bill proposes enacting for annual receipts big tech companies earn from residents' data.

# 75

The number of internal processes Scranton, Pa., mapped as it worked to move to a cloud-based ERP platform.

# 12

The number of high school interns in Baltimore who will work with tech companies on civic tech projects, building career pathways for the city's youth.

# \$25K

The fuel cost savings the Martha's Vineyard Transit Authority in Massachusetts has seen since 2018 by starting to electrify its bus fleet.



## BIZ BEAT

Biobot Analytics, the startup that identifies levels of opioids — and, more recently, COVID-19 — in wastewater, is hitting the federal government. The U.S. Department of Health and Human Services is throwing its weight behind the company, funding testing for COVID-19 at 320 wastewater treatment plants serving 100 million people across 50 states and territories over 12 weeks, with the aim of helping cities stay on top of the virus's spread.

## WHO SAYS?

*"We can't look around and think, 'Oh, it's June 2022, I guess we should start talking to election officials again.'"*

govtech.com/quotejuly2021

## MOST READ STORIES ONLINE:

How long might the COVID chip shortage last?

Ohio CIO Ervan Rodgers Announces Move to the Private Sector

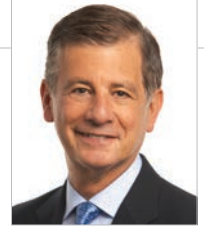
Knopp Resigns as Wyoming CIO After Major Health Data Leak

Utah Website Redesign Looks to Capture a Younger Audience

Biden Executive Order Revamps Nation's Cybersecurity Posture

Passport Raises Another \$90M, Bringing Total Above \$200M





# Funding the Future

Federal plans must include funding for digital infrastructure.

Infrastructure is one of the hottest topics for the federal government right now, with the Biden administration's sweeping proposals to repair and modernize over 20,000 miles of bridges, highways and roads. But as the initiative progresses, there exists an important definitional issue that should receive much more attention in Washington: digital infrastructure.

Congress has not debated infrastructure investments since the explosive growth of Internet of Things (IoT) devices and connectivity. Instrumentation as an emerging government technological advancement will, if properly funded, produce transformative advances in how we use, manage, repair and build infrastructure. Connected sensors that monitor water flows, energy usage, bridge vibrations and air quality will produce dramatic advances in resilience and sustainability and help public officials make sure that public investments are more equitably made and maintained. The potential is almost unlimited and ranges from improving the social determinants of health by pre-emptively intervening before poor health outcomes appear to reducing traffic accidents or advancing

better pricing and sharing of streets, curbs and sidewalks.

Raleigh, N.C., is a city at the vanguard of this movement, led by Beth Stagner, IT business applications director, and Jim Alberque, GIS and emerging technology manager. Raleigh, thanks to its leadership and an ongoing annual fund for

tech innovation, invests in promising new technologies for the city, including those that advance the use of AI and IoT sensors that literally help employees perform better and make decisions with more information. Pattern detection and predictions emanate from instruments embedded in trash cans, parking apps and meters, trash trucks, road sensors, and cameras that anonymously monitor turning movements in order to re-engineer dangerous intersections and much more.

Stagner points to geospatial infrastructure as one of the underlying pillars of the city's digital architecture, illustrating how it "allows us to integrate and work across multiple platforms and applications. And that's been really crucial to the city because it brings more city workers out of their silos and causes them to work together." Alberque, who also manages the GIS architecture, emphasizes that GIS is an integration platform since 90 percent of the city's data is spatially aware and location-based.

Across the country, digital platforms help cities improve the design of capital projects and guide maintenance by watching rising water levels, calibrating bridge maintenance to vibration analytics or sensing underground cracks that might develop into potholes. Digital platforms coupled with AI also assist city officials in dynamic management of their assets. Curb and sidewalk digital platforms integrate anonymized data concerning parking, ride-share companies, and scooter and pedestrian usage, and guide informed decisions about parking, scooter drop-offs, bike lanes and the placement of outdoor cafes. Or as Alberque says,

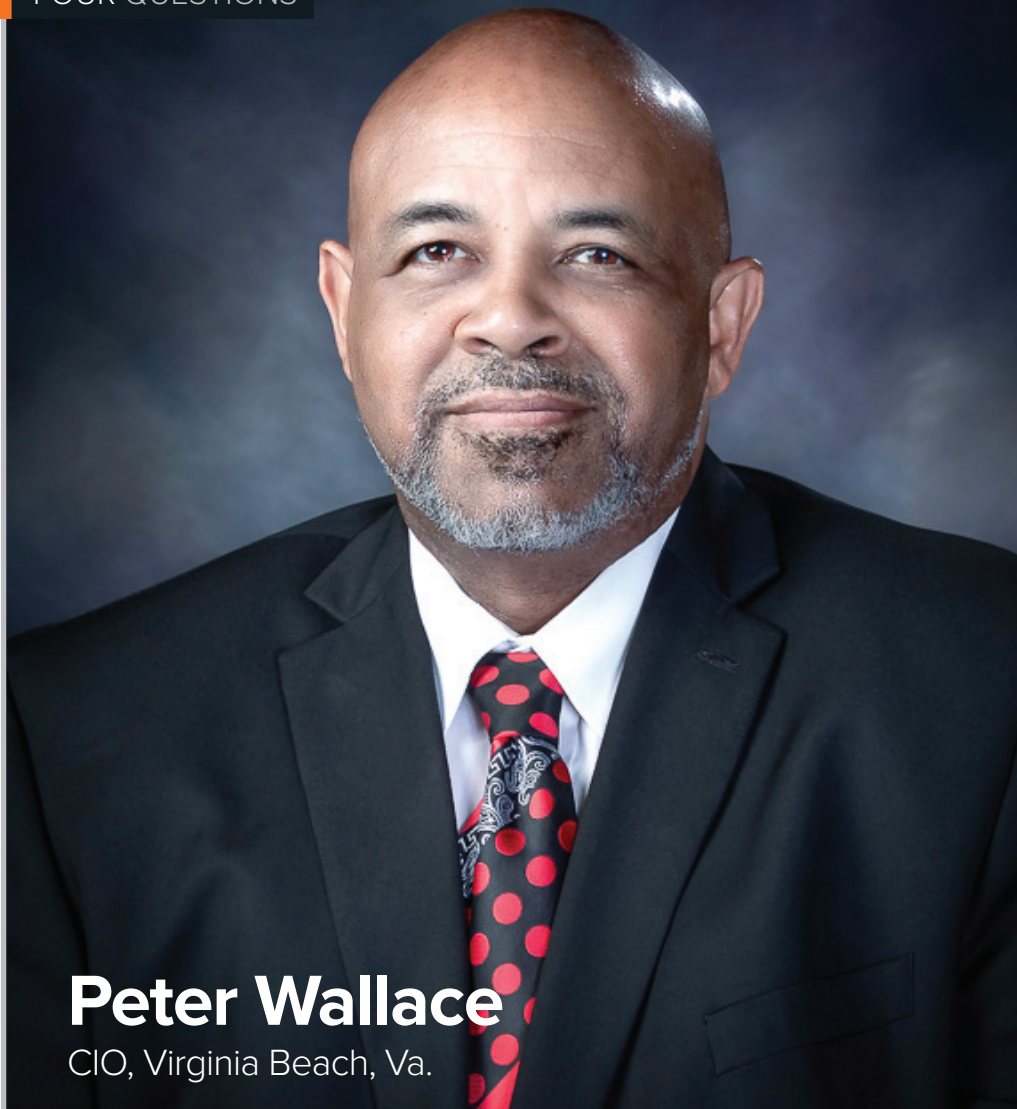
it's not just about seeing an object, but asking "why do I see that object? And what is that object going to do? It becomes part of a shared understanding with all of this other information."

Raleigh's IT vision statement nicely captures the compelling case for digital infrastructure and IT enablement because it allows "coordinated investment, use of resources and implementation of initiatives for desired outcomes." No more should officials build a project merely with backward-facing data. No longer should maintenance be scheduled based on simple routines and nor should one agency build without other city officials and the community providing input on equity and sustainability factors. Digital infrastructure advances planning and dynamic iterations in the use of those assets.

Using that data well "exponentially increases your workforce," according to Stagner. "You have this whole set of other things that are watching, and if you can bring that in, and train it to do such things as pattern detection, workers can make much better and faster decisions." For these Raleigh leaders, the privacy and security issues are real and need careful attention and public reassurance. But the enormous increase in the scale of the digital exhaust allows faster and better decisions.

Congress should fund digital platforms by clearly including them in the definition of infrastructure while also supporting the technical resources that would encourage broad adoption. Bang for the buck will dramatically increase and results in terms of the environment and equity will be transparent, measurable and better. [Bit](#)

**Stephen Goldsmith** is a professor at Harvard Kennedy School and director of the Innovations in Government Program and Data-Smart City Solutions. The former mayor of Indianapolis, his latest book is *The Responsive City: Engaging Communities through Data-Smart Governance*.



## Peter Wallace

CIO, Virginia Beach, Va.

As CIO for Virginia Beach, Va., *Peter Wallace* has spent the past four years leading the coastal city's central IT shop. The city's tech and innovation work in that time has been diverse and wide-ranging, from a predictive analytics and data sharing partnership built around managing seasonal flooding to responding to a pair of unprecedented crises in as many years. GT recently spoke with Wallace about crisis response, lessons learned and what's next for the department.

### 1 What have some of the major projects around the pandemic been for your office?

The pandemic itself has been eye-opening, and I think it's been a catalyst for government in this country in terms of transformation. In this instance, because there was no other choice, government had to change quickly. For us, we had to start supporting a 6,000-user remote workforce overnight, and we did. We expanded our capacity with our Internet provider. The second thing we did was build a new VPN so it would be seamless and very secure.

[As of April 2021], we still have about half our workforce working remotely.

### 2 What lessons or programs will extend past the pandemic?

One of the main lessons we learned is that you have to be agile. We always have that mindset in IT, but I think the organization has now come to know how much they depend on IT. It goes back before the pandemic. In 2019, we had a shooting in a municipal building. We had to move 400 people out of the building within a week, find them spaces and get them back to work.

It's been a crazy two years. We were approaching the first year of the anniversary of that shooting when the pandemic came and we had to shut down again. What we have learned in IT is to be very agile, to be ready for what's next and to be aware that people's psyches are very fragile. You have to be mindful and take a new leadership approach. Make sure that you put humanity first. When you get disrupted at your job for a shooting, your whole life is disrupted. What we have to do is make sure that people have the tools that they need to cope and also to do their work.

It's about leadership and about leading with compassion. That's what's required in these times of uncertainty, and that's what we're going to continue to do.

### 3 How has your office been able to work on digital equity and digital inclusion?

In Virginia Beach, we have a program that gives students a Chromebook, both to work on when they're in school and to take home to use the Internet. We realized that some of the students in underserved areas don't have sufficient broadband, so this program doesn't help them. They still can't get online. We've started looking at how we can partner with our school system to find out where the most underserved areas are and work to provide Internet services.

### 4 How has your traffic data sharing partnership evolved, and what's ahead?

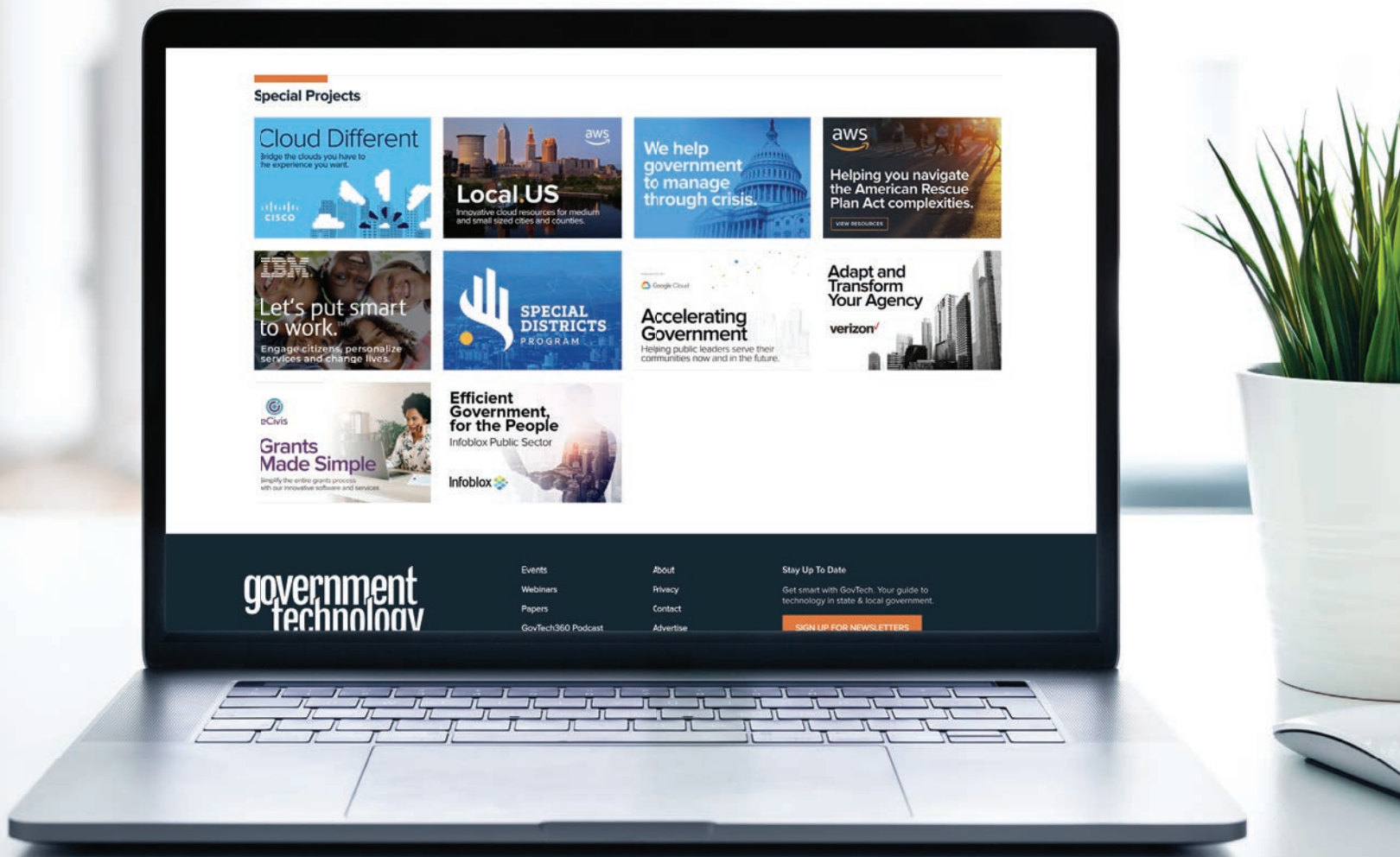
That's been a very good partnership. We now have a joint partnership with Norfolk, Va.; Miami-Dade County, Fla.; and other coastal cities around how we can use our data to predict flooding. We're working with our traffic department to not allow building on certain sites, knowing that if there is rain, several inches, that area will flood. We also want to make sure that in those situations, they know where to put up signs to close roads and keep people off of flooded streets. That's the type of proactive work that this partnership has taken on. [gt](#)

— Zack Quaintance, Associate Editor



# Take a deeper dive into government technology

Scroll down to view our Special Projects:  
[www.govtech.com](http://www.govtech.com)











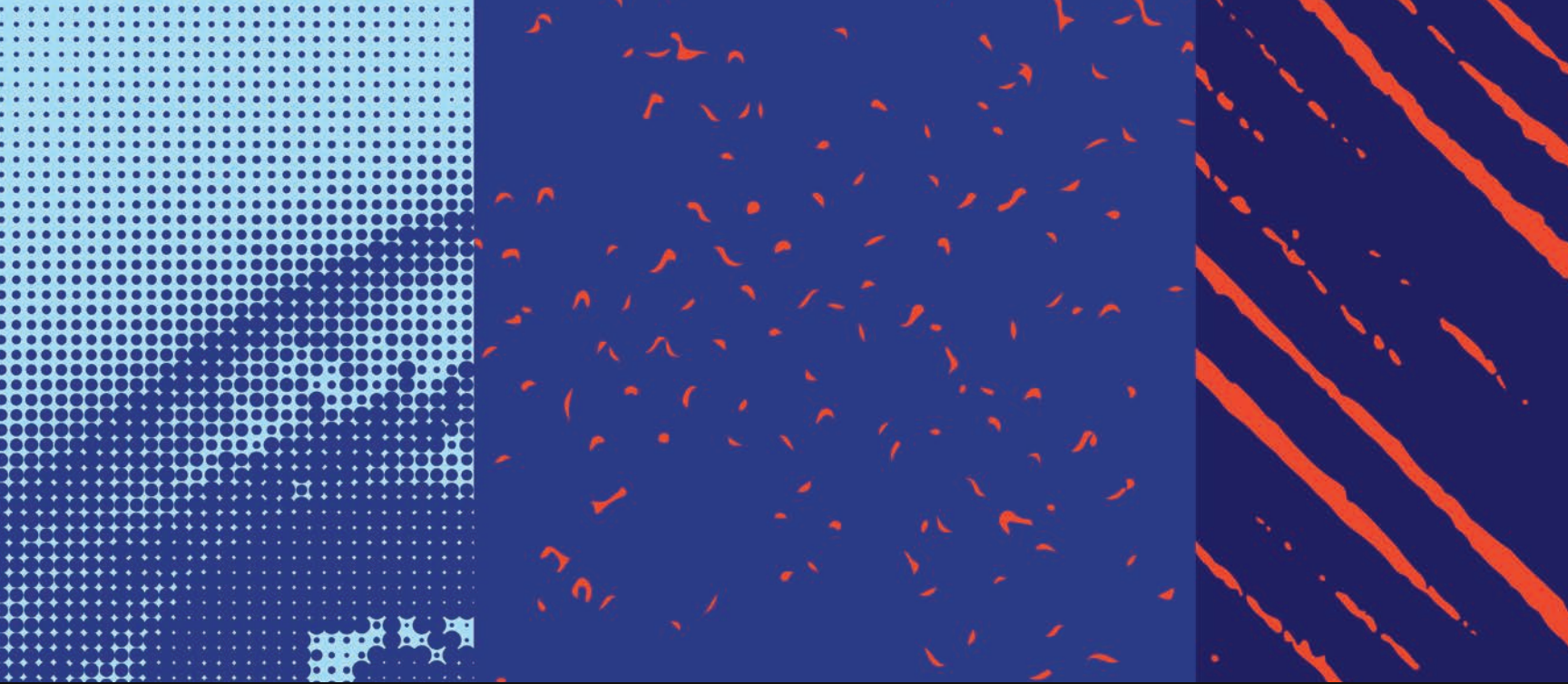
## Locally Grown

A nondescript industrial building next to a steel mill in Braddock, Pa., just outside Pittsburgh, isn't where one would expect to find a state-of-the-art farming operation, but that's where Fifth Season has set up shop to grow nutrient-dense, flavorful greens year-round with less environmental impact than traditional agriculture. Launched by three founders with an interest in collaborative robotics, Fifth Season grows the equivalent of 300 acres of outdoor space inside 126,000 square feet. The biodome (pictured) uses AI and robotics to create a software-controlled environment that maximizes light spectrum and intensity, airflow, humidity, pH, and more, so that it's always the ideal growing season for the organization's harvest.

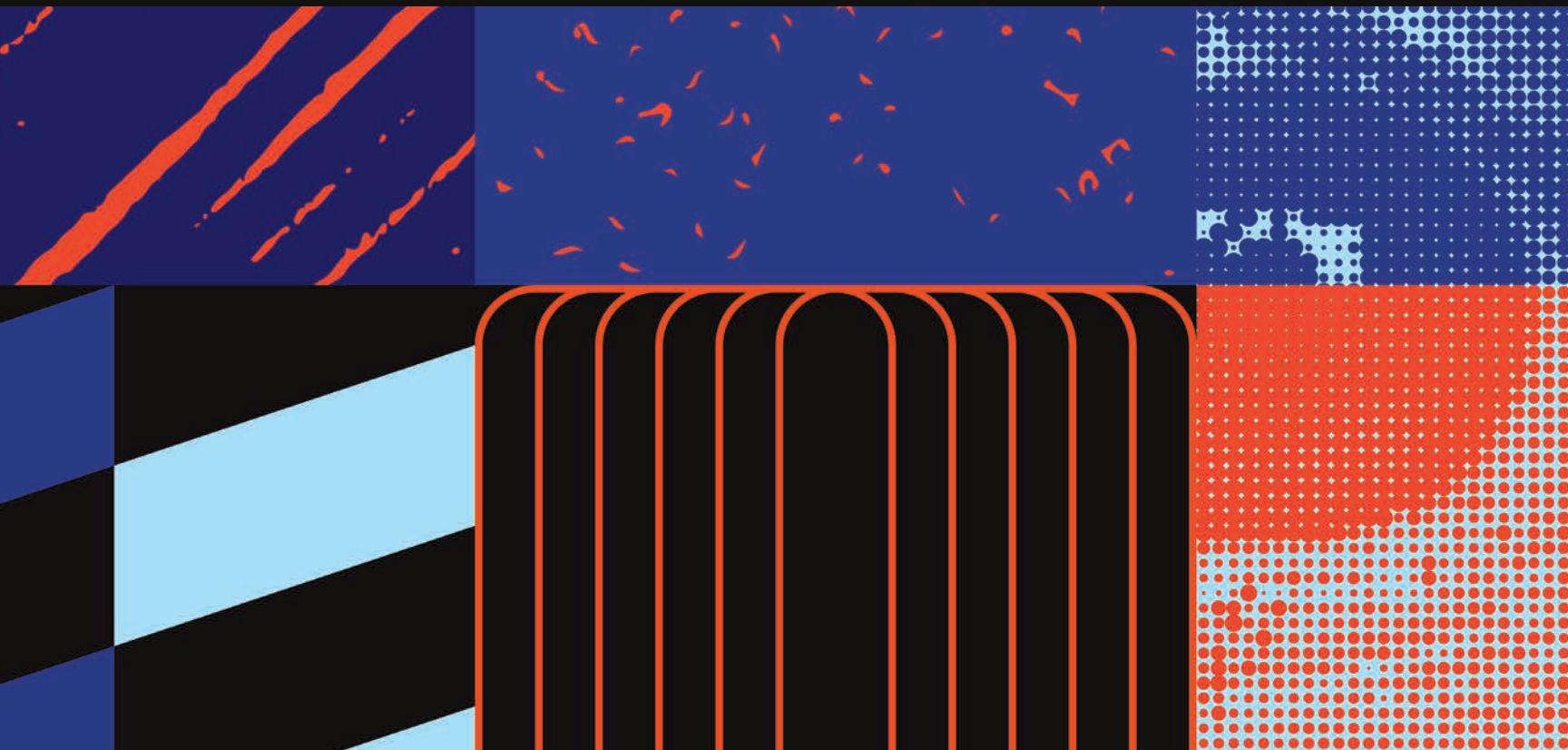
"Forty-foot-tall robots are grabbing trays of plants and putting them way up high, in places where people would otherwise be riding in scissor lifts carrying super-heavy trays," Grant Vandebussche, Fifth Season's chief category officer, told *NEXTPittsburgh*. "They're doing all the heavy lifting. In other cases, there are smaller robots that are literally just checking on the plants. Making sure they look good, taking pictures, feeding those back into our database, using our AI, letting us know that the growing recipe that we have planned is actually working."

Produce from Fifth Season is distributed to local restaurants and growers, as well as partner organizations working to make an impact on the region. For example, the Free Store, founded by Gisele Fetterman, wife of Pennsylvania Lt. Gov. and former Braddock Mayor John Fetterman, partners with Fifth Season to get fresh produce onto the tables of the community's underserved families.





# INCUBATING INNOVATION







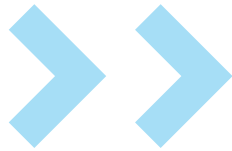
**By Zack Quaintance**

**A**s recently as a decade ago, it would have been rare — if not entirely unheard of — to find a state or local government in the U.S. that had a robust office dedicated solely to innovation work. While such innovation offices are a bit more common now, they're still far from wholly standard, and as a result there is quite a bit of variance between those that do exist.

In fact, nearly all of the government innovation offices in the country have a singular identity, with unique qualities that range from how each one was founded, to the way the offices choose their projects, to where they are housed within city hall or within the state government infrastructure. Part of this is inherent to the work; there is no standardized blueprint for discovering new ways to solve old challenges.

As such, *Government Technology* recently set out to speak with the leaders of several of these government innovation programs, aiming to get a read on where they've been, where they are now and where they are headed in the years to come. What emerged was a mosaic of interesting ideas, of ways to function and deep commitments to finding new ways to serve stakeholders and communities.

# WHAT'S IN A NAME? BOSTON'S NEW URBAN MECHANICS



**P**erhaps the first thing that stands out about the innovation track in Boston's City Hall is its name — New Urban Mechanics, a nickname given to the office by a past mayor that just seemed to fit.

The word “new” being in the title is fitting. When the office was created in 2010, it was among the first of its type in the country. It was founded by Nigel Jacob — who is still with the program, serving under the official title of co-chair of the Mayor's Office of New Urban Mechanics — and Chris Osgood, who departed from New Urban Mechanics in 2015, staying on with the city as its chief of streets, transportation and sanitation. Looking back now, Jacob remembers there was a process to figuring out what exactly it meant to be new urban mechanics.

There was, essentially, a learning curve to incorporating relatively structured innovation into the business of governing a major American city. It wasn't a steep or costly learning curve, but it wasn't without its challenges, owing mostly to the

fact that the very idea of why it should exist was so new to local government.

With 11 years of life and counting, New Urban Mechanics now ranks as one of the oldest and most robust innovation offices within any city hall in the country. The list of accomplishments by New Urban Mechanics includes a summer fellows program that continues to usher bright young people into local government, a housing innovation lab and a well-worn pathway between startups and City Hall.

Jacob has a list of lessons learned along the way, lessons that can benefit other cities hoping to replicate the office's track record and longevity, chief among them being that “how you build is just as important as what you build.”

What this means specifically is that engaging people on the ground — both those who work with the public at city hall as well as members of the public themselves — is absolutely crucial. This connects with another best practice Jacob stresses, which is that all innovation work needs to prioritize building trust, doing so by asking hard questions about whether innovation work is being done for the public, or simply being pushed upon them, regardless of whether it's something they'll actually use.

“Trust is just as important inside city hall as it is outside city hall,” Jacob said, noting that as one of the first innovation offices in the country, part of New Urban Mechanics' early task was explaining its role to other internal agencies, setting itself up as being there to support work rather than there to take anyone's existing job.

For some time now, the New Urban Mechanics team has numbered between 10 and 15 staff members, making it at once one of the biggest innovation offices in American local government and yet one of the smallest offices within Boston City Hall. In terms of funding, it's the salaries



# “TRUST IS JUST AS IMPORTANT INSIDE CITY HALL AS IT IS OUTSIDE CITY HALL.”

for staffers that require the bulk of the budget, rather than the work itself, with a substantial amount of New Urban Mechanics funding coming from grants and philanthropies.

As far as what type of projects New Urban Mechanics chooses to take on, Jacob said there is no hard and fast criteria, but there are some common qualities the department looks for, including whether it has the potential to help Boston’s marginalized communities, and whether it can help Boston gain clarity on a particular topic of direction.

In addition, the department also needs to strongly consider the timeline for results. Projects that span years may be interesting, but innovation work requires experimenting and gauging results, something that can’t easily be done if the scope of a project extends too long.

Perhaps the simplest summation of how New Urban Mechanics functions in City Hall can be found in anecdotes Jacob has about the office’s relationship with the mayor. Often, when another department brings an idea to the mayor, the mayor next takes it to New Urban Mechanics.

“More than once the mayor has walked into our office and said, ‘I’m thinking about this,’” Jacob recalled. “‘Can you please take a look at this and let me know what you think?’”



## WHAT IT TAKES TO INNOVATE

Best practices offered by veterans of government innovation.

- 1 **How you build is just as important as what you build.**
- 2 **Identify stakeholders in advance.**
- 3 **Build trust with staff who may fear new practices might cost them their job.**
- 4 **Don’t be afraid to start small. Not every project needs to be gigantic, sweeping and grandiose.**
- 5 **Benchmark where your jurisdiction stands compared to others and set clear goals.**
- 6 **Innovation spawns more innovation, so communicating about innovation activities is a must.**
- 7 **Executive sponsorship is critical to sustained support.**
- 8 **Commit to transparent review of successes and failures.**



## LIVING IN THE FUTURE, UTAH FOCUSES ON THE TECH OF TOMORROW

**U**tah — which is among the states that do the best job of embracing emerging technologies by any metric — surprisingly enough, does not have an office dedicated specifically to innovation.

Instead, innovation work was determined to be one of three responsibilities (the other two are enterprise architecture and digital government) when the state first created a chief technology officer position back in 2006. Unlike several cities and some other states, in Utah there is no separate leadership or specialized staff expressly for innovation.

The state, however, has very much built innovation work into the way its government operates. Utah CTO Dave Fletcher — a 30-plus-year veteran of state government work who has held his position since it was first created — shared a glimpse into how the state approaches innovation.

Central to the work is an annual review of emerging technologies, during which his office works to identify which of these technologies are likely to be most central to state government. In the past, this has meant a thorough examination of the potential of smartphones back in 2007, soon after the launch of the iPhone. That review led directly to Utah creating a state government app, making it the first state in the country to do so.



More recently, this same annual review process led to the determination that harnessing the power of artificial intelligence will be key to efficient state government in years to come. And — like the iPhone review before it — this has led directly to government action, this time with the creation of Utah’s AI Center of Excellence. This center is already yielding results, sometimes in areas one might not expect, like agriculture. The state was recently able to use AI to manage cattle brand inspections, digitizing a process that used to involve a public servant flipping through a physical binder in search of duplicate shapes.

That center and the smartphone app are just two examples. The state has also led the way with other technologies, including creating a strategy for cloud-based technologies all the way back in 2009, long before every state but Michigan had started to look into it.

What, exactly, does this review process look like? It’s certainly not limited to a few meetings in one office. Part of it includes a roundtable with the state’s IT directors — a group that represents departments throughout the state — to get their input on what emerging technologies stand to be

most relevant to their work. From this, the state develops specific use cases.

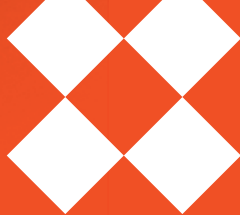
One key piece of advice that Fletcher has for those engaged in the work is that not every project needs to be gigantic, sweeping and grandiose. In fact, those projects aren’t likely to come without first starting small.

This is especially useful when it comes to financial matters. Innovation work is rarely robustly funded in state government. If stakeholders, however, can show a small innovation project is getting results, getting funding for a larger related project becomes much easier. To this end, Utah also holds monthly digital government product management meetings, where innovation work is shared. Often, the result is that new ideas and new projects are sparked from those in attendance.

“The lesson for me is that innovation spawns more innovation,” Fletcher said. “You can do something small, and then make sure you communicate and share that with a broader audience. You don’t have to bite off huge innovations all at once.”







## INSTITUTIONALIZING INNOVATION, FROM LOUISVILLE, KY., TO NORTH CAROLINA

**T**he permanence of innovation offices in state and local government has long been fluid. Many of these programs — including the Boston program discussed earlier — were given a sizable boost by Bloomberg Philanthropies, which to date has helped fund local gov Innovation Teams (called i-teams) across North America, from Anchorage, Alaska, to Durham, N.C.

While the i-teams program — which has now expanded to 20 cities across the globe — provides funding for a limited window, the programs contacted for this story all said that once innovation work started in city hall, the

institution committed to continuing it, even after the funding had gone.

In Louisville, Ky., in fact, not only did the innovation work continue, all of IT was eventually moved to be led by innovation leader Grace Simrall, whose current title with the city is chief of civic innovation and technology. Simrall said that this was done with the understanding that the entire IT department would embrace innovation as part of its work.

This is somewhat rare within local government, speaking to large commitment to fostering a culture of innovation, which Simrall attributed in no small part to having total buy-in by the city's top elected official, Mayor Greg Fischer.

That move was made in 2018, following years of productive innovation work in Louisville, much of it done with a focus on public health. One marquee innovation project for the city was AIR Louisville, which as the name implies was focused around air quality. This project, which

is almost 10 years old now, saw the city partnering with the private sector to give residents sensors attached to inhalers, in order to gain better, more granular data around where the city needed to work to improve air quality.

Simrall said that while innovation work tends to focus on unique, localized challenges, there are commonalities she's found within successful innovation projects, including identifying stakeholders in advance, benchmarking where your city stands compared to others, setting a clear goal and committing to discussing any failures in depth, which bolsters transparency and helps to avoid continuing projects once they've met a logical end.

The Innovation Center for the state of North Carolina is a different sort of program, having started its life as a physical space for testing equipment and tech platforms, said Deanté Tyler, director of the North Carolina Innovation Center. For example, the center tested chatbot technology back in 2016, seeing potential for automation of routine, repetitive tasks performed by staff.

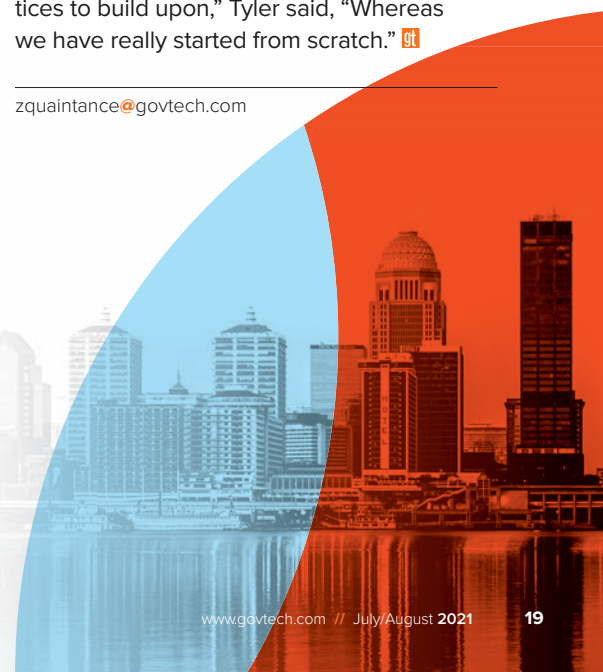
The center has since evolved to be both a space and a program, complete with two full-time staff members and occasional short-term interns from nearby academic institutions. Housed within the state's Department of Information Technology, the Innovation Center will celebrate its eight-year anniversary in the fall.

A lot of the work the center does involves listening to innovation-minded folks from various state agencies, working to help them solve their challenges as well as to complete projects that they pitch to the center.

The work of the center and like-minded programs remains a work in progress, vastly different from other agencies with mostly the same missions for decades, such as transportation or public health.

"A lot of other areas in state government have decades and decades of best practices to build upon," Tyler said, "Whereas we have really started from scratch." <sup>gt</sup>

[zquaintance@govtech.com](mailto:zquaintance@govtech.com)



# Everything you need to start your day.

## Govtech Today

Original and breaking technology  
news for state and local government.

Sign up today at  
[newsletters/govtech.com](https://newsletters/govtech.com)



GOVTECH TODAY  
MARCH 9, 2021

**Digital Government is Only Successful If It Works for All**  
Government is tasked with the hefty responsibility of doing the people's business, but what happens when people can't access services or online systems fail? [READ MORE](#)

#### OTHER TOP STORIES

**New York City Begins Electrifying Its Garbage Truck Fleet**  
The Sanitation Department has been gradually electrifying its garbage collection fleet, starting with retrofitting trucks with technology that uses highly efficient ultracapacitors for energy storage. [READ MORE](#)

**Reducing Cybersecurity Risk With Minimal Resources**  
In this exclusive interview, Mike Davis, CISO for alliantgroup, offers practical ways to assess, mitigate and manage cybersecurity risks in your organization — even on a tight budget. [READ MORE](#)

**5 Types of Folks Trying to Buy Your Business (Contributed)**  
In gov tech, growth and recognition tends to mean interest from many different people. Here, one entrepreneur offers a guide on how to sift through different types of requests and proposals. [READ MORE](#)

**How Can Government Defend Against DDoS Attacks? (Contributed)**  
A Distributed Denial of Service (DDoS) attack is a cyberattack from multiple, remote locations intended to cripple an organization's online operations, and it's one of the top four cybersecurity threats of our time. [READ MORE](#)

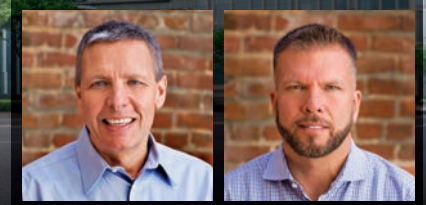
#### QUESTION OF THE DAY

Can your smartphone make a COVID-19 diagnosis based on your cough?  
[ANSWER](#)

[MORE HEADLINES](#)



# For Safe, Reliable Bus Transit, Enforcement is Key



Buses are a vital part of public transportation networks, and cities increasingly have been strengthening that network with dedicated bus lanes for safer and more efficient transit. Illegally parked vehicles can be a serious problem for bus service, and parking enforcement for those cars can be a challenge. In this *Government Technology* Q&A, **Stuart McKee (left)** and **Chris Carson (right)** share their thoughts about the important role of enforcement in a reliable transit system. They are the COO and CEO, respectively, of Hayden AI, which offers an innovative bus-mounted enforcement device for cities.

**Obviously, the pandemic decimated ridership on public transit, something cities will be dealing with for years to come. What other ways did the pandemic impact public transportation?**

**McKee:** There's a bunch of jobs you can't do via Zoom. According to 2018 Census data, 2.8 million American workers in essential industries commute to work on public transit every day. That's about 36 percent of all transit commuters.

Applying artificial intelligence and edge-based processing to transit is going to affect a significant population of individuals as well as a massive amount of our economic infrastructure.

**Carson:** Through COVID, we saw this digital transformation that's been on the rise for several years: Companies like Lyft, Uber and Amazon don't operate

from storefronts, but conduct business from the curbs. Those increasingly congested curbsides are now slowing down buses. As buses slow, workers have to spend more time on those buses. This leads to lost time and lower economic productivity.

**Your technology uses bus-mounted sensors to identify and issue tickets for cars illegally parked in a bus lane. How does it work?**

**McKee:** Our compute box is not much bigger than an Apple MacMini. And it's got a massive amount of compute — 21 teraflops of processing power. Using sensor fusion, we achieve precision localization using data from wheel odometry, GPS, vision and more.

**Carson:** Our perception system can see and reason in 3D. Using mapping layers as a "super sensor," it can tell where a car is parked to within

a 10-centimeter accuracy and if the car is parked in front of a fire hydrant, even if the system can't see the hydrant because the car is blocking it.

**McKee:** Because of this perception platform and the massive amount of computing, we can use vision to understand things that we couldn't have ever imagined five years ago.

**What policies — federal, state and local — are you seeing right now that will impact the way cities manage transit?**

**McKee:** We're really pleased to see a lot of city leaders talking about mobility. And it's not just the big ones. It's not just New York and L.A. I mean, the current secretary of transportation is a mayor from a fairly small town. And he talks frequently about how important public transportation is.

We're pleased to see this discussion at the federal level, and in cities — and at the state level too. We should talk specifically about California Assembly Bill 917 [a proposed piece of legislation that would allow video imaging of parking violations in transit-only lanes statewide.] That's an example where we've seen a discussion around the importance of efficient public transportation. And we're incredibly pleased that Los Angeles Mayor Eric Garcetti's office dialed in their support. We feel this validates some of the effort we've put in, and we're going to work really hard to provide tools and capabilities that helps folks like Mayor Garcetti realize their vision.

  
**haydenAI**

[www.hayden.ai](http://www.hayden.ai)







# ***Fast Track***

*For many states, mobile driver's licenses are the first step toward a unified digital identity for citizens. [By David Rath](#)*

**T**he COVID-19 pandemic has provided momentum for all things digital and remote. For instance, in health care it led to the rapid adoption of telehealth, which had struggled for years to gain widespread acceptance.

In motor vehicle regulation, the pandemic accelerated what has been a gradual transition to serving customers remotely. “The evolution of mobile driver’s licenses and the recognition of being able to do transactions without exchanging a physical document certainly fits within that,” said Ian Grossman, vice president of member services and public affairs for the American Association of Motor Vehicle Administrators (AAMVA). “Being able to empower customers to have a credential that they can use in a transaction where they’re not passing back and forth a physical document has been further accelerated by the pandemic.”

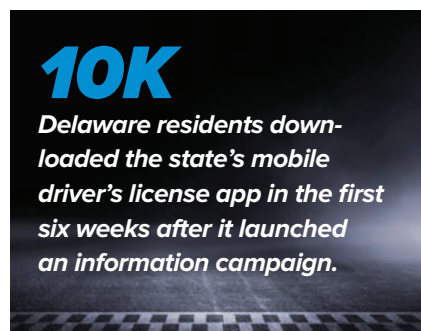
Arizona rolled out its mobile driver’s license (mDL) app in March 2021. Eric Jorgensen, director of Arizona’s Department of Transportation, is leading his state’s nascent mDL initiative. He wants to make clear, however, that the state has its sights set on something much bigger.

“I actually hate the term ‘mDL’ because it doesn’t recognize the power of what we’re doing here,” he said. Arizona calls its app AZ Mobile ID. “The whole concept is that we’re providing a way to remotely authenticate a person, to provide a trusted digital identity that doesn’t exist today. Once we provide that, we’re opening doors to enhanced government services. Also, the government can play a key role in facilitating commerce, providing a better citizen experience and providing for the security of that citizen — that goes way beyond what a driver’s license is about.”

A 2020 white paper by an industry consortium called the Secure Technology Alliance highlights some of the reasons states are intrigued by mobile IDs, described as a “new way of cryptographically verifying identity.”

“The person who holds the mDL controls what information is shared and with whom,” the report noted. “In addition, mDLs support more efficient and secure transactions. For in-person transactions, electronic authentication can give the mDL verifier confidence in the presented ID without requiring specialized knowledge of the hundreds of card design and security features applicable to the driver’s licenses (and their variants) that are issued by 56 states and territories. The mDL can also eventually be used to increase security for online purchases and interactions.”

As with any new technology, there are early adopters and others taking a wait-and-see approach or prioritizing other initiatives. State executives at the



forefront of developing mDLs agree with Jorgensen that driving is just the first use case in a larger digital identity initiative.

“There are a lot of government agency use cases where you would use your driver’s license or state ID to prove that you are who you say you are,” said Russell Castagnaro, director of digital transformation in the Colorado Governor’s Office of Information Technology. “This is all foundational work. We’re going to prove it out with the DMV, and then with taxation, and then spread it out across the other agencies as quickly as possible.”

The myColorado app, which has been downloaded by approximately 100,000 Colorado citizens, provides access to COVID-19 resources, to Colorado PEAK (Program Eligibility and Application Kit) to apply for benefits, and to DMV services and state job opportunities. It

also allows citizens to store digital vehicle registrations and proof of insurance in the app wallet. Citizens can leverage it to get a version of their fishing license, and the state will soon be adding other parks and wildlife licenses. The state also is working on a revocable consent model to be used in the health-care space, Castagnaro added.

Colorado State Patrol (CSP) troopers began accepting digital IDs on Nov. 30, 2020. The state is engaging with local police departments and sheriffs’ offices as well.

These mDLs are in their very earliest stages of use. Until more police, businesses and other state agencies invest in the technology to read mDL data, the appeal to citizens will be limited. States are essentially facing a chicken-and-egg problem. People don’t get mobile driver’s licenses because there aren’t many places that accept them, and businesses and public-sector organizations don’t invest in the technology to read and process them because not many people have them.

“We worry about that a lot,” said Jana Simpler, director of the DMV and toll operations for the Delaware Department of Transportation. “Even though this rolled out for us statewide on March 9, we want to keep the enthusiasm for mDL growing,” she noted, adding that the state began an information and education campaign in May. “In the most recent data, over 10,000 people have downloaded the app in about a month and a half.”

Delaware is also seeking to convince businesses to accept mDLs. The majority that have signed up so far have been restaurants or hospitality businesses that sell alcohol and tobacco products. They are seeing some interest from casinos and the gaming industry as well.

“The general philosophy is that once we get these into more people’s hands, and they’re trying to use them, the relying parties will recognize the need to invest in the infrastructure to read them,” AAMVA’s Grossman said. “It’s not unlike when chips on credit cards first came out. We all started to get the credit cards, but when you went to the store, they didn’t take them. But it



didn't take that long to move from that to where we are now, which is that your chip can be used pretty much anywhere.”

**Role of the CIO's Office**

Because of the potential widespread impact of mobile ID initiatives, some of them are being led by technology officials like Colorado's Castagnaro. In other states, DMVs or DOTs are taking the lead role.

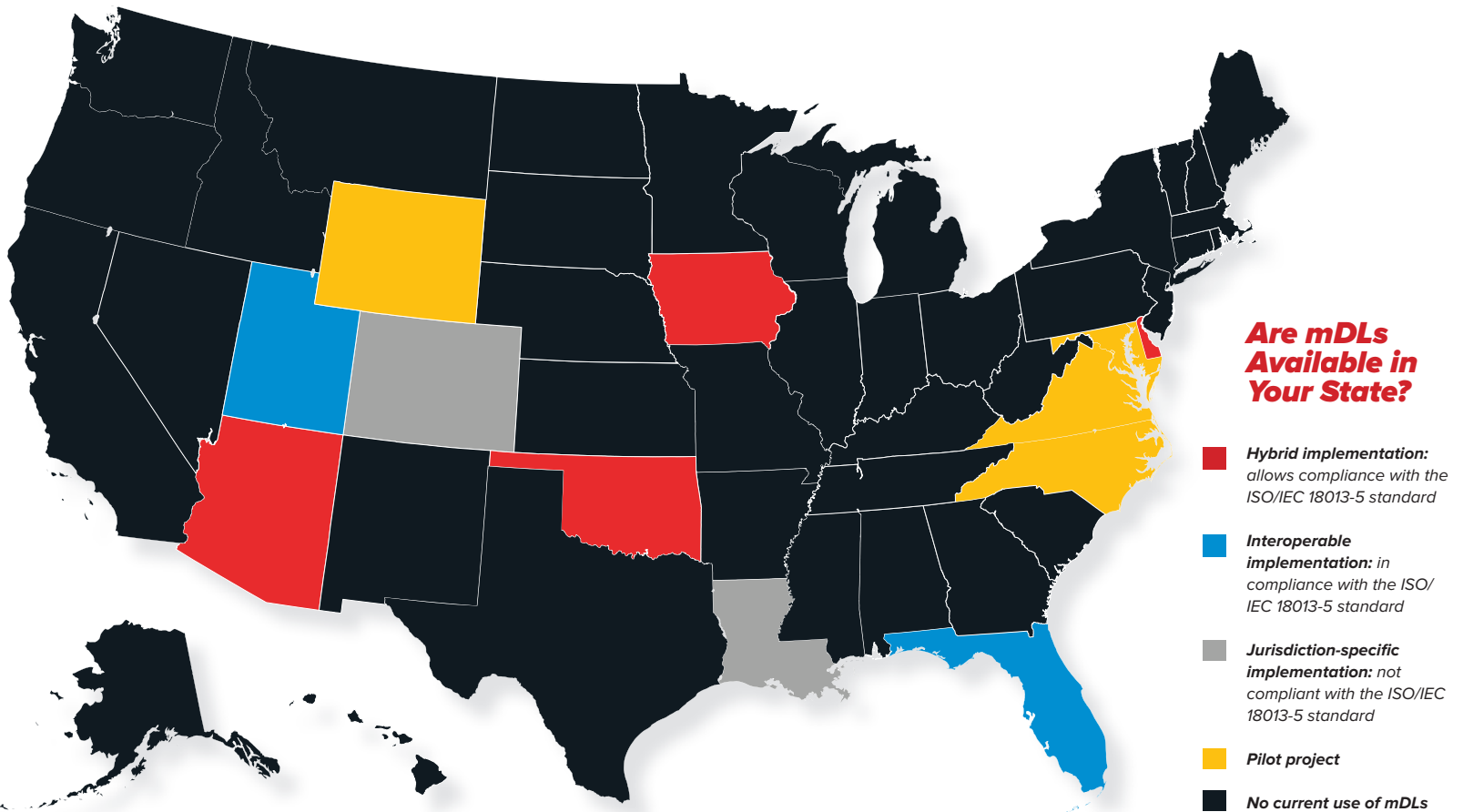
One person working at the center of the mobile ID movement believes state CIOs should form closer partnerships with DMVs. Matthew Thompson is senior vice president for civil identity, North America, at IDEMIA, a company that partners with 34 state DMVs on physical driver's license solutions. The company has partnered with three states on mDLs so far. He says that governors and state

CIOs should look at their DMV not just as an agency that provides driver and vehicle services, but as one that can operate as an identity management bureau for the entire state and provide verification services to enable e-government.

“State CIOs need to better understand the [role] that trusted identity plays in driving their entire digital transformation,” Thompson said. “They have a built-in identity bureau in their state that has a system of record that provides a route of trust that other agencies can benefit from immediately. What shined a light on the massive deficiencies and gaps we have here is rampant unemployment fraud, which has occurred to the tune of \$62 billion. By not solving the identity challenge for digital transformation, the consequences are dramatic.”

States like Arizona and Delaware have worked with IDEMIA on physical driver's license infrastructure and have extended those relationships with the company for mDLs, too. In Delaware, the Department of Technology and Information has been involved from day one as well, Simpler said. “I'm grateful for those IT folks who made sure that we got the i's dotted and t's crossed ... as well as ensuring that we followed more global ISO standard needs.”

Although it works with companies such as Ping Identity for login and multifactor authentication, Colorado has a dedicated internal team working on the core components of myColorado. “I never really liked the idea of having a third party being the only one who writes how a system works when it's your own data,” Castagnaro said.



ISO/IEC 18013-5 is a standard for mobile ID that is currently going through the adoption process at the International Organization for Standardization. The standard is aimed at ensuring interoperability and striving for best security practices.

Source: American Association of Motor Vehicle Administrators. Data current as of March 31, 2021.

## Standards

Part of what has made some states hesitant to plunge into mDL work is that standards development has been underway for more than five years. But now an International Standards Organization (ISO) standard is nearing completion. “We’re close enough with it now that we understand what the technical requirements will be,” Thompson said, “and that’s really what’s going to enable the broadest acceptance.”

Another question people have had is how mDLs relate to federal Real ID requirements. Jorgensen says a recently passed Real ID modernization bill made clear that Real IDs could be issued in a mobile format. “There’s still some work that has to be done, and TSA has been actively engaged in trying to develop all the pieces around that,” he said, adding that acceptance at airports would be a key use case for mDLs. “That becomes a great step forward,” he added.

There also needs to be a trust framework established so that, for instance, police in one state could read the IDs generated in a neighboring state. “There’s a lot of conversation around a public key infrastructure, a digital trust service, that would be able to support that exchange of the public key certificate when it’s being read,” AAMVA’s Grossman said. “We are evaluating what type of infrastructure needs to be built, who needs to build it and how it would be sustainable.”

The ISO standard focuses foremost on the secure exchange of data from the device to the reader, as opposed to a physical representation of the card on the phone, Grossman added. “When you hand over your physical card to somebody, you’re giving them all that information on the cover, when they may not need all that information. An example is every time you use your driver’s license to prove you’re over 21, that person doesn’t need to know your name, your address, or whether you are an organ donor or not. If it’s just an exchange of data that I control, then I could protect my privacy and only give you what is needed to get the transaction done.”

***I don’t expect that I will be able to drive anywhere with my mobile driver’s license for probably three to five years. But I do expect to see 15 states issuing mobile driver’s licenses to their residents by the end of 2021.***

## A Contactless Future

At a very basic level, to get to broader acceptance, people have to be able to use mDLs to drive, so police readers are key. IDEMIA’s Thompson thinks that’s going to take a while because the technology challenge is much bigger as you move down to law enforcement groups in smaller jurisdictions. “IDEMIA is working on how to help law enforcement on the acceptance side. They all recognize that they need to accept it. We all recognize that they don’t want to take people’s devices and people don’t want to hand them their devices,” he explained. “So there needs to be a contactless way of verifying that. That’s going to be a multiyear journey. I don’t expect that I will be able to drive anywhere with my mobile driver’s license for probably three to five years. But I do expect to see 15 states issuing mobile driver’s licenses to their residents by the end of 2021.”


COVID-19, Thompson added, “accelerated literally everyone’s thinking and prioritization of it across the board.”

Jorgensen says that Arizona has been working on its mobile ID project for five or six years, pushing to have ways to remotely authenticate a person. “About a year ago, we launched our modernization project that put a whole bunch of new services online,

and guarded them through this account,” he explained. “You had to create an account for various transactions — for example, we allowed parents to proctor their child’s permit test at home. That was another collaboration we did with IDEMIA. Going into the pandemic, we had about 200,000 accounts set up, and that was about two years’ worth of account building. Today we’re at 2 million, so in the past year we’ve done 1.8 million additional accounts. That’s a huge expansion in demand for online services that the pandemic caused.”

Even before the pandemic, Arizona could do simple title transfers online using its ID product that was the precursor to the mDL to verify the transaction between the two customers. “We were doing fewer than 100 a month before the pandemic and now we do well over 1,000 every month,” he said.

Simpler notes that Delaware started working on a mobile driver’s license in 2018, two years before the pandemic hit. “We saw an interesting opportunity with the pandemic having hit to talk about the contactless nature of this. So we’ve talked about it being secure and convenient, but all of a sudden that contactless nature became very important in the pandemic in a way that we weren’t anticipating. We absolutely think that the ability to share your identification in a contactless way certainly has driven the adoption rate much higher than we might have anticipated.”

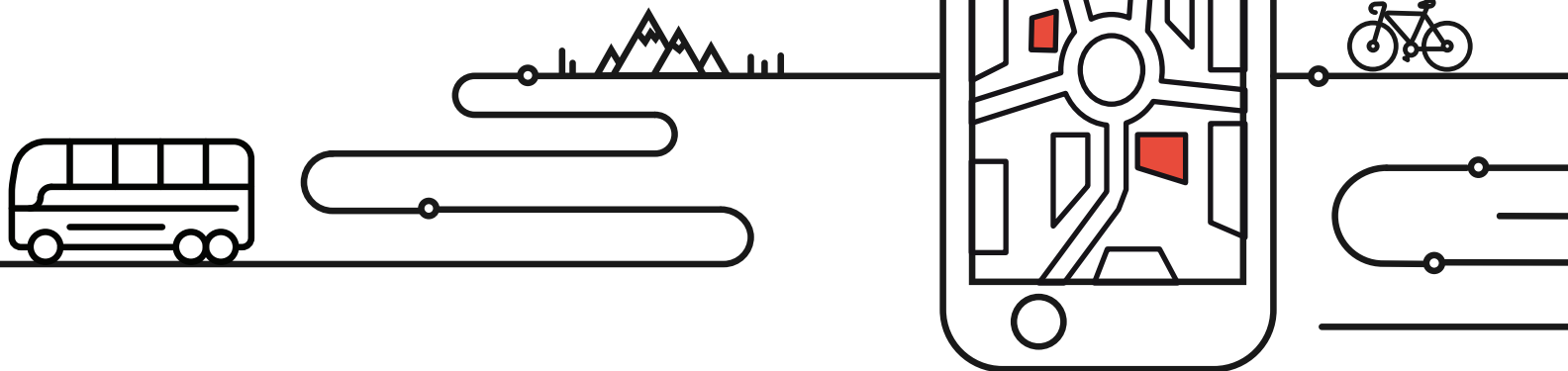
First-year adoption of mDLs in the states that have rolled them out has been slow, but Arizona’s Jorgensen is convinced those numbers will improve over time. “As we find ways to incentivize the adoption by the verifiers, the benefits will become clearer to the public,” he said. “I think that’s coming quick.” 





# Transportation Reimagined

Using data-driven technologies to ensure citizen safety and expand mobility options.



**A**s the nation recovers from the COVID-19 pandemic, traffic volumes are growing on roadways and transit systems. State and local transportation officials face a difficult balancing act: They must ensure safe citizen mobility while closely managing transportation networks to keep traffic moving smoothly.

To meet these demands, forward-leaning jurisdictions are using new digital tools, including cloud-based platforms and analytics applications powered by artificial intelligence (AI). These technologies can deliver quick wins like optimizing transit schedules or identifying tire-eating potholes. They also help transportation agencies respond to budget and planning challenges created by new commuting patterns due to increased remote work, expanding mobility options and other factors — all without rip-and-replace modernizations that would break budgets strained by the pandemic.

## Transitioning to a new normal

Before departments of transportation (DOTs) can achieve their modernization goals, they must grapple with a host of short- and long-term issues.

Departments faced severe budget pressure due to pandemic-driven social distancing requirements and lockdowns, which caused public transit ridership to plummet

and reduced fare revenue. With fewer drivers on the roadways, DOTs saw gas-tax revenues decline as well. Some of these changes may be long lasting as employers institute permanent work-from-home policies.

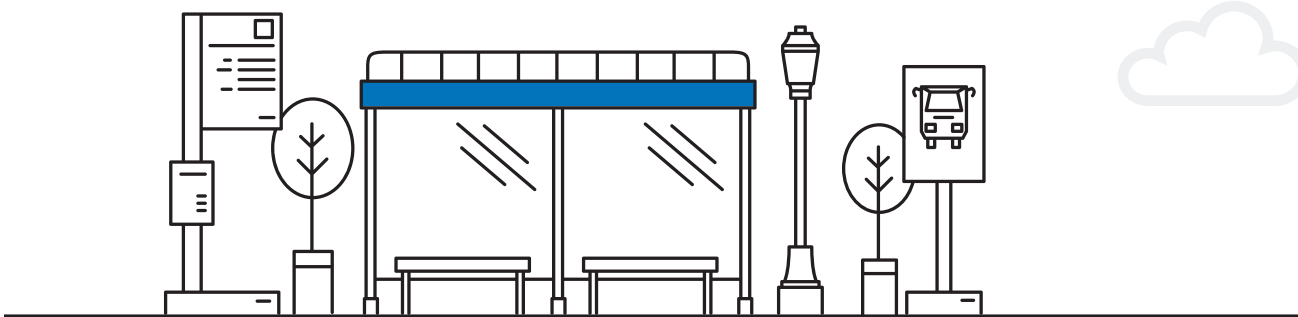
New budget pressures add to long-standing problems like outdated IT systems that make it hard for DOTs to share data across agency boundaries and analyze the growing volume of information gathered by sensor networks and high-definition cameras.

Population growth in many urban and suburban areas is outstripping the capacities of existing transportation networks, leading to roadway congestion, overcrowded buses and trains, and hard decisions about prioritizing infrastructure maintenance projects. Citizens also are opting for non-traditional modes of transportation — from ride-sharing services to e-bikes and autonomous vehicles — making it even more complex for public officials to manage mobility.

## Smart mobility takes center stage

Proactive DOTs are addressing these issues by leveraging smart mobility.

“The goal is to develop a comprehensive strategy for enabling a transportation system that is optimized across different transportation modes using real-time data for greater situational awareness,” says Monali Shah, strategic business



executive for public sector transportation at Google Cloud. “The goal is to integrate mobility in a way that supports how people want to travel today and in the future.”

The Seattle Department of Transportation (SDOT), for example, is taking a data-driven approach to strengthening its transportation systems. The city is improving transportation infrastructure to keep pace with a growing population, but it needed to minimize disruption for drivers and transit passengers during construction projects. The city adopted intelligent cloud-based technologies to manage and coordinate construction projects citywide to reduce their impact.

Heather Marx, director of downtown mobility, is at the epicenter of Seattle’s construction boom. She is responsible for bringing together SDOT’s regional transportation partners — King County Metro Transit, light rail operator Sound Transit, the Port of Seattle and the Washington State Department of Transportation — to ensure transportation improvement projects come together in the right order, at the right time, with the right execution.

“The goal is to integrate mobility in a way that supports how people want to travel today and in the future.”

*Monali Shah, Strategic Business Executive for Public Sector Transportation, Google Cloud*

[SDOT uses an application called dotMaps to better manage public rights of way.](#) Combined with Google Maps and Google Cloud, dotMaps uses data analytics and machine learning to reduce disruption caused by multiple public and private construction projects. dotMaps also helps commuters use the various regional transportation systems efficiently, particularly during the most congested periods of the day.

A Google Cloud partner, SADA, helped launch dotMaps in less than six months and Seattle quickly reaped rewards from using it. The application gives SDOT 100 percent visibility and

control over projects on city streets, which has saved more than \$21 million to date. Additionally, commuters are saving time and money by adjusting their travel plans in the event of road closures. The rate of commuters driving alone also decreased, with more than 66 percent of commuters now choosing to walk, carpool, bicycle or telecommute to work, according to SDOT.

Seattle isn’t the only large city benefitting from dotMaps. The Chicago Department of Transportation’s Project Coordination Office (PCO) needed to maximize investments in street paving and infrastructure projects by improving collaboration between city departments and utilities to reduce construction conflicts.

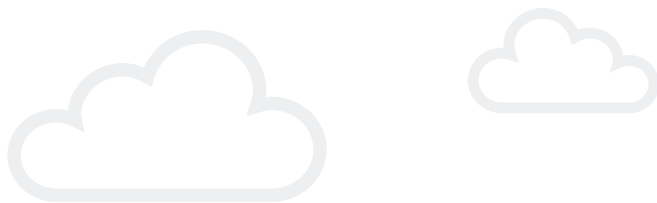
[Using dotMaps, PCO can centrally view all permit, project and special event data.](#) A live interactive map displays about 30,000 current projects, enabling the office to spot conflicting projects and gauge the concentration of projects in a single area. Improving coordination among public and private constructions projects saved the city more than \$24 million in a single year.

[The city of Memphis is another jurisdiction using innovative technology to improve mobility.](#) Recognizing that potholes are one of the most visible indicators of whether a city government is doing its job efficiently, Memphis Mayor Jim Strickland and CIO Mike Rodriguez began looking for ways to apply technology to fix the problem. Google recommended conducting a machine learning proof of concept with Google Cloud partner SpringML.

The city’s goal is to detect potholes by analyzing video footage of roads, and then classify the holes by width and depth and share the information with city crews for repair.

Memphis conducted a proof of concept that began by training the machine learning software using preconfigured Google Deep Learning VM Images. SpringML helped develop a user interface to collect pothole data and automate the city’s 311 ticketing process. Together, the teams analyzed 30 days of video collected from a city bus and high-resolution video from 360-degree cameras mounted on a code-enforcement vehicle. The video streams were also overlaid with data from 311 reports. As the models were refined, accuracy quickly climbed from 50 percent to more than 90 percent as the software differentiated potholes from manhole covers or other objects.





The city uses the same technology to proactively identify run-down properties. Memphis officials say data-driven detection mechanisms help the city find vacant or blighted properties and address them, ultimately creating safer neighborhoods that are more attractive to businesses and home buyers.

## 5 steps for progress

How can transportation officials maximize technology investments to recover from the pandemic today and future-proof transportation systems for the years ahead? Experts say five important steps lay the groundwork for success.

**1 Address the pandemic's impact on DOT budgets with technology that can maximize resources and enable the ongoing modernization of transportation systems.** DOTs often run labor-intensive legacy processes, such as manually sifting through large volumes of data or physically traveling roadways to locate potholes and other problems. These processes drain precious resources and prevent employees from performing more important tasks, such as finding new ways to enhance customer experiences.

Instead, departments can use services like Google Trends to see what citizens are searching for on government websites and via mobile apps to understand the needs of the traveling public. Trend analyses provide insights that can help transportation officials optimize transit routes and schedules and proactively fix emerging problems on roadways.

**2 Develop a data analytics strategy that centralizes historical and current data to improve real-time decision-making.** Bringing together different data sources into a central location breaks down departmental barriers to sharing information. “The goal is to broadly enable effective, ad-hoc querying and reporting across an agency,” says Chris Haas, strategic business executive at Google Cloud.

One building block for data centralization is Google's BigQuery, a cloud-based service that eliminates the need to maintain on-premises data warehouses. This approach lets DOT staffs focus on analyzing information for operational and service improvements instead of managing data center hardware and software.

“Agencies can use video analytics to proactively reduce overcrowding, promote social distancing, and manage resources and schedules more effectively.”

*Chris Haas, Strategic Business Executive, Google Cloud*

**3 Take advantage of advances in analytics technology to leverage data more effectively.** Sophisticated analytics technology such as AI and machine learning can help agencies safely provide smart mobility options in the current pandemic environment and beyond.

Memphis is taking this approach using the BigQuery platform as a foundation. The city imported a wide range of information — including bus routes, reported potholes, street paving schedules, and geolocation data from ArcGIS and Google Maps — into BigQuery to better understand street conditions and the proximity of potholes to one another.

Memphis expects this initiative to substantially reduce the number of potholes on city streets, creating a better driving experience for residents and visitors alike. And because drivers won't be as likely to swerve to miss a pothole, streets will be safer for bicycles and scooters. Fewer potholes also will save the city between \$10,000 and \$20,000 annually in vehicle damage claims resulting from potholes that weren't addressed in a timely manner.

In addition, Google Cloud lets agencies aggregate historical data about traffic volume and flows to build data models for predictive analytics. One use case is to understand where accidents frequently happen and make changes. “Agencies can reset speed limits before crashes occur to improve public safety,” Haas says.

Analytics technology also helps public transit systems protect riders and operators as the pandemic persists. “Agencies can use video analytics to proactively reduce overcrowding. Analyzing video streams from cameras



mounted in transit vehicles and terminals can help officials promote social distancing and manage resources and schedules more effectively,” Haas says.

**4 Identify opportunities for enhancing efficiency and public safety that extend beyond the pandemic.** For example, predictive analytics performed with machine learning applications can help DOTs implement variable speed limits and toll rates on heavily traveled highways.

“Through preferred pricing during certain times of the day, transportation managers can incentivize people to travel before or after rush hour or use mass transit instead of their automobiles,” Haas explains.

Analytics can also improve pedestrian safety. Analyses based on historical and current data can identify areas with the highest accident rates and uncover the underlying causes, such as poor lighting at intersections.

“DOTs can prioritize resources by extracting new insights from data that’s been available to them for years,” Shah says.

**5 Find use cases that can deliver quick wins and set the stage for ongoing improvements.** Rather than launching large-scale modernization projects that may not yield returns for years, DOTs should pinpoint smaller projects that can have an impact within months. For example, depending on local requirements, agencies may focus on improving traffic safety or mass-transit efficiency.

“Prioritize potential use cases from across the agency and identify the data that will be needed to improve the systems that support them,” says Haas. “Officials can build a matrix that lists projects according to how long it will take to achieve results. DOTs can then chip away on a case-by-case basis as initial use cases deliver value.”

## Elevating communities with modern transportation systems

Using data, analytics and artificial intelligence, DOTs can respond more effectively to immediate challenges and

# “There are real opportunities for making transportation networks safer, sustainable and more equitable.”

*Monali Shah, Strategic Business Executive for Public Sector Transportation, Google Cloud*

prepare to meet future needs. These advanced technologies equip transportation agencies to improve safety for drivers and transit riders, modernize transportation infrastructure while limiting disruption and maximize the impact of transportation investments.

In addition, data-driven insights will have another important benefit: alleviating chronic transportation inequities that have inhibited the ability of some neighborhoods to prosper.

“Difficulties in getting people to essential destinations — jobs, schools and healthcare facilities — negatively affect every aspect of life,” Shah says. “Thanks to so many new mobility options, there are real opportunities for making transportation networks safer, sustainable and more equitable. We’re at an inflection point where we can break down information silos, better understand mobility problems and focus on areas that have been neglected in the past.”

Visit [govtech.com/futureready](https://govtech.com/futureready) to learn how cloud solutions equip transportation agencies to achieve quick wins and address long-term challenges.

*This piece was written and produced by the Government Technology Content Studio, with information and input from Google Cloud.*

Produced by:

**government  
technology**

Government Technology is about solving problems in state and local government through the smart use of technology. Government Technology is a division of e.Republic, the nation’s only media and research company focused exclusively on state and local government and education. [www.govtech.com](https://www.govtech.com)

For:

 **Google Cloud**

Google Cloud is widely recognized as a global leader in delivering a secure, open, intelligent and transformative enterprise cloud platform. Our technology is built on Google’s private network and is the product of nearly 20 years of innovation in security, network architecture, collaboration, artificial intelligence and open source software. We offer a simply engineered set of tools and unparalleled technology across Google Cloud Platform and G Suite that help bring people, insights and ideas together. Customers across more than 150 countries trust Google Cloud to modernize their computing environment for today’s digital world.





# Can Tech Weed Out Bad Info Online?

*Untrue information propagating on the Internet threatens democratic institutions and the public good. Emerging tech tools aim to help government combat the threat.* **BY BEN MILLER**

**S**ome people believe that Donald Trump really won the 2020 U.S. election. Some people believe COVID-19 is only as bad as the flu. Some people believe the president is part of a secret satanic cult that eats children.

These are all patently, provably false ideas. But the fact that many Americans believe them — to say nothing of others around the world — has become a problem.

Perhaps the most tangible example is in vaccination rates. As of this article's writing, about one-fifth of adults say they won't get vaccinated against COVID-19, with another 12 or 15 percent saying they will wait for more information. That's enough people to leave the door open for more outbreaks and complicate efforts to restart the economy.

But what if technology could help uncover this type of misinformation and disinformation, giving government a way to smother it before it spreads? Or maybe even just make it disappear?

That's the concept behind new software hitting the market for government agencies. Using artificial intelligence, they mine major social media platforms — along with their fringe competitors — as well as blogs and other websites to find misinformation and disinformation.

In a world where outlandish beliefs lead to real-life consequences, the existence of such technology might sound like a welcome relief to beleaguered public officials.

But it also presents many questions that lack clear answers. How accurate are they? What can government do with the information they provide? And in a world where the truth itself has become a political debate, who decides what counts as misinformation and disinformation?

### How it works

Different companies offer different approaches, but the general framework is to monitor vast swaths of the Internet — mostly social media, where misinformation spreads fastest — for messages on specified subjects, and sometimes with a specified sentiment such as a negative statement about vaccines. The companies will then use some sort of ground truth, perhaps a government agency or a trusted group of experts, to see how far off the post in question is.

One might view it as a rough approximation of a person's mental journey when scrolling through their own social media feeds, only a lot faster and with the rigidity of computer logic.

The company AlphaVu specifically pointed to the Centers for Disease Control and Prevention as a source of truth to measure against. Another company, Logically, uses a variety of chosen experts.

Because they're looking for replication of misinformation, and because government customers can specify what they're interested in, a lot of the work can be done quickly and cleanly by looking for posts that are similar to known misinformation or disinformation.

"Without even needing to verify whether that's misinformation or disinformation, we're able to understand the context around content to assess

whether or not it fits within that rumor profile," Lyric Jain, CEO of Logically, said in a previous interview with *Government Technology*. "So those are the types of things that we would flag up, based on the messages, based on the methods that are being used to promote. And all that is automatable to a certain degree, and wherever we're not confident, that's where we bring in our human analysts."

The idea is to bring the most concerning posts to the surface so that public officials can do what they will with it. AlphaVu offers tools to find which geographic locations and demographic groups problematic messages are coming from, which gives governments the ability to target their own messaging campaigns. Logically has a library of material to

quickly assemble counter-messaging, and it also has tools to ask social media platforms to take certain posts down.

The idea is to do it all as fast as possible — after all, a lie can be spread to millions with a single click of the mouse.

"If the response isn't immediate, if it seems like, at least optics-wise, there's any uncertainty in response, or if there's a vacuum where a narrative is allowed to go unchallenged, that's the space where the most harm occurs," Jain said. "And it's really hard to convince people once they've been convinced of that narrative."

### Judges of the truth

One thing about this technology that's unavoidable: Somebody needs to decide





what counts as misinformation and disinformation.

So far, that decision is being outsourced to the companies selling the technology. They are using government agencies and experts as their basis of truth, but they're still making decisions that create the foundation for the truth.

Tara Kirk Sell, a senior scholar at the Johns Hopkins Center for Health Security who studies misinformation and disinformation, sees all sorts of potential problems with that approach and cautions that the problem is too thorny to be easily solved with automation.

"That seems problematic, even as someone who feels like science has not been followed on COVID-19," she said. "Just because someone doesn't

agree with you, or your opinion, doesn't mean it's misinformation."

Consider the shady gray area in between truth and lies. One of Sell's research projects studied tweets during the Ebola outbreak of 2014, a project where she and her colleagues went in hoping to classify posts as either true or not true. They found many tweets that were somewhere in the middle — part true and part false, unclear, technically true but misleading, etc.

"This is a huge gray area where even as trained public health coders, we had a very difficult time," she said. "We had to make that extra category, because, you know, that is a hard area to put in one bin or the other."

There's also an issue of scope: A public health agency can say what shutting down means or doesn't mean, but the policy choice of whether to shut down depends on values and priorities.

Sell believes more in education: targeting the listeners more than the speakers. If more people learn to critically evaluate the information in front of them, fact check and ask questions, she said, misinformation could just "roll right off them."

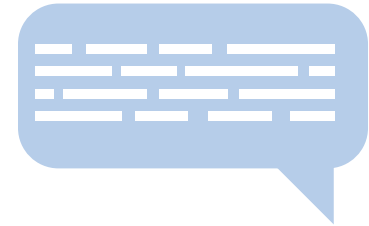
But that would likely require a large, coordinated effort at the highest levels of government.

"We've got to get a lot of different stakeholders involved. And I think it requires expertise in whatever topic area you're working on, but also some people who are approaching the ethics and the legal requirements, and just people who have a stake in these issues. I think that that's important," Sell said. "That's why we call for a national strategy to combat health-related misinformation."

### *Public health*

In 2020, with misinformation about COVID-19 swirling and mutating, the Virginia Department of Health (VDH) turned to AlphaVu for help. The idea wasn't to take down posts or go hunting bad actors, but something akin to a continuous, configurable, digital focus group.

"We use it for a local microcommunity influence, so to speak ... particularly wherever it's high-risk, hard-to-reach populations, this helps," said Suresh



## Misinformation vs. Disinformation

Both misinformation and disinformation are untrue statements, but the difference between them lies in the intent: If the speaker is deliberately lying or misleading their audience, it's disinformation.



SHUTTERSTOCK.COM

Soundararajan, CIO of VDH. “So we get this information and we operationalize it.”

The tool gives them one score to measure sentiment and another to assess truthfulness. It’s all in support of the department’s messaging strategy.

“Week to week we have meetings on this data and what the risk is and where it is and all that stuff,” Soundararajan said. “So it helps us to message and say OK, if you see [the conversation] this week, we can message something out to the population the subsequent week.”

Since misinformation happens within a sociopolitical and historical context, it can be hard to tell whether the department’s efforts have helped. But Soundararajan sees some evidence it has: In October, the department was constantly seeing risk scores of seven and higher, on a scale of 10. By March, it was more common to see fives.

“It could be multiple factors. The general anxiety of people must have come down, that’s one thing,” he said. “I would like to think that the way we are countering misinformation with data from AlphaVu, us sending targeted messages to different social media platforms and removing this misinformation ... I think that’s kind of helping.”

## Elections

The other obvious application for the technology in recent years is elections, where a combination of distrust, foreign meddling and close results have collectively raised the nation’s blood pressure a notch or two.

Few have seen more of that than Maricopa County, Ariz., which drove its state to a narrow flip from red to blue in 2020 and thus helped put Joe Biden in the White House. In the days following the election, with results trickling in, supporters of Donald Trump accused officials in the state of pushing the results to Biden and protested.

Lester Godsey, chief information security officer of Maricopa County, likened the experience to working in a natural disaster response center.

“That’s the closest example I could come up to, in comparison to the 2020 election, is like, some natural disaster — because it was almost like that,”

“If the response isn’t immediate, if it seems like, at least optics-wise, there’s any uncertainty in response, or if there’s a vacuum where a narrative is allowed to go unchallenged, that’s the space where the most harm occurs.”

he said. “From a social media perspective, we just saw profanity-laced tirades online, we were seeing people retweeting and resharing posts that have no — from my perspective — no basis of reality.”

Maricopa County is not a client of AlphaVu or Logically, but Godsey has been outspoken about the role information security has in government’s fight against misinformation and disinformation. To him, it’s all about risk.

“We monitor social media to see what the potential risks are, but at the same time it’s also a source of intelligence for us,” Godsey said. “We go to social media to see if there’s an increased likelihood that somebody is going to launch a cyber attack against us or protest against us — again, not for purposes of censorship or to ... not allow somebody constitutional rights, but rather, just to protect your organization [and] the people [who] work for it.”

The county uses social media monitoring tools, of which there are many on the market. Such tools, even though they weren’t necessarily designed for finding misinformation and disinformation, can still serve many of the same functions.

Maricopa County used it to fight back when people said that open voting locations were closed. Other incidents were more ominous — Godsey recalls one moment where his team found somebody

posting about their plan to follow employees of the county recorder’s office as they went about their work counting votes.

“Somebody was using Twitter to pass that information along. We reported it to the [Arizona Counter Terrorism Information Center], and then they reached out to their FBI contacts, who then had an agent at Twitter,” he said. “And that account was disabled about an hour or so afterward.”

Information security, after all, encompasses both digital and physical risks.

But the goal is not simply taking down posts, which he considers a slippery slope to censorship. The idea is to be better informed, and therefore prepared.


“Any organization that cares about brand, or their reputation, or the trust that they may or may not have within their wider community should care about social media and should be allocating resources and monitoring how they’re coming across,” he said. “I think that’s something that translates across the board.”

## Will government bite?

By all accounts, misinformation and disinformation are not going away. Aside from regular people proliferating falsehoods online, the international use of disinformation campaigns appears to be increasing.

“Back in the day, when we started [in 2017], there was just over a dozen ... nation-state actors ... who were conducting these activities outside of their own countries,” Jain said. “And now that number’s blown up to around 80-something, so we feel like the threat surface is growing larger.”

The question of to what extent government agencies will see that as a direct threat to their work, and seek technology to fight back, is an open one. But Sell thinks it’s likely that more government agencies will be interested in tools like the ones offered by Logically, AlphaVu and others.

“This is a growing area of concern for the government,” she said. “I think the appeal of just buying some technological system that you think will help you seems [like] something that is hard to turn down. But I think ... the solution is more than just an algorithm.” 



INNOVATION IN GOVERNMENT®

# The Best of What's New in Hybrid and Remote Work

*As the pandemic subsides, state and local agencies navigate permanent workforce changes*

- 2 Transforming the Workplace
- 4 Modernizing Contact Centers to Enable Remote Work
- 6 The Digital HQ: Flexible, Inclusive and Connected
- 8 Giving Remote Workers Access to Resources They Need
- 10 Managing Process and Cultural Change
- 12 Navigating the New Frontier



# Transforming the Workplace

*Long-term adoption of remote work will drive technology modernization and new management policies*

**M**ore than a year after state and local government agencies shifted employees to remote work, their biggest workforce challenge may be just starting.

When the COVID-19 pandemic struck in March 2020, agencies scrambled to expand secure connectivity and acquire mobile devices, but most state and local CIOs say their organizations transitioned relatively easily to working from home on an emergency basis. Now, with COVID-19 cases in the U.S. dropping dramatically and economies reopening, public agencies face a more complicated issue: figuring out where and how state and local government employees will work going forward.

“We’ve been through a giant social experiment in the last 15 months, and we’re heading into an even bigger one,” said Lee Rainie, director of internet and technology research for the Pew Research Center, during the NASCIO Midyear Conference in May.<sup>1</sup>

## **Permanent Changes**

Center for Digital Government (CDG) research indicates the pandemic will permanently alter the nature of work for public employees.

A 2020 CDG national survey found almost 75 percent of respondents anticipate hybrid work — where employees work from home at least on a part-time basis — will be their long-term model. The trend is particularly strong at the state level where just 16 percent of respondents anticipate returning to a fully in-person work environment.

In California, for example, multiple state agencies expect large percentages of their workforces to continue working remotely at some level post-pandemic. CalPERS, the state’s massive public employee retirement system, expects about half of its workforce to continue working remotely on either a full-time or part-time basis after the pandemic subsides, says CEO Marcie Frost.<sup>2</sup>

Other California state agencies are moving even more aggressively. Covered California, which operates the state’s health insurance exchange, anticipates 10 to 20 percent of its staff will stay fully remote, while perhaps another 50 percent could have part-time remote schedules. And FI\$Cal, a department created in 2016 to operate California’s statewide financial information system, has permanently moved 90 percent of its staff to remote work.<sup>3</sup>

## **New Challenges**

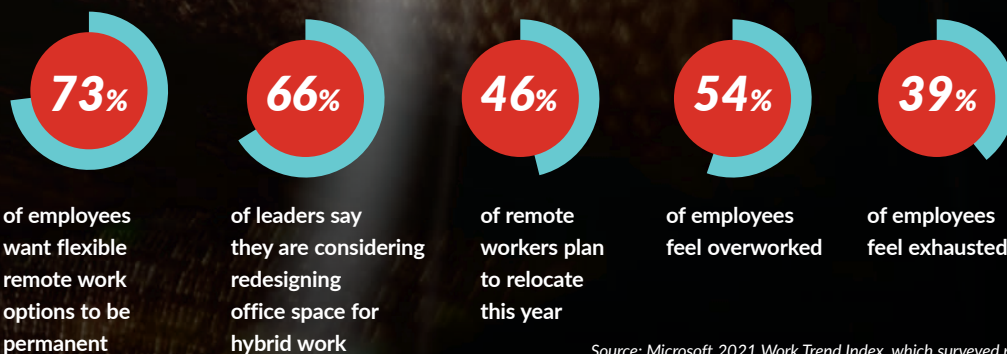
Transitioning to a permanent hybrid work model presents new technology and management challenges for government leaders.

Technology modernization, which was kickstarted during the pandemic response, must continue. Cloud-based systems capable of supporting the new work-from-anywhere model will be critical, as will digital document and signature capabilities that eliminate paper processes. In addition, agencies must keep strengthening virtual collaboration platforms to provide equal engagement and advancement opportunities for in-office and remote workers.

Because large numbers of employees will never return to the office full time, agencies anticipate reducing their physical footprint, but remaining office space will need upgrades. Brick-and-mortar locations will likely become shared spaces where employees can reserve desks or meeting rooms. These facilities will require better audio and video systems to support seamless collaboration between in-person and remote staff. Agencies will also need reservation and scheduling systems to manage shared office spaces.



## Remote Work Opportunities and Challenges



Source: Microsoft 2021 Work Trend Index, which surveyed more than 30,000 public and private sector employees in 31 countries.

Finally, results from a recent Microsoft workforce survey – which covered public and private sector organizations – indicates employers must do more to support remote workers' basic technology needs. More than 40 percent of employees said they lack essential office supplies at home, and one in 10 don't have an adequate internet connection to do their job, according to the survey. More than 46 percent said their employer does not help them with remote work expenses.<sup>4</sup>

Even more critical are the policy changes agencies must implement as they lead remote and hybrid workforces into the future. That transition will be a significant one for managers and supervisors in state and local government, where remote work was rare before the pandemic.

"You need to give tools to your managers, because this is very different than watching people at their desks from 8 to 5," says Russell Fong, chief administrative officer for the California State Controller's Office. "All the things we've taught managers throughout their careers are different than what you want to do in today's environment."<sup>5</sup>

Agencies will need to develop key performance indicators for programs and

processes, and they will need to implement effective processes for measuring the output or performance of individual employees.

Work/life balance is another concern. The new model for work blurs traditional lines between home and office, and many employees are feeling the strain. The Microsoft survey found 54 percent of respondents feel overworked and 39 percent feel exhausted.<sup>6</sup>

Overcoming issues like these was a frequent topic of discussion at the NASCIO Midyear Conference where state CIOs expressed concerns about workplace culture.

"I'm not concerned from a technology perspective," explained Texas Department of Information Resources Executive Director Amanda Crawford, "but from a

logistical and management perspective how we're able to keep cohesive teams."<sup>7</sup>

### Becoming a Better Employer

Navigating the shift to permanent remote and hybrid work demands that agencies take a fresh look at the technologies and policies related to supporting and managing their workforces. But these changes will bring significant benefits.

Digitizing and automating processes will make agencies more productive and efficient. So will giving employees tools that let them work seamlessly from home, in the office or anywhere else. In addition, new flexibility around remote work, as well as moving toward performance-based management techniques – instead of management by attendance – ultimately could make government a better and more desirable place to work.

<sup>1</sup> State CIOs Look to Future With Digital Services, Hybrid Work. <https://www.govtech.com/pcio/state-cios-look-to-future-with-digital-services-hybrid-work>

<sup>2</sup> Navigating the Future of Work. <https://papers.govtech.com/Navigating-the-Future-of-Work-138778.html>

<sup>3</sup> Ibid.

<sup>4</sup> The Next Great Disruption Is Hybrid Work – Are We Ready? <https://www.microsoft.com/en-us/worklab/work-trend-index/hybrid-work>

<sup>5</sup> Navigating the Future of Work. <https://papers.govtech.com/Navigating-the-Future-of-Work-138778.html>

<sup>6</sup> The Next Great Disruption Is Hybrid Work – Are We Ready? <https://www.microsoft.com/en-us/worklab/work-trend-index/hybrid-work>

<sup>7</sup> State CIOs Look to Future With Digital Services, Hybrid Work. <https://www.govtech.com/pcio/state-cios-look-to-future-with-digital-services-hybrid-work>

# Modernizing Contact Centers to Enable Remote Work



*The pandemic forced government contact centers to modify how they provide services. Ivory Dugar, senior solutions consultant at Genesys, answers the equipment and workforce optimization questions that are top-of-mind for agencies that extend operations to remote agents.*

## **How has remote work impacted government contact centers?**

The need for contact center agents to provide services from home forced organizations to ask some important questions. First, do we have the right solution and connectivity in place to handle calls that are directed to agents at home; in particular, do we need to migrate to a cloud-based solution? Second, do our agents have the right equipment? Third, with agents moving from place to place, how are we going to manage our personnel from a workforce optimization perspective?

## **What challenges should organizations address to make remote work successful?**

To ensure callers have a secure, fluid and reliable customer experience, agencies must maintain diverse channels of communication. Another challenge is ensuring that contact center agents have secure and timely access to their agency's database, intuitively orchestrated communications and sufficient bandwidth for reliable connectivity. Organizations also need to minimize the learning curve associated with introducing new endpoints such as Bluetooth-enabled headsets, softphones and web real-time communication (WebRTC), which eliminate the need for traditional desk phones and

enable workers to use their laptop for voice or digital interactions.

## **How can contact center modernization support remote work and improve constituent experience?**

It starts with a sound, strategic methodology for migrating contact center activities from an office to agents' homes. This is where seasoned contact center business and solution consultants can provide strategic guidance for getting from point A, whether that's a premises-based or cloud-based solution, to point B, a platform solution that places contact center agents in a reliable remote environment. These conversations help agencies identify areas that might yield greater efficiencies, benefits and cost savings; create a solution roadmap; justify costs; and set performance benchmarks.

## **What should agencies consider before enabling contact centers for remote work?**

First, security controls are critical to protect caller's credit card numbers, electronic health records and other private data. Second, agencies must consider how their state- and agency-level security practices around VPNs, remote desktop protocol (RDP), ports and firewalls affect a remote worker's endpoint in terms of access to their virtual desktop, voice traffic passing through the virtual desktop infrastructure (VDI) or RDP, and bandwidth restrictions that might cause poor voice quality. Third, to ensure people with the right skills are at the right place at the right time, organizations need to automate workforce optimization. Fourth, they need to decide whether to repurpose existing devices such as SIP hard phones or procure things like Bluetooth-enabled headsets to enable

WebRTC and softphone communications. Finally, agencies must consider unified communications so remote workers can connect and communicate with back-office workers in a timely way.

## **What questions should organizations ask vendors when they consider a remote agent solution?**

I suggest these three: 1) What would our security posture look like? Does the solution support security standards such as HIPAA, GDPR and PCI, and is the customer's data secure regardless of the communication channel — voice, chat, SMS, bots and so on? 2) Does the solution support flexible phone options — such as WebRTC, generic SIP and remote — so agents can remain connected and proficient wherever they are? 3) Does the solution support E911 (Enhanced 911)? Both Kari's Law and Ray Baum's Act require that contact centers enable agents to dial 911 without having to press or dial a prefix beforehand and provide the location of the endpoint the agent is calling from.

## **Many government contact centers pivoted quickly to remote work. What should they revisit now?**

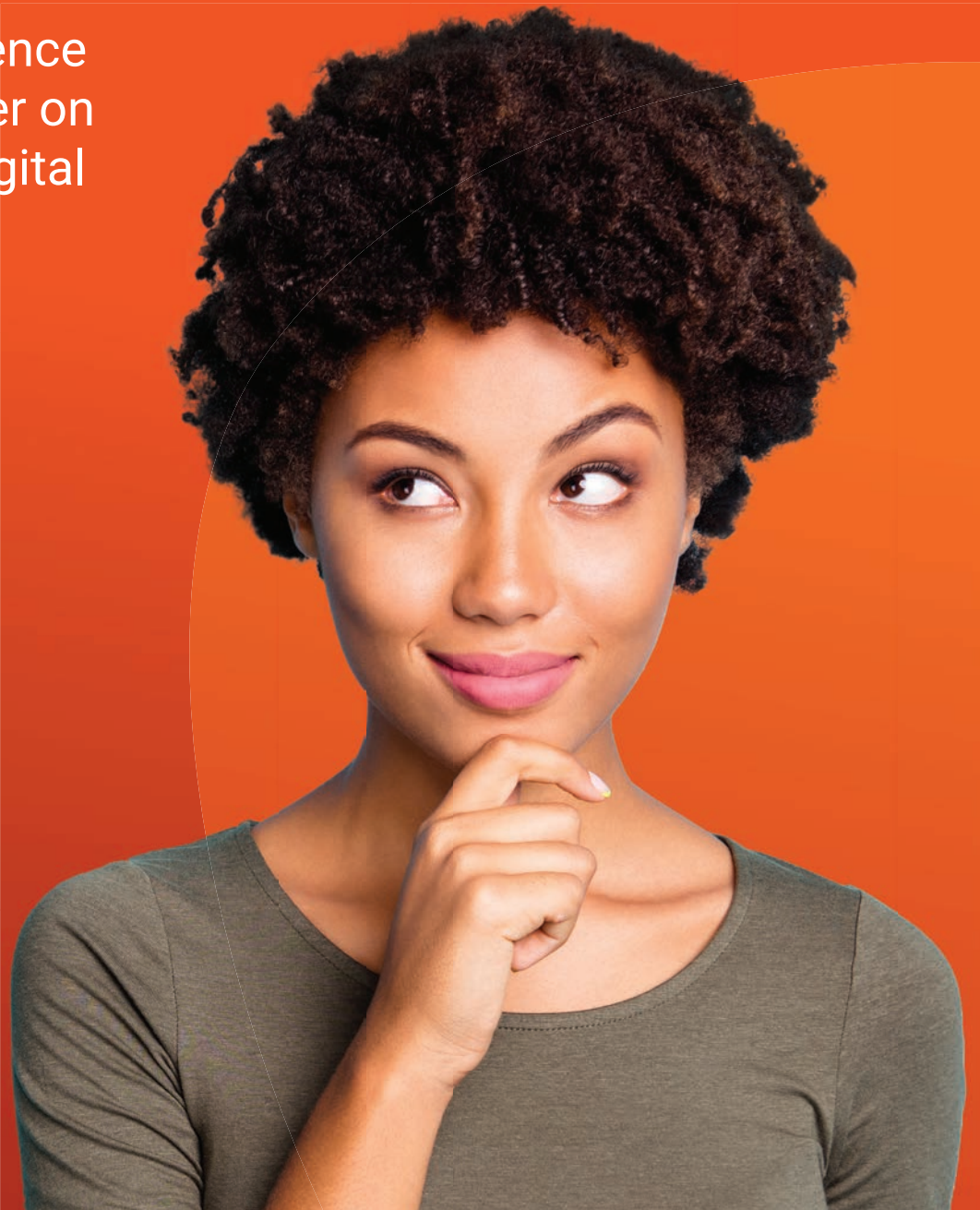
A lot of agencies overlooked E911 support for remote workers. That needs to be corrected. Agencies should also reconsider repurposing office-based hardware and software for employees working from home. Reusing that equipment may seem like a cost-saving strategy; however, with the availability of softphones and WebRTC, there really isn't a need to repurpose equipment as the sole method of communication but rather as an additional option for agents.



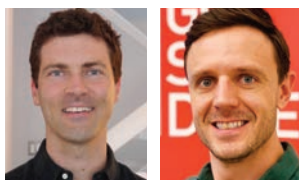
Give your constituents  
**SUPER HUMAN  
SERVICE**

Customer experience  
software to deliver on  
the promise of digital  
government

Learn more at  
[genesys.com/government](https://genesys.com/government)



# The Digital HQ: Flexible, Inclusive and Connected



**Dave Macnee**, senior relationship manager for Slack's Future Forum, and **Kevin Carter**, customer success leader for public sector at Slack, share research data on remote work and discuss technology and strategies for getting remote work right.

## What trends are you seeing around employee expectations for remote and hybrid work?

Employee expectations have changed. Data from the Future Forum's quarterly survey of 9,000 knowledge workers — the Remote Employee Experience Index — shows employees want to maintain a flexible working model even once the pandemic ends. Only 17 percent of those surveyed want to return to work full time in the office. The vast majority — 63 percent — want some form of flexibility.<sup>1</sup> In addition, recent Federal Employee Viewpoint Survey results show government employees who telework at least three days per week have higher employee satisfaction and engagement index scores than those who telework two or fewer days per week. Employees who are ineligible for telework have the lowest engagement scores of all the workforce.<sup>2</sup>

## As organizations rethink what's possible in terms of work, what does the future look like?

Organizations realize remote work is not simply a preference, it's a work style that's

going to be negotiated with potential employees. As we think about the talent government needs to attract, the digital headquarters will become the norm. Based on our Future Forum primary research and conversations, we believe the digital HQ will be one that is flexible, inclusive and connected.

## What challenges stand in the way of sustainable remote/hybrid work?

What we've seen over the past year hasn't just been about working from home. It's been working from home during a pandemic. As the pandemic has stretched into its second year, employees are feeling the strain. The data show that even though the work-from-home experience is better than working in the office full time, employee satisfaction with work-life balance has declined and stress and anxiety have increased. A contributing factor to that stress is the pressure to demonstrate productivity. A third of remote workers say they feel pressure to make sure their managers know that they're working.

## What can organizations do to ensure employees succeed in remote/hybrid work environments?

There isn't a one-size-fits-all approach. The organizations we see doing this well are taking this moment to intentionally rethink and redesign work. They're thinking about the principles that guide their mission and the guardrails they need to try new things in a safe and controlled manner. As for specific tactics, that means doing things like giving people flexibility in when they work as well as where they work. We

found that the flexibility in when people work has an even higher impact across all five remote employee experience factors than a person's location — it's having control over your schedule. Success also means finding ways to foster a sense of belonging both when people are working remotely and when they are in a shared physical space. When organizations bring people to the office, what is the intent and what do they need to do to support that intent?

## How can technology help keep employees connected, engaged and productive regardless of where they work?

Technology is foundational for connecting employees and fostering a culture of inclusion where remote workers have access to the decision-makers, information and opportunities that traditionally may have been restricted by time and place. It's important to find collaboration tools that let employees work effectively; build community even if they're outside the office; and engage with citizens, agencies and other external partners as easily as their internal teammates do. It's also important to have things like systems of record, where all conversations and decisions are maintained so that everyone has access to the same information regardless of where they work. Finally, agencies need a single tool to bring together things like incident management systems, customer relationship management systems and code development so employees can easily access and leverage them wherever they are.

<sup>1</sup>Hybrid rules: The emerging playbook for flexible work. Future Forum. <https://futureforum.com/2021/01/28/hybrid-rules-the-emerging-playbook-for-flexible-work/>

<sup>2</sup>Federal Employee Viewpoint Survey. Office of Personnel Management. <https://www.opm.gov/fevs/>



# Slack for Government

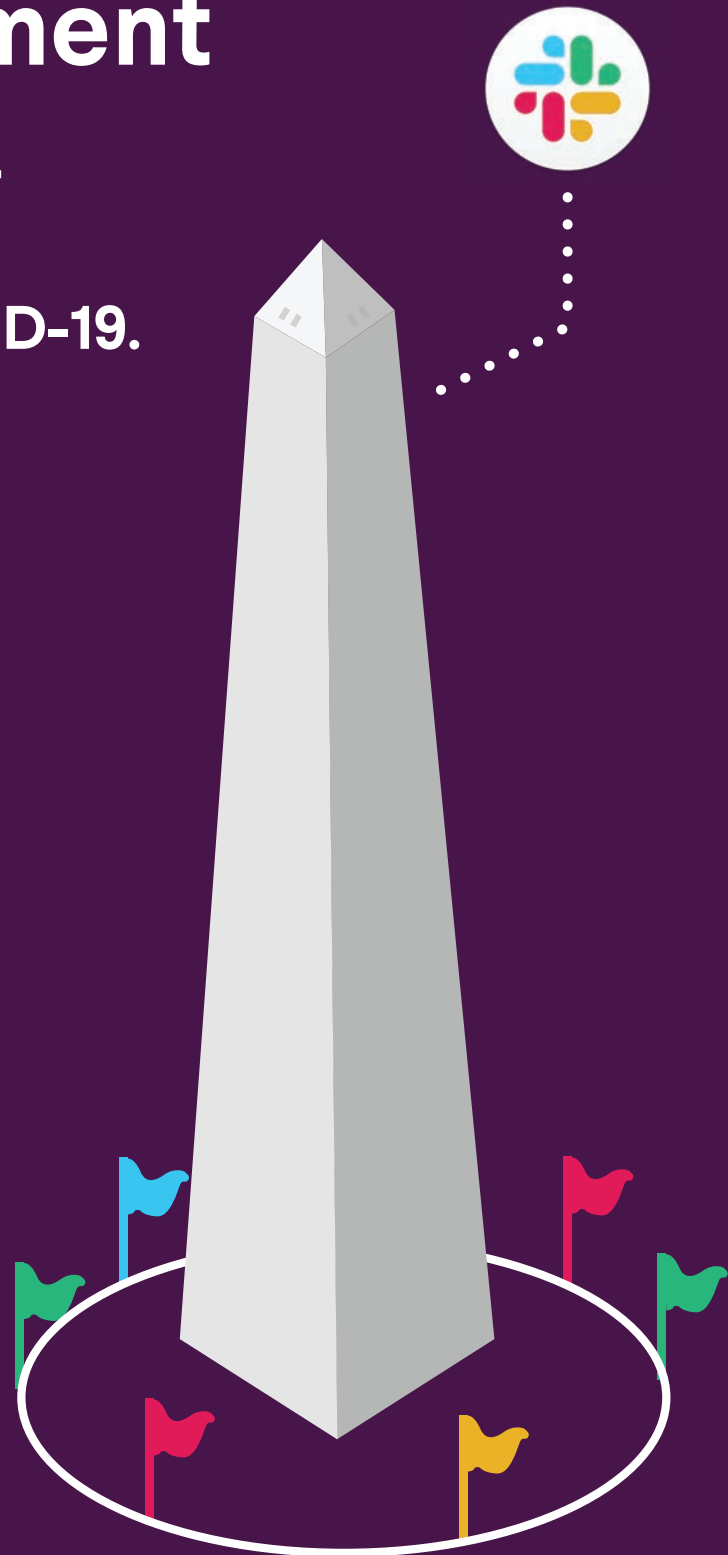
**Government agencies and their partners face unprecedented challenges in response to COVID-19.**

Slack is the FedRAMP Moderate-authorized channel based messaging platform that provides governments and their partners with a secure, centralized digital HQ.

The Slack for Government guide explores how government agencies are bringing their people, tools, data and processes together in Slack to increase remote work productivity and secure collaboration.

**Download the Guide**

[carah.io/slackforgvmt](https://carah.io/slackforgvmt)



# Giving Remote Workers Access to Resources They Need



*As organizations shift to remote work, they need to rethink how they manage users, applications and devices. **Chip Carr**, senior manager of public sector for NVIDIA, discusses how virtualization and other strategies can simplify IT management and create a consistent user experience regardless of a worker's location or device.*

## **What challenges do organizations face around growing use of remote work?**

There are five basic considerations for a remote work infrastructure: security, IT management, productivity, mobility and communication. During the pandemic, remote workers may not have had time to get an approved device, so they connected with their own device from a home network. Different users connected at different speeds and with different device capabilities. IT had to scramble to manage associated hardware and software to ensure remote workers could be productive.

## **How can organizations take remote work to the next level?**

They need to provide the same secure, reliable access to computing resources whether people work remotely or in the office. Consistent, secure access helps organizations overcome disruption. We saw that with our customers that had implemented GPU-enabled virtual desktop solutions prepandemic. They switched to remote work without missing a beat. Their workers simply connected from home and they were productive on day one. Delivering GPU-accelerated virtual machines also provides higher user density, simplifies and centralizes IT management,

and enhances security because data and applications reside in the data center, not on end-user devices.

## **What approaches support remote work modernization?**

In the past, you issued a worker a laptop so they could work remotely, and then they connected into the VPN. All their applications and data ran on the laptop. That's impractical when you have to manage potentially thousands of users, their devices and their applications. To maintain consistency and continuity, organizations must shift to a centralized, software-defined approach, where IT staff control applications, security settings and the delivery of computing resources from the data center.

## **How can organizations optimize processes to support remote and hybrid work?**

Centralized IT management and virtualization technology are critical to manage infrastructure and address changes quickly and at massive scale — whether that's to patch a vulnerability across all user devices, upgrade applications or deploy additional computing resources. IT can make a change once via software and then distribute it to everyone's device within minutes with minimal downtime. Software can monitor network traffic and resource utilization in aggregate and then automatically allocate resources as needed so organizations don't have to invest in higher-performance user devices or purchase more hardware. In addition, organizations can isolate workloads and systems for security or other purposes, meaning multiple workloads and operating systems can run on the same device.

## **How does artificial intelligence (AI) and graphic processing unit (GPU) technology support workers in remote analysis of images, graphics and other visuals?**

Modern remote work infrastructure enables developers and researchers to remotely train robots and develop AI applications for image classification, object detection, image translation and more. Take the example of a public utility that maintains power lines that run through trees. Workers typically inspect the lines to make sure tree limbs won't damage lines in a high wind. A better approach is to embed a high-performance, low-power GPU into a drone that uses the power of AI to inspect lengths of hard-to-access power lines in real time.

## **What advice do you have for organizations as they move into the future with AI?**

AI is transforming how computers perform perceptual tasks such as computer vision, pattern detection, speech recognition and behavior prediction. These improvements make it possible to automate labor-intensive jobs. Agencies can start moving down this path by identifying critical manual tasks that take an inordinate amount of time and then determining whether part or all of these tasks can be automated. Organizations can often automate upfront tasks such as gathering and preparing data for analysis. Done manually, these tasks can consume as much as 80 percent of an analyst's time. By leveraging large amounts of data, organizations can build models to predict and refine internal processes that set a course for the future.



# BUILDING A SECURE REMOTE-WORK INFRASTRUCTURE

Immersive Virtual Workspaces for Every User,  
Any App, Anywhere.



# Managing Process and Cultural Change



*The shift to remote work requires significant change to workflows and organizational culture.*

**Jim McClurkin**, senior director for public sector at SAP Concur, suggests approaches that will help governments modernize and prepare for the future.

## **How did creative uses of CRM and other business applications help governments navigate the pandemic?**

Necessity is the mother of invention. Many organizations repurposed technologies that were not originally directed at supporting remote work. They customized and conformed these technologies for a suddenly remote environment. One example is the repurposing of auditing and fraud detection systems so organizations could pivot from largely paper-based purchase order processes, which became impossible in a remote work situation, to non-purchase order environments for expense management. State and local agencies that lacked those adaptive technologies suffered a lot more than ones that did.

## **What should organizations consider as they more fully commit to remote and hybrid work?**

First, organizations need a network and network security protocols to support their processes. Next, a lot of existing processes have nothing to do with how someone would work remotely. Organizations must rethink their workflows, approvals and other processes to fit the remote environment. Finally, different organizational cultures and their workers have different tolerances for change. It's

important to honestly assess where you're starting from so you can put the appropriate level of vision and planning in place to make that happen.

## **How can organizations bring the intelligent enterprise to remote work?**

In our worldview, the core of the intelligent enterprise is that the cloud becomes the highway for remote workers. On-premises technologies, paper-based processes and the physical handling of documentation are the opposite of the intelligent enterprise, which uses the cloud to create an automated flow of this information. It makes those workflows, approvals and information available anywhere and on any device. Organizations must be open to re-evaluating their processes and how they work. But when they do this, it opens a vast opportunity to improve processes.

## **How can organizations improve workflows and processes across and between remote and onsite work environments?**

Number one is prioritizing what's important in workflows — with the overall focus being the desired business outcome. Organizations need to streamline workflows, create more efficient processes and give employees greater latitude on how they get their work done. The intelligent enterprise gives organizations visibility they never had before. Old-fashioned processes and workflows prevent organizations from having visibility into things like cashflow, outstanding invoices and approvals. Now that this information is at their fingertips they can consider any number of new processes to replace their old paper-based processes.

## **How can agencies foster data sharing, especially as the workforce becomes more distributed?**

Trust is at the top of the list. A lot of organizational cultures have been in place with the same leader, the same teams and the same routines for many years. That's all gone out the window. To foster trust, you have to be accessible and open to change. You also must honestly evaluate what's important to the organization — not only so you can get your work done and be successful, but also to ensure you're protecting taxpayers' dollars in terms of waste or abuse. Part of that ability to trust gets back to visibility. Once you have visibility, you can more easily trust what's going on.

## **What advice do you have for keeping remote employees engaged and developing the (remote) workforce of the future?**

It's projected that 30 to 35 percent of the public sector workforce will remain remote. A lot of these workers will probably be younger. To attract and engage the workforce of the future, you have to keep systems, processes and tools up to date. Younger people run their lives on their phone. If you expect them to submit to completely manual paper-driven processes, you'll probably never get a chance to hire them, much less retain them. You also have to find out what they need to be successful in a remote environment; show them a path to promotion; and demonstrate that remote, hybrid and on-prem teams are aware of and understand their value to the organization.



# WHEN A MISTAKE DOESN'T JUST END UP IN AN EXPENSE REPORT, BUT A NEWS REPORT.

## GOVERNMENT RUNS BEST WITH SAP.

SAP Concur solutions can help state and local governments ensure compliance when doing expenses and invoices. So their staff can adapt to changing regulations, and effortlessly stay within policy.

[Concur.com/government](https://concur.com/government)

SAP Concur 

THE BEST RUN





## ISSUES TO WATCH

**T**he pandemic prompted many state and local government leaders' first venture into remote work. Now, about 75 percent of organizations surveyed by CDG plan to expand their use of remote work. In this Q&A, Peter K. Anderson, a CDG senior fellow, discusses how organizations can successfully forge their way in this new territory.



### **What's driving more permanent adoption of remote work?**

A lot of people have come around to the idea and found that it actually works quite well. They also see that the private sector has been doing it very successfully for years. In fact, the private sector is also embracing remote work more fully. One of the large rental car companies has decided 70 percent of its workforce will continue working from home permanently. Other companies are consolidating sites to account for massive reductions in on-site workers.

### **What do organizations need to consider along the way?**

They need to start by assessing how things have worked so far in terms of network access, speed, capacity and security capabilities at home. "Temporary" meant deploying little to no government equipment at remote sites. Now, organizations will have to revisit that, particularly for employees like IT staff or call center agents who work extensively with digital tools. Mobile devices — whether BYOD or provisioned — also have to be supported in some way. In addition, some tools — for example, printing applications — may need to be both modernized for remote work and scaled back. A municipal stadium CIO recently noted that printing requirements decreased by about 80 percent once his staff went to remote work. That suggested they didn't need to print so much and could probably reduce their printing capabilities — and the costs associated with them.

# Navigating the New Frontier

### **What cultural challenges arise with remote work?**

First, some employees can't work from home due to the nature of their jobs — for example transit operators or utilities personnel. Seeing others in their organization enjoy a work-from-home arrangement can create a sense of inequity, so leaders need to find ways to address that disparity. Second, many people have worked together for years and there's a whole culture around that. Seeing people in a Zoom room is just not the same. That can be difficult for people who thrive on personal connection. Another challenge is work-life balance. If a person already tends to overwork and now there's not a physical space to leave for the day, it can be very difficult to stop working — which ultimately does not serve anybody well.

### **Any advice for managing remote workers?**

Managing remotely is a learned skill. It's one thing to do it temporarily and another to do it on a permanent basis. Some managers think they need to see people in a seat to manage them well and ensure employees are doing what's needed. In the attempt to recreate that in-person experience, they may over-schedule virtual meetings, send numerous texts or require some sort of monitoring via cameras or keystrokes. A better approach is to identify specific time periods where all team members are expected to be available and then free up the rest of the day so workers can focus and work independently as much as possible.

### **How does remote work impact recruitment, especially for hard-to-find talent?**

Having more flexibility and removing the location barrier opens up real opportunities, especially when it comes to competing for specialties like IT. Some states prohibit hiring out of state, but organizations can still widen the pool to include candidates beyond their local headquarters. They can recruit candidates who want to reside in areas with a lower cost of living or who don't have the time to commute, for example. This flexibility also helps attract minorities and women, which in IT work, has been a real challenge.

### **What technologies can help advance the remote work vision?**

Software as a service (SaaS) eases the burden on IT staff, and the total cost of ownership becomes much more appealing if you consider ease of access and security. Most agencies simply can't afford to create that level of security on their own. Upgrades are another advantage. In the past, an organization might wait five years between ERP upgrades, for example. With SaaS, they get quarterly upgrades, and once a year they may even be required to upgrade. That means they'll have the vendor's most current upgrade enterprise-wide, and they're not going to have to find \$5 million every four or five years to do it.





News & Insights on  
Where Government is Going

# GOVERNING

THE FUTURE OF STATES AND LOCALITIES

Get Our Free Daily Newsletter [newsletters.governing.com](https://newsletters.governing.com)





# Leveling Up

Firefighting. Social services. Accessibility. How virtual and augmented realities are changing the way government works.

BY ADAM STONE



In Austin, Texas, city leaders are using augmented and virtual reality — AR and VR — to train emergency responders. Philadelphia is exploring VR as a way to make public transport more accessible. Multiple municipalities in North Carolina are looking at ways to leverage the technology in support of everything from tourism to workforce development.

“As AR and VR become more accessible and easier to use, they offer a lot of great possibilities for government to explore innovative approaches,” said Ellysse Dick, a policy analyst at the Information Technology and Innovation Foundation.

From field operations to personnel training to service delivery, “there are a lot of opportunities to improve government through these immersive experiences,” she said. While state and local governments are still in the early stages of AR and VR adoption, a number of emerging use cases suggest the technology’s potential power.

## EMERGENCY RESPONSE

In Austin, Texas, emergency personnel are using VR to train for work on a bus-sized ambulance known as the Ambus. It’s hard to train on the actual vehicle: There are only 13 in the state and they’re not readily available for exercises.

“They get about two hours or so training on the apparatus, and then we sometimes go two or three years without a disaster,” said Keith Noble, commander of homeland security and emergency management with Austin-Travis County EMS. “Now they’ve had no training for two years and all of sudden they have to respond to a hurricane.”

Trainees put on an Oculus Quest headset and can interact with a 3D-rendered prototype of the Ambus systems and equipment in order to gain familiarity with the layout and the operations of the vehicle.

“It’s hard to get 30 people all together at one time for training, and then you have to pay them overtime. With VR, they can train anytime, anywhere, at their convenience,” Noble said. VR also offers the possibility of just-in-time training. “Say we get deployed for a hurricane: It usually takes 24 hours or so to get everything

together and head down to wherever we’re going. With VR, they could be putting on a headset during that time and refreshing themselves on the apparatus.”

## ACCESSIBLE TRANSPORT

With sponsorship from technology accelerator US Ignite and Facebook, Philadelphia is in the midst of a smart cities hackathon challenge focused on VR in support of transportation accessibility.

“We have a very diverse population here in Philadelphia, and we are actively working on trying to get more people onto public transit,” said Smart City Director Emily Yates. “The hackathon will help us to identify innovative ways to utilize augmented reality to improve accessibility to transportation for individuals with disabilities.”

People with visual impairments, for instance, might use an AR phone app to see enhanced or enlarged signage laid over an actual image of a bus depot or train station. For the physically disabled, AR could help with wayfinding, steering them toward more accessible pathways in the public transport system.

“Perhaps it’s guiding you more easily to the elevator, identifying ways that don’t require you to take the steps,” Yates said.

“Or maybe it could provide you an alternative route if there’s a train station that doesn’t have accessible means available.”

While the outcomes of the challenge have yet to be seen, Yates said she is optimistic that these new tools could deliver dramatic improvements. “There’s just so much opportunity for innovation in this space,” she said.

## SOCIAL SERVICES

In Montgomery County, Ohio, the child services office is using VR to train caseworkers. The aim is twofold: to help them better understand how to respond to situations, and also to address potential racial inequities.

At Accenture, Child Welfare Lead Molly Tierney has been heading up an effort to develop AR and VR experiences in support of social services. She explained there’s a natural fit here. “Virtual reality experiences are very immersive and highly realistic, and can replicate what caseworkers see in the field,” she said.

Her team has developed a virtual scenario in which a caseworker interacts with a family in its home, learning how to read the cues in human behavior and how to de-escalate tense situations. “You





TRANSIT RIDERS IN PHILADELPHIA MAY SOON BE ABLE TO USE AN AR PHONE APP TO SEE ENHANCED SIGNAGE AT BUS DEPOTS AND TRAIN STATIONS.

SHUTTERSTOCK.COM

go to ‘visit’ a home and you sit across the table from a person who’s looking you in the eye,” she said. “You speak to them and based on what you say, that changes how they respond to you.”

A version of this helps caseworkers to recognize their own hidden biases by swapping out actors of different ethnicities

and inviting participants to review how their handling of the situation varied, perhaps because of race-based perceptions.

### A WIDE NET

In Raleigh and Cary, N.C., technology advocacy group RIoT is leveraging funding from US Ignite in support of a broad-based VR challenge. The effort casts a wide net, seeking ways to implement the technology in support of a range of government functions.

The challenge looks at ways to increase tourism and, in particular, to leverage the convention center. Developers also are invited to offer AR and VR solutions around inclusivity as well as workforce development.

“We are helping to crowdsource potential solutions from entrepreneurs, startups, small businesses,” said RIoT Executive Director Tom Snyder, who predicts augmentation will have a far-reaching effect on civic life.

“We’re going to see impacts not just across these statement areas, but across every aspect of how we interact in our communities,” he said. “When we can augment more and we can do it more and more in real time, we’re

going to be able to solve problems that just weren’t solvable before.”

### BENEFITS AND OUTCOMES

Across these municipalities, those who are pursuing augmented solutions describe a range of potential benefits.

For first responders, AR and VR could expose trainees to more diverse scenarios, Noble said. He also likes the fact that emergency personnel can train on hazardous situations without being exposed to actual hazards.

“We want to use this for the high-acuity, low-frequency incidents that it’s hard to train for in real life, things like hazardous materials or active shooter incidents,” he said. “There are things like that, that hopefully we don’t respond to very often, but we still have to be prepared for.”

Yates said she is intrigued by the possibility of being able to open up new modes of communication.

“The visual approach is a very compelling tool for getting people to engage, versus just talking,” she said. “There are people who can’t do it with just words, who can better understand the pros and cons if you give it to them in pictures.”

For Tierney, one big potential advantage to augmentation lies in its geographic reach — the ability to deliver training anytime, anywhere. That could be a game-changer in social services, where training budgets may be lean, she said.

“If you are running a statewide child welfare agency and you have a training in one part of the state, people are going to have to travel across the state to get to it,” she said. “This offers an alternative.”

She also expressed enthusiasm about the unique ways in which VR might help individuals in state government to tackle their own implicit biases. She pointed to her team’s social service example, where individuals get to gauge their own reactions to people of different ethnicities.

“It gives them opportunity to see — minute to minute, transactionally — how bias is actually manifesting itself,” she said. “That is enormously important. If we don’t find new ways to practice our way of being, we will just keep playing like we



AUSTIN-TRAVIS COUNTY-EMS





SHUTTERSTOCK.COM

VR HEADSETS LIKE THE OCCULUS QUEST MEAN FIRST RESPONDERS OR SOCIAL WORKERS CAN SAFELY TRAIN FOR POTENTIALLY DANGEROUS SITUATIONS WITHOUT PHYSICAL HAZARDS.

have always been playing. This creates an opportunity to practice it a little differently, and then when we're out in the world, we might actually change how we react."

In terms of outcomes, some have expressed concern that virtual training in a simulated space may not carry the same weight as a more conventional hands-on or classroom experience. While it's probably too soon to say for sure, some initial results suggest VR and AR experiences can in fact drive meaningful outcomes.

Noble has done tests, training a cadre on a simulated Ambus using AR tools, while another group trained using VR scenarios and a third learned via traditional training.

"We found that the VR and AR groups greatly improved their memory on where items were in the bus. Their retention of all the things that we wanted them to learn was far greater than the 'traditional' group," he said.

"We think it's mainly because they were able to train any time they wanted," he said. "And they were able to do it multiple times in VR and AR."

## BEST PRACTICES

For state and local entities looking to adopt augmentation, either for training or

for citizen services, those in the trenches suggest a number of best practices.

As a still-emerging technology, there are not yet a lot of set standards around AR and VR platforms. Snyder suggested it will be important for government organizations to seek out solutions that share some common ground, in order to make them both broadly applicable and also cost effective.

"It's not wise for government to jump in on a solution that is truly only working in your community," he said. "It's important to be open, to look for things that can maybe pilot in one location and then can scale into other communities. We don't want every single town in America running a completely different technology stack."

Civic problems tend to ignore jurisdictions. "Traffic, pollution, storm water, those don't stop at the county line," he said. "When we're developing solutions for these different things, it is important to have interoperability. We should do this in ways that are open source, so they can be replicated in other places."

For those looking to implement pilots, Noble said, it's important to have leadership on board. To that end, he said, IT will need to come to the table with metrics of success.

"It's a new technology, I don't know how well-proven it is. One of the biggest

hurdles that we're going to face with VR and AR is actually proving that it works just as well as 'real' training, or better," he said. "We did beta tests with our cadets where we proved that their memory retention and time-on-task greatly improved with VR and AR. That went a long way with our leadership in showing that this is not just a toy or a video game."

As government looks to augmentation as a way to deploy training across broad geographies, Dick said, IT leaders will need to think about how personnel in the field are accessing those tools.

"Especially if you're talking about something that requires wireless VR, you might not be able to train people who are in a rural area with very low bandwidth available to them," she said.

"VR is great, but you have to make sure it's usable for everyone that you're asking to train on it," she explained.


"You need to make sure that there are alternatives available if people can't access it, whether it's due to bandwidth and infrastructure or physical ability."

In terms of implementation, it may be helpful to support augmented learning with a degree of human contact, ideally in the form of follow-up encounters.

"Let's say 15 individuals have each gone through the headset experience," Tierney said. "Then they're invited into a seminar where they get to talk together and learn the differences about what you saw and what I saw, what each of us noticed. We can begin to unpack our thinking together."

Overall, these early implementers agree, AR and VR together hold great promise across a range of potential civic uses.

"We as humans have always tried to augment ourselves. When our vision starts to go, we put on glasses. If our hearing starts to go, we get a hearing aid," Snyder said.

"We want to use technology to make ourselves better," he said. "AR and VR are going to be transformational in bringing clarity, in bringing real-time information to us, right when it's needed. It is going to affect every single aspect of government." 



# Modernizing Authentication in State and Local Government with Hardware-Based MFA

**The massive shift to remote work has led to what some experts have referred to as a “cyber pandemic” in state and local government.<sup>1</sup>**

Hindered by legacy systems, budget constraints and business processes driven by in-person interactions, many organizations were not prepared for the significant cybersecurity challenges that confronted them during the pandemic, especially regarding strong employee authentication.

State and local governments have traditionally relied on username and password-based authentication. Some agencies have adopted mobile-based multi-factor authentication (MFA), but this may not be the strongest form of MFA, especially for privileged users and administrators.

There are also many employees who can't, don't or won't use mobile devices for MFA because they don't have a

smartphone or live in low-connectivity areas. Employees may also balk at the idea of allowing admin access to their personal devices, or compliance issues or union restrictions may actually prohibit using personal mobile devices for work. This creates gaps in governments' security posture and further increases the risk of account takeovers. What's more, mobile-based MFA isn't cost-effective for governments because they must reimburse employees for mobile-related costs.

To ensure 100 percent MFA, state and local governments should consider hardware-based security keys. These are physical, one-touch authentication devices users can input into their computers or tap against their mobile phones to access critical systems and applications. Hardware security keys such as the YubiKey from Yubico are phishing-resistant and help eliminate account takeovers. They're also user-friendly, cost-effective and can serve as a critical enabler of



## ADVERTISEMENT

a zero trust security architecture, allowing governments to challenge a user with simple, one-touch authentication when policy dictates the security posture of a user be reaffirmed.

“In today’s extremely diverse, large, highly complex and dynamic operating environment, the state of Georgia requires a holistic cybersecurity strategy, one that doesn’t rely solely on the individual end user or software-based solutions,” says Dean Johnson, the chief operating officer of the Georgia Technology Authority (GTA).

As state and local governments modernize service delivery, a hardware-based MFA solution can help them strengthen enterprise security in three critical areas: remote work, connectivity, and infrastructure and process modernization.

### Current Challenges

Remote work and the disruptions of the past year have led to several security challenges for governments.

Employees’ homes and devices have become the new perimeter, and usernames and passwords don’t offer the robust security defenses governments need in this new work-from-home environment. To strengthen security, state and local governments have had to rapidly switch to 100 percent MFA to obtain more comprehensive coverage.

“Everybody used to work within their own walls, so they were protected,” says Frank Snyder, sales leader for the state, local and education markets at Yubico, a leading provider of hardware-based authentication solutions for the public sector. “Now, everybody is trying to come in the front door one at a time. It’s just much more complicated. And they have to continuously authenticate to get in, so governments need 100 percent coverage.”

Resource constraints, technology silos and an evolving threat landscape also hinder governments. Company-issued devices are often more secure than employees’ personal

**“When governments are looking for an MFA solution, they need one that’s like a Swiss Army knife that can handle their legacy applications as well as modern connections.”**

Frank Snyder, Yubico Sales Leader for State, Local and Education

devices, but smaller local governments may not have the resources to provide them. Many governments also still rely on disparate identity platforms, which makes access management more challenging and prevents governments from having complete control and visibility into their security infrastructure.

State and local governments are confronting all these challenges at a time when hackers have increasingly targeted these organizations. In 2020, cyberattacks on state and local governments increased 50 percent.<sup>2</sup> These attacks weren’t just relegated to software and IT systems. Operational technologies like SCADA systems and air-gapped systems have become prime targets for hackers, too – especially when they’re connected to cloud-based monitoring applications.

While governments have turned to a variety of authentication solutions to increase security, many of these solutions are software-based, which can create additional security vulnerabilities. Hardware-based security keys, on the other hand, offer several benefits in terms of more robust security, a better user experience, cost efficiency and authentication modernization.

### The Benefits of Hardware-Based MFA

#### Securing Remote Work and Enhancing Connectivity

As more government organizations embrace hybrid work environments, they’ll need to create a secure remote work infrastructure.

Hardware-based security keys offer a range of capabilities to help them achieve this. First, they’re typically compatible with some of the leading identity and access management systems, including Microsoft, Okta, Duo Security and Ping. These devices can be connected to multiple identity systems, offering governments more flexibility and scalability. A hardware-based MFA also relies on modern FIDO U2F and FIDO2 authentication protocols that provide strong two-factor and multi-factor authentication; gives users the option to go passwordless; and helps organizations combat phishing attacks because credentials can’t be shared across systems,



devices or users. This approach also helps reduce man-in-the-middle attacks in which a hacker eavesdrops or alters communications between two parties.

Hardware-based MFA reduces the security risks associated with employees using their personal devices and recycling the same password across their personal and business accounts. The solution also reduces BYOD-related reimbursement expenses for governments.

“A hardware security key wins on a usability standpoint because it’s purpose-built for authentication. It has that sole purpose, whereas phones have too many features and apps loaded on to them,” says Cody Hussey, a solutions engineer at Yubico. “There’s just so much more that could go wrong.”

Hardware-based MFA has other usability advantages, as well. Like many organizations, governments are filled with workers from different age groups who have a range of technical abilities. A hardware-based security key levels the playing field because it’s as simple as a single touch or the tap of a key.

In terms of connectivity, hardware-based MFA can extend the capabilities of security solutions such as a VPN, which many governments implemented as a stopgap in the beginning of the pandemic. Though many organizations continue to use VPNs, the quality of these solutions vary by provider and may not offer the highest levels of encryption. As governments adopt a cloud or hybrid cloud infrastructure to support remote connectivity, a hardware-based MFA solution can serve as an effective second authentication layer for a host of digital workplace collaboration tools, including videoconferencing and email applications.

For those reasons and more, the state of Georgia selected Yubico to provide hardware MFA services.

“Given the varied regulatory requirements that state agencies are required to comply with, the GTA views Yubico’s hardware security option, Yubikey, as vital to helping protect mission-critical systems and state data from both external and internal threats, while at the same time doing so in a very cost-effective way,” Johnson says.

“The Yubikey solution brings multiple benefits to state agencies. It provides greater security than mobile authenticators: The physical device prevents 100 percent of account takeovers which is the threshold that GTA was targeting.”

#### Driving Infrastructure and Process Modernization

Many of the same capabilities that make hardware security keys so beneficial for remote work also make them optimal for infrastructure and process modernization within state and local government.

Relying on newer FIDO authentication protocols enables strong authentication across legacy and modern infrastructures and applications that facilitate citizen-



**In 2020, cyberattacks on state and local governments increased 50 percent. These attacks weren’t just relegated to software and IT systems. Operational technologies have become prime targets for hackers, too.**

facing digital services. This is crucial for budget-strapped governments that may not yet have the resources to rip and replace legacy systems or prefer to operate in a hybrid cloud environment for the long term.

“When governments are looking for an MFA solution, they need one that’s like a Swiss Army knife that can handle their legacy applications as well as modern connections,” Snyder says.

Hussey adds that as governments modernize, it’s critical for them to shift their security mindset.

“As governments move toward modern infrastructure, more streamlined processes and methods of tackling projects with cloud technologies, they’ve realized that modern authentication is needed to protect those resources,” he says. “It’s now important for organizations to move away from a network perimeter as their main means of security and move towards identity as the new perimeter, especially with a modern zero trust architecture.”

#### A Roadmap for the Future

As state and local governments work to strengthen enterprise security, they should keep the following best practices in mind:

**Think long term.** Governments should consider their near-term operational goals and long-term initiatives as they assess MFA solutions – whether they plan to permanently adopt a hybrid work model, launch more self-service applications or digitize the majority of citizen services. The right MFA solution should be future-proofed to meet evolving needs and should authenticate across all platforms.



## ADVERTISEMENT

“The solution should be ubiquitous,” says Michael Santini, a sales leader for the state, local and education markets at Yubico. “You shouldn’t have to redo your infrastructure, undergo a massive overhaul or engage in a massive spend to implement stronger authentication.”

**Focus on strong authentication.** While any MFA solution is better than no MFA, not all are created equal. For the greatest levels of protection, governments need to deploy strong authentication using phishing-resistant hardware security keys to stop account takeovers.

**Focus on usability.** User experience can make or break adoption, so the solution should not require a steep learning curve for employees to use it effectively. In a remote environment, this is especially critical to ensure compliance and greater endpoint security.

That was an especially important factor for Georgia in adopting the Yubikey solution, says Johnson.

“A big selling point for GTA was the fact that the hardware solution does not need network connectivity to be functional. A large number of the state agencies operate across Georgia’s 159 counties. Many of these agency sites are in very remote, rural geographies where maintaining a consistent network connection all of the time can be virtually impossible. Having ease of access to a Yubikey device that facilitates functionality regardless of where the end user is located is significant.”

**Collaborate with the right partner.** A provider and an organization should share the same long-term vision, both for technology and for the partnership itself. The provider’s vision and products also should align with federal

**“The GTA views Yubico’s hardware security option, Yubikey, as vital to helping protect mission-critical systems and state data from both external and internal threats.”**

Dean Johnson, Chief Operating Officer  
of the Georgia Technology Authority

cybersecurity guidance and priorities, such as NIST 800-207, which provides a framework for establishing a zero-trust architecture.

Snyder says the threat landscape has changed so much that modern authentication is no longer just about software. Something supposedly as analog as physical security has become just as critical to creating a modern, multifaceted security architecture that thwarts hackers.

“Because modern hackers have gotten so sophisticated, your endpoint security measures have got to involve human interaction, a human gesture,” Snyder says. “There has to be proof there’s a human on the other side of that authentication. And the only way to do that is with a hardware token.”

In Georgia, Johnson says, hardware MFA keys have already become an important part of the state’s overall cybersecurity strategy.

“The use of Yubikeys, along with other approved MFA methods, the use of complex passwords, and regular end-user security awareness training help ensure the state of Georgia can maintain a high degree of confidence that our end users and the state’s data are being properly secured.”

*This paper was written and produced by the Government Technology Content Studio, with information and input from Yubico.*

### Endnotes:

<sup>1</sup> <https://www.govtech.com/blogs/lohrmann-on-cybersecurity/2020-the-year-the-covid-19-crisis-brought-a-cyber-pandemic.html>

<sup>2</sup> <https://gcn.com/articles/2020/09/04/cyberattacks-state-local-government-climbing.aspx>

Produced by:  


Government Technology is about solving problems in state and local government through the smart use of technology. Government Technology is a division of e.Republic, the nation’s only media and research company focused exclusively on state and local government and education. [www.govtech.com](http://www.govtech.com)

For: 

Yubico puts an end to account takeovers for businesses and individuals. The YubiKey — the world’s #1 hardware-based security key — is the most secure, easy-to-use, and affordable multi-factor authentication. The world’s largest governments, technology companies, and financial institutions trust Yubico to secure their most important information, accounts, and applications. [Learn more at www.yubico.com](http://www.yubico.com)

# Protecting Critical Government Assets with Hardware Security Key-Based Authentication



*State and local governments have begun to adopt mobile-based multi-factor authentication (MFA) to protect against security breaches. Jeff Phillips, vice president of public sector at Yubico, identifies the risks of relying solely on mobile-based authentication, and explains how hardware security keys can complement mobile-based MFA to ensure 100 percent MFA coverage.*

## How do state and local governments typically authenticate users?

For years, state and local governments have relied on usernames and passwords to authenticate users. But username and password-based authentication is not good enough anymore. Governments need to improve cybersecurity to protect their constituents against the havoc wreaked by cyberattacks.

To improve authentication security, some state and local government departments have turned to mobile-based MFA.

## What are the risks to government when relying on mobile-based MFA?

Mobile authentication may appear to be a quick fix to tighten government security, but it will only protect enterprises up to 80 or 90 percent, leaving critical gaps in coverage. Systems are still vulnerable because governments are relying on downloaded software.

There will also always be employees who either can't, don't or won't use mobile-based MFA. Some employees do not have access to a smartphone or have limited access to Wi-Fi. Others might work for unions that say they cannot use their personal devices for work purposes.

## How can a hardware security key help address some of these issues, and provide an alternative or complement to mobile-based MFA?

A mobile authenticator might be easy to distribute, but a hardware security

key offers far better security and user experience in the long run. With mobile authentication, every time you want to log in to a system you have to enter your username and password, wait for a code and enter in the code before you start. With a key, you simply enter your username and password, insert your key and you are in.

A hardware security key, such as the YubiKey from Yubico, is phishing resistant. Even if a hacker gets your username and password, if they do not have the key, they cannot infiltrate your system. YubiKeys are also 1 of 3 government-approved alternate authenticators, according to the Department of Defense, and are referenced in the NSA's guidance on selecting secure MFA solutions. As the keys are also FIPS validated, government customers can quickly fill security gaps with fast deployments and quick budget approvals.

Hardware keys also guarantee a secure supply chain. When your key needs to be updated, you do not have to download new software that could put you at risk. You simply receive a new key.

## What should state and local governments be looking for when procuring a hardware security key?

When adopting a new tool or solution, governments should always follow the "crawl, walk, run" model. First, governments should consider how they are currently operating. Then, they need to discuss the quickest way to transition their authentication strategy to a zero trust

model that ensures only the right assets are connecting to their network.

For some state and local governments, this might involve first procuring hardware security keys for staff that can't, don't or won't use MFA as a way to fill gaps in coverage.

The ideal hardware security key collaborates with a secure identity platform to create a single sign-on experience for each user. The identity platform automates the process so governments simply can set it and forget it.

Governments already protect the health and public safety of citizens. Cybersecurity is the next domain, and a hardware security key is an easy solution that governments can implement to protect their employees and their constituents from cyberattacks.

# yubico

Yubico puts an end to account takeovers for businesses and individuals. The YubiKey — the world's #1 hardware-based security key — is the most secure, easy-to-use, and affordable multi-factor authentication. The world's largest governments, technology companies, and financial institutions trust Yubico to secure their most important information, accounts, and applications. Learn more at [www.yubico.com](http://www.yubico.com)





# 30%

To help optimize its messaging about availability of COVID-19 vaccines, this spring Walgreens expanded its partnership with Phrasee, an AI-driven copywriting platform, to create targeted email campaigns. They used the tech to generate more engaging subject lines, simplify text and tone down some of the “fun” language that didn’t fly with customers early in the pandemic. The result? After putting Phrasee’s changes into action, Walgreens reported a 30 percent increase in email open rates. SOURCE: VENTURE BEAT



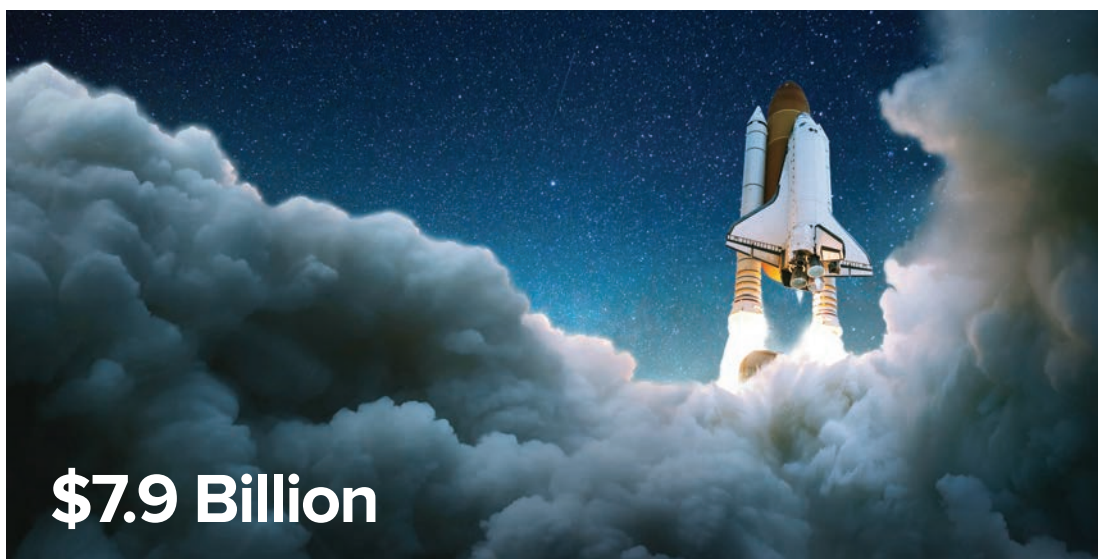
**RED ALERT:** The U.K. is finally joining the ranks of countries including the U.S., Canada and South Korea this year in launching an emergency alert system. The government will send text alerts to all residents’ mobile phones when there’s a national or local risk, such as severe flooding or fire, and mobile providers will share no personal information with authorities. Public testing of the system began in May and will expand nationwide later in 2021. SOURCE: ENGADGET



WIKIPEDIA

## 46 YEARS:

One man was such a fan of a 46-year-old Hewlett-Packard HP-25 calculator that he used a 3D printer to create a new battery case to hold a 900mAh lithium-polymer cell capable of wireless charging, replacing the device’s original nickel-cadmium batteries. The HP-25 is a programmable scientific calculator designed for engineering use, and its 10-digit LED display still accomplishes exactly what its user needs, despite the availability of faster, shinier — and likely shorter-lived — options. SOURCE: GIZMODO



SHUTTERSTOCK.COM

**In keeping with the Biden administration’s emphasis on scientific research since the new president took office in January, the**

**federal budget proposal released May 28 included a request for nearly \$8 billion for NASA. The funding would go toward**

**addressing climate change on earth, as well as further exploration of the moon and other planets.**

SOURCE: ARS TECHNICA

Send Spectrum ideas to Managing Editor Lauren Harrison, lharrison@govtech.com

A GOVERNMENT TECHNOLOGY Q&amp;A

government  
technology

# Next-Generation Cloud Access Security Broker

## How cloud security is evolving to meet new challenges

A decade ago, the concept of a Cloud Access Security Broker (CASB) emerged to address the complex security needs of emerging cloud infrastructures. As cloud has become a mainstay in state and local government, there is new urgency for cloud-specific security measures.

In this Q&A, Ned Miller, public sector chief technical strategist for McAfee, talks about new CASB capabilities that can support cloud deployments in general, and zero trust specifically.

For more information, visit [mcafee.com](https://www.mcafee.com)

 **McAfee**<sup>™</sup>  
Together is power.

### Why was CASB first introduced?

CASB was originally intended to help organizations gain additional visibility and control over data as it was moving into the cloud.

Operators and defenders needed a more sophisticated means of managing security, especially with data residing in multiple cloud infrastructures. The original management and security tools did not take that kind of infrastructure into consideration.

### How has that need changed over time?

With widespread cloud adoption, the complexity of the problem has evolved. Organizations face new issues: Where is my data being stored? How is it being accessed? Who is accessing it? And do we have the appropriate governance models in place?

With government's cloud-first mentality, software-as-a-service applications have become pervasive. We have also seen the rise of shadow IT: People leveraging cloud applications without the direct involvement of the IT department. Government needs new tools to manage and govern all those applications.

### How has CASB evolved to meet that need?

CASB has grown beyond the initial core functionality to become more of a security platform and address things like shadow IT and the need for multi-cloud governance.

At McAfee we now support all four of the major cloud service providers with tools like configuration management, malware detection and policy enforcement. All

those things have evolved over time, as the environments have become more complex.

For example, CASB now addresses security needs around dev-ops — the effort to provide a modernized development environment using cloud-based infrastructure or containers. We have enhanced the CASB platform to accommodate cloud native application protection and container security.

### So, it has gone beyond just protecting the cloud infrastructure?

Exactly. Now we also must protect the applications that are built inside of those infrastructures.

### How does McAfee make that happen?

We designed McAfee MVISION Cloud to address shadow IT, with configuration management and policy enforcement. There's also the cloud-native application protection and container security.

Lately we are focused on protecting data that is traveling across clouds or even in between cloud-based applications. For example, with Zoom and Microsoft Teams meetings, what is governing the content that we are sending each other? Today's CASB has the ability to do that.

### How does all this support zero trust?

At its heart, zero trust is a data-centric security model. CASB delivers continuous data protection, conditional and contextual access to data, threat landscape data and user behavior monitoring. The most important asset you have is data, and CASB is a comprehensive, single policy-enforcement engine for data protection.



Every day on govtech.com, we explore a question about something new happening in the tech (and tech-adjacent) world. Here's a look at a few recent Questions of the Day. For more, visit govtech.com/ QoD, or subscribe to our newsletter to get them daily in your inbox.



## Can an implant allow you to type with just your imagination?

**Answer:** Yes.

Designed for people with severe motor and speech impairments, a new system from the BrainGate collaboration allows users to type just by imagining doing so. In a recent test, a 65-year-old man paralyzed from the shoulders down was able to text at a rate of 90 characters per minute.

The system uses two 4x4 mm brain implants and a machine learning algorithm to pick out and analyze the specific cognitive signals associated with handwriting. It then produces the letters the user is thinking of on the screen in real time. The man using the system just had to visualize "writing the letters one on top of another with a pen on a yellow legal pad" and what he was thinking of would get typed out.

The system can't feasibly be replicated as it is now, considering that it involves brain surgery to install the implants and has to be hooked up to a very sophisticated computer. It also isn't generalized, meaning it has to first be taught each individual user's unique cognitive nuances. But the team behind it envisions it eventually becoming "wireless, always available and self-calibrating."



## What is the point of a levitating hot dog cooker?

**Answer:** There's no point, really; it's just good fun.

YouTuber NightHawkInLight has built a device that absolutely no one needed, but if you're a hot dog fan, then you just might want one. The device uses what is known as the Coandă effect in order to levitate the hot dog. This is when a liquid or gas will cling to a rounded surface, like when you pour a liquid out of a mug and it just runs down the side of the mug. This effect can be used in order to levitate round, or in this case round-edged, objects with an air gun.

This particular homemade grilling alternative levitates the hot dog so that it is surrounded by heated coils wrapped around a larger coil. The air stream holds the hot dog in place in midair while the heat does its work. Not only is this far more entertaining than a regular grill, it's also more sanitary.



## This app uses what tech to let users solve true crime cases?

**Answer:** Augmented reality.

If you're a fan of true crime, then this smartphone game is for you. Developed by True Crime Mysteries, "Eastern Market Murder" is a location-based augmented reality game in which players solve a real-life true crime case in the actual location where it happened.

"Eastern Market Murder" takes place in Melbourne, Australia, so if you want to get the full on-site experience, you'll have to go there. There is, however, an off-site version as well. The story follows an 1899 murder case in Melbourne's Eastern Market, which is still in operation today. Users can go to the actual location where the suspect's stall was in the market and see it exactly as it was in 1899 through their phones. The game will then take them to different locations throughout the city as they follow the investigation, letting them see things as they were at the time through their phone screen.

Send Spectrum ideas to Managing Editor Lauren Harrison, lharrison@govtech.com

# Harnessing 5G to Deliver Digital Government



*In recent years, connectivity has advanced from 2G to 4G, but the emergence of fifth-generation wireless technology, or 5G, promises to revolutionize how data is shared across networks and how quickly governments and their constituents can access the information they need.*

*In this interview, **Bryan Schromsky**, managing partner for Verizon 5G Public Sector, shares insights on the promise and opportunity 5G connectivity offers and the steps state and local governments can take to begin building out their 5G infrastructure.*



#### **Verizon is here to help the public sector**

Verizon serves as a trusted partner to the public sector, from rural communities to the largest State and Federal agencies. We enable better government through our best-in-class networks, innovative solutions, exceptional customer experience, and decades of success helping get mission-critical projects done right. With Verizon on their team, our customers can serve their constituents better, work more efficiently and remotely, create smart communities, empower young learners, help ensure public safety, and respond quickly to emergencies.

For more information, please visit:  
[Verizon Public Sector](#)

#### **In what ways is 5G more revolutionary than previous advancements in communications technology?**

We really look at 5G as being the Fourth Industrial Revolution. You actually have a platform or a connectivity infrastructure that can do things we couldn't imagine or dream, and we're not tethered by a particular fiber or terrestrial connection. In previous generations of telecommunications technology, such as 4G, you could watch and upload videos and use unified communications, but with 5G, you can do all those things at a higher level. You get better imagery, AR (augmented reality), VR (virtual reality) and autonomous, fully connected vehicles that receive high bandwidth at very low latency, which is revolutionary.

#### **What are some key use cases for 5G in the public sector?**

Some of our public sector customers are using 5G connectivity to power autonomous drones, so not using bluetooth, WiFi or a local radio frequency connection, but actually controlling a drone when it's outside of line of sight. We're getting requests in terms of next-generation, high-speed rail lines and actually building out trackside networks at the federal, state and local level.

A lot of governments are also turning to 5G connectivity for AR and VR-driven training and immersive learning. Many colleges and universities are using 5G to facilitate online learning experiences, and in healthcare, we see organizations use it for robotic surgery and telehealth services to diagnose patients.

#### **How will 5G impact service delivery and the constituent experience within state and local government?**

With the pandemic, we've seen a lot of growth in 5G adoption and more of a willingness to build out 5G infrastructure and expand broadband access.

5G broadband access is crucial to facilitate things like distance learning and remote work and reach underserved communities. It's crucial to bridge the digital divide and connect us during pivotal moments, whether it's using videoconferencing tools to communicate with colleagues or a loved one who may be in the hospital, or to give students a more immersive learning experience.

Demand for government services will only increase in the future. The world is mobile now, so implementing advanced connectivity through 5G and edge computing technologies — which provide faster speeds, lower latency and greater network reliability — will give institutions the capabilities to meet these demands.

#### **What can state and local governments do to begin building out their 5G infrastructure? How can they maximize current federal funding to achieve this?**

Along with pandemic-related federal aid, there are a lot of grant opportunities for state and local governments. For example, the National Science Foundation and the Department of Transportation have several grants focused on autonomous vehicles. A lot of those grants are actually earmarked for 5G technology or other innovative technology targeted to certain problem sets.

State and local governments can also work collaboratively with telecom partners to begin building out their 5G infrastructure. We're currently doing a lot of public-private partnerships. We've created two 5G innovation centers in Palo Alto, Calif., and Lake Nona, Fla. Governments and their private sector partners can work together to set up similar engagements around the country to learn from these projects and expand access in their communities.





Gordon Knopp

## Wyoming CIO Resigns After Major Health Data Leak

**Gordon Knopp** resigned his position as Wyoming CIO following the high-profile leak of sensitive health-care data by the state. Knopp had held the position dating back to 2019. State Information Services Administrator Timothy Sheehan was selected as Knopp's temporary replacement.

## Pennsylvania Names New CTO

Following the departure of chief technology officer Sean Crager for the private sector, **Jason Hebbe** was named Pennsylvania's new CTO at the end of May. Hebbe worked directly under his predecessor and has been with the state for more than nine years, most recently as chief operating officer, where he provided direction on IT services for the CTO.



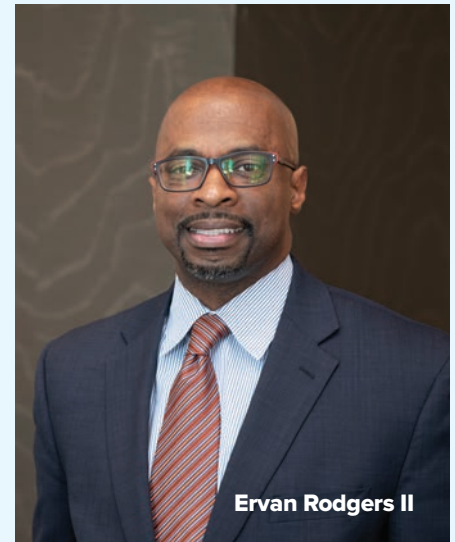
Margaret Brisbane

## Permanent CIO Named in Miami-Dade County

Miami-Dade County, Fla., named **Margaret Brisbane** its permanent CIO, a job she had filled on an interim basis since early this year. Brisbane brings more than 15 years of experience with the jurisdiction to the role. She replaces Angel Petisco, who retired from the job.

## Ohio CIO Leaves for Private Sector

**Ervan Rodgers II**, Ohio CIO for the past two years, announced he was leaving state service as of June 2 to take an executive role with shoe retailer Designer Brands. A *GT* 2021 Top 25 Doer, Dreamer and Driver, Rodgers was instrumental in standing up the InnovateOhio Platform, among other accomplishments. Deputy CIO Katrina Flory has replaced him in an interim capacity.



Ervan Rodgers II

## Phoenix, Ariz., Chooses IT Veteran as Acting CIO

Phoenix, Ariz., has tapped **Steen Hambric** as its acting CIO. Hambric has worked in the city's central IT shop as assistant CIO dating back to 2017. He replaces Matthew Arvay, who left the city to pursue opportunities in the private sector.

## West Virginia Changes CTO's Title to CIO

West Virginia Chief Technology Officer **Joshua Spence** is now the state's CIO following a recent proposal from Gov. Jim Justice aiming to modernize state IT. The new title will allow Spence to create a committee to oversee agency IT projects, among other expanded responsibilities.



Christopher Stewart

## Austin Upgrades Stewart's Status to Permanent CIO

**Christopher Stewart** was named the new permanent CIO of Austin, Texas, after serving in the position in an interim capacity since September. Stewart brings 20 years of city experience to the job, which he takes over in the wake of Stephen Elkins' retirement.

## N.C. Risk Officer Steps Down

**Maria Thompson**, who served for six years as North Carolina's first chief risk officer, left for the private sector in early June. A *GT* 2020 Top 25 Doer, Dreamer and Driver, Thompson will be replaced by deputy risk officer Rob Main on an interim basis.



Maria Thompson

# Smart-Scheduling Tools Bridge Physical and Virtual Delivery of Constituent Services



**Government organizations are entering a brave new world that blends in-person constituent services and virtualized customer journeys. Many agencies stood up digital options in the pandemic; now they're looking to mature and evolve the way they blend traditional service delivery with online options. One valuable part of that effort is smart-scheduling technologies, which allow users to place themselves in a virtual queue for services, or access services virtually without ever needing to set foot in an office. In this Government Technology Q&A, Michael Twersky, cofounder and CEO of Whyline, which offers smart-queuing solutions to private and public sector organizations, discusses how agencies can leverage technology to improve the customer experience as well as internal ROI.**

## As we transition out of the pandemic, how are constituent services going to change?

Even in a post-pandemic world, folks don't want to be in crowded waiting rooms, in a small, confined space around a lot of people. They also don't want to be in long, winding, serpentine queues when they don't have to. It's top of mind for a lot of constituents: "Do I want to stand in line? Do I even want to go in for something that can easily be done virtually?"

That demand for instant gratification from a technological perspective is not only relevant for the private sector, but it's also very relevant for the public sector.

## How should government organizations address that?

It's really important to start thinking about not only what you want to do, but how you plan to do it. It's easy to say, I'd like to see our agency in a future world where we offer virtual services, touchless payments, touchless queueing, etc. That's great, but then how do you set your organization up to do that? Do your current software, processes, personnel and procedures enable you to service clients in that fashion?

It's important to start educating yourself on the types of technology out there, not only in terms of what can replace your current in-person processes but what can be additive and synergistic.

## What are the benefits of smart-scheduling platforms for constituents?

You're able to easily view, how long are the wait times for the type of service I need? Based on what I need to do, what are the closest agency offices around me? What are the live congestion levels right now, or later in the day? You can predictably make an informed decision before you ever leave your home by entering into the virtual queue and letting the software wait on your behalf.

Alternatively, you can be directed to ways you can take care of the same task entirely virtually, without coming in person at all.

## And for agencies themselves?

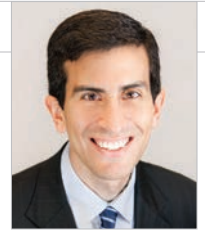
There are a lot of efficiencies and ROI opportunities. You have more optimal alignments of staffing against predictably higher and lower periods of congestion. That means greater savings in terms of FTEs by not overstaffing your offices when no one is there. And because clients are able to submit information to be processed and authenticated before they get there, staff will know what they're coming in for ahead of time. Administrators can start reviewing those docs before the customer ever walks in the door.

Look for a solution that can handle both sides of the coin. It's really important for the solution to own the whole time management and efficiency stack, to better prepare and manage the processing and scheduling not just for in-person stuff, but for entirely virtual stuff as well.



Whyline was founded to create better, more efficient experiences through the use of virtual queues, dynamic appointment scheduling, and digital capacity management solutions. Currently supporting both governments and the private sector globally, Whyline empowers people everywhere to skip the line and let the software wait on their behalf. [www.whyline.com](http://www.whyline.com)





# Getting Verified

In the absence of a federal electronic ID, digital driver's licenses are a move in the right direction.

One of the biggest challenges for online services in both the public and private sectors is verifying the identity of users. When individuals register for a new service, how can online providers know if they are who they say they are?

While some online services may not need identity information — an online store, for example — others require it, such as financial service providers that are obligated to verify the identity of individuals seeking to open accounts. Moreover, identity information is often necessary for many online government services, such as obtaining unemployment benefits or a marriage license, or recording a real-estate transaction. In many cases, individuals cannot complete these transactions online because there is no secure and reliable way for them to prove their identity online.

When online services that require identity information are available, they usually rely on complicated and error-prone processes to remotely verify a user's identity. For example, one of the most common techniques is knowledge-based authentication, where online services

ask individuals to prove their identity by answering questions about data from credit agencies, such as giving the street name of a previous residence. But of course, not everyone will correctly remember this information — creating the potential for false negatives, where legitimate

users cannot access services — and some of this information may be known by others, or even publicly available, creating a different potential for false positives, where unauthorized users can impersonate others.

Another method is to have services attempt to remotely verify physical identity documents, such as a passport or driver's license, using a combination of automated facial recognition and manual verification. Unfortunately, these processes are also error prone, and many of the techniques to determine whether an ID card is valid, such as tactile features, overlays or laser engraving, are not effective using only photos or video.

Indeed, poor identity verification is one of the reasons that identity theft is such a growing problem as more services move online. The Federal Trade Commission received 1.4 million reports of identity theft last year, double the number in 2019, with one security research firm estimating \$56 billion in losses.

The best solution to this problem would be for the federal government to develop an interoperable framework for securely issuing and validating electronic IDs and then direct a federal agency to start issuing these electronic IDs upon request. Both the State Department and the Department of Homeland Security already have systems and processes in place that could easily be adapted to issue e-IDs, either as standalone products, such as smartcards or software certificates for mobile phones, or as an extension of existing identification documents, such as passports.

But in the absence of federal action, a number of states have already begun this work on their own by creating digital driver's licenses that provide a secure digital alternative to a physical identity document. These are more than just a photo of a driver's license on a phone — they are mobile apps with a number of identity features, such as allowing individuals to only share some information, such as their age and not their address, when purchasing alcohol, thereby increasing privacy. (For more on where states are with mobile driver's licenses, see *Fast Track* on p. 22.)

However, these various state electronic IDs are not always compatible, which means they cannot necessarily be used out of state, nor do they all necessarily work efficiently for remote transactions. The Improving Digital Identity Act, introduced last year by Rep. Bill Foster, D-Ill., would not only create a national, interoperable electronic ID framework across all levels of government, but it would also establish grants for states to upgrade their systems for issuing driver's licenses and other identity credentials to support electronic IDs.

Both the states and the federal government have long dragged their feet in improving identification in America — the Real ID Act, passed in 2005, is still at least two years away from full implementation. Given the many benefits of electronic IDs, hopefully it will not take another two decades to see progress. **90**

**Daniel Castro** is the vice president of the Information Technology and Innovation Foundation (ITIF) and director of the Center for Data Innovation. Before joining ITIF, he worked at the Government Accountability Office where he audited IT security and management controls.

# Reinventing Human Services



*The COVID-19 pandemic intensified challenges for vulnerable groups in the United States. Human services agencies have been among many groups on the front lines of the crisis, delivering critical services and handling massive new workloads.*

*New research conducted by Accenture between July and September 2020 shows the growing importance of these programs. More than a third (34 percent) of U.S. residents expect to use more human services in the years to come. The same research foretells mounting pressure around modernization. Seventy-seven percent of U.S. residents expect human services to look very different in the future, and 74 percent of human services executives say their organizations have reached a turning point.*

*In this Q&A, **Ryan Oakes**, leader of Accenture's global public sector practice, talks about the pandemic's impact on human services and what the future may hold.*

## What did we learn about human services during the pandemic?

One thing we learned is that the human services system was not built to handle the crisis in a way constituents would prefer. Clients want to get services through digital channels instead of the traditional processes built around in-person visits. Human services workers performed magnificently during an all-encompassing pandemic that threw many of their clients into uncertainty, fear and displacement. But technology to support these public sector functions has been under invested and under leveraged. There's an opportunity to learn from the best of what happened during the pandemic in terms of virtual service delivery and marry that with the right protections to ensure support is directed to those in need.

## How are these programs changing?

There is some fantastic work going on here in the U.S. and other countries where digital services are pushing the pace of change. Some organizations have the chops to do it themselves, but many others lack the horsepower. That's not an indictment of their talent or dedication — they're just not staffed or funded for it. For many of those organizations, the pandemic gave them a taste of what it's like to partner in a different way with the private sector.

The organizations we see shaping themselves for the future are seeking a new balance point between speed and control. The pandemic showed how technologies like virtual assistants can help improve service delivery, and I'm optimistic that human services agencies can leverage new federal funding to accelerate transformation activity. But I think it's important to be honest about the fact that the vast majority of U.S. human services systems are complex beasts. Organizations really need to take the time they need to balance the complexity of the task at hand with the opportunity to drive innovation and better outcomes.

## What new technologies will be important to meet the demands of the future?

We have just begun to tap into the value that automation will bring to government. I know some people are genuinely worried this will eliminate jobs. But there is such a big gap between the service government could provide and what it's currently able to provide. Automation can help government address that gap by letting human services workers offload routine and simple tasks so they can handle more complex issues. Think of it like providing every state worker with an assistant that can work 24/7.

Closely connected to that is using artificial intelligence to improve training. I'm deeply proud of Accenture's virtual reality training program (the Accenture Virtual Experience Solution, or AVEenuS) for child welfare workers that numerous states have deployed. It's immersive, scenario-based training for caseworkers who have an annual turnover rate of close to 40 percent in some states. This learning experience equips them with new tools to prepare for that experience.



Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Interactive, Technology and Operations services—all powered by the world's largest network of Advanced Technology and Intelligent Operations centers. Our 537,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities. Visit us at [WWW.ACCENTURE.COM/publicservice](http://WWW.ACCENTURE.COM/publicservice).





# Trusting in a Zero-Trust World

Zero trust is all the rage — but are we taking it too far?

Depending on who you talk to, zero trust is a new concept for stopping data breaches, the preferred network architecture for cybersecurity, the most secure model for online interactions, the best security framework or even a mantra for life — and its influence is growing rapidly.

Wherever you turn, experts and thought leaders are singing its praises. An online search can easily find thousands of articles, speeches and presentations on why zero trust is the must-have paradigm for all things cybersecurity moving forward.

So how do we actually define zero trust? A NIST blog says stick to the principle “never trust, always verify.”

According to Palo Alto Networks, “zero trust is not about making a system trusted, but instead about eliminating trust.”

Still others give a longer definition: “Zero trust is a security concept centered on the belief that organizations should not automatically trust anything inside or outside its perimeters and instead must verify anything and everything trying to connect to its systems before grant-

ing access,” Mary K. Pratt wrote for *CSO Online*.

I went on the record several years ago as a big supporter of zero trust. Nevertheless, as in other areas of technology, I began to worry as perceptions changed and its power grew.

## Check Zero-Trust Scope

I now fear that some are taking zero trust way

too far, even expanding what was originally intended by those who started the trend to cover all areas of life. For some people it is even the model for all human interactions, which is where I pull the emergency cord and get off the bus.

While I suspected this might be happening after sitting in on several public- and private-sector webinars on zero trust over the past year, I became downright alarmed when a LinkedIn thread on whether organizations should hire hackers with a criminal record yielded this comment from a respected colleague: “I operate in a zero-trust environment. I wouldn’t trust my non-criminal employees any more. They are as likely to cause a cyber attack through negligence. And a convicted hacker probably has more understanding of real-world tactics than what you can learn in a three-part online course.”

Putting the criminal hackers aside, my response was: Wow! Are we really now throwing away trusted relationships at home and work under the banner of zero trust?

And what about Stephen M. R. Covey’s best-selling book *The Speed of Trust: The One Thing That Changes Everything?* The author shows how trust — and the speed at which it is established with clients, employees and all stakeholders — is the single most critical component of a successful leader and organization.

Now I was on a mission. I went out and found articles, podcasts and blogs featuring John Kindervag, who is credited with creating the zero-trust trend more than a decade ago while at Forrester.

*ShadowTalk Threat Intelligence Podcast* interviewed Kindervag and provided some great insights on zero trust, including what it does not include. In a nutshell, the “never trust, always verify” definition is for digital communications, and we err greatly if we apply that to offline human interactions. People can be trustworthy, but the packets of information claiming to be from that person may not be.


Consider these important points Kindervag outlines in the podcast:

1. (Online) Trust is a vulnerability.
2. People are not packets. “People aren’t the issue, packets are the issue.”
3. Trust is a big problem in the digital world — that’s the primary thesis.

As I was starting to write this column to present my “findings,” I decided to reach out to John Kindervag, just to double check my work. He responded quickly:

“Digital trust and human trust are two separate things. Zero trust only applies to digital systems. People are not necessarily untrustworthy, but at the same time they are not packets. Zero trust only applies to the zeros and ones that traverse our various digital systems.

“[Malcolm] Gladwell calls human beings trust engines. Morton Deutsch talks about how trust is the willingness of one individual to be vulnerable to another individual, and applies this to business management.

“The fatal flaw was anthropomorphizing the network and moving over concepts like trust that had no business belonging in digital environments.” 

**Daniel J. Lohrmann** is the chief security officer and chief strategist at Security Mentor. He is an internationally recognized cybersecurity leader, technologist and author. From 2002 to 2014, Lohrmann led Michigan’s award-winning technology and cybersecurity programs, serving as CSO, CTO and CISO.

# Q&A: Transforming Government Procurement with Strategic Sourcing

Although procurement organizations strive to partner with agencies and departments, they often fall into a compliance and control mode at the expense of best value. The COVID-19 pandemic created even more challenges for dedicated government procurement employees who struggled with outdated procurement processes, policies and tools. A recent survey conducted by Harvard Business Review Analytic Services found most procurement organizations, including those in state and local governments, are long overdue for modernization.

Strategic sourcing brings analytics-driven insights and greater visibility into the procurement process while promoting collaboration between stakeholders and suppliers. In this Q&A, **Stan Garber**, vice president of spend management at Workday, and **Rowan Miranda**, industry lead for public sector at Workday, explain how strategic sourcing can drive greater value, reduce costs and create return on investment (ROI) from technology solutions.



Stan  
Garber



Rowan  
Miranda

## Q What challenges do government procurement organizations face?

**Miranda:** Procurement lags other areas of administration in terms of technology modernization. It's very manual and paper-based, and governments face many compliance issues. Procurement organizations typically aren't using analytics to measure what they do and how well they're doing it.

## Q What is strategic sourcing and why is it becoming more important for government?

**Garber:** Strategic sourcing includes sourcing, project management, savings tracking, contract management and stakeholder engagement. It's really the upstream part of the process of working with government stakeholders, oversight committees and contractors to identify and serve the organization's mission.

This is particularly important for public sector organizations because they often lack visibility around purchasing and procurement. Right now, governments are under significant financial and social pressure. Cost savings are important — but so are quality, diversity and fairness. A proper strategic sourcing process helps

balance cost, quality and contractor diversity requirements.

## Q Why is it important to increase collaboration and visibility in the procurement process?

**Garber:** Increasing transparency and visibility ensures buyers, government stakeholders, boards and contractors collaborate more effectively to make good purchasing decisions. Strategic sourcing can help manage risk in the procurement process by increasing visibility, accountability and automation across the board.

## Q How can technology support strategic sourcing and make procurement teams more productive?

**Garber:** When you think about the elements of strategic sourcing — from the contract data to information generated from the RFP process and suppliers — these pieces are scattered across organizations and departments. Procurement teams need to consolidate this information so sourcing managers, stakeholders and government contractors can access what they need.

Once you centralize your procurement operations and data, you can use technology

to improve visibility and streamline your processes.

## Q What type of ROI is the private sector seeing with sourcing technology?

**Miranda:** The best sourcing technology helps procurement organizations deliver a better user experience for both internal procurement teams and government contractors. Private sector companies that leverage an intuitive, cloud-based strategic sourcing platform are realizing the benefits of integrating contracts and supplier management, sourcing, project tracking and request management capabilities.

High-performing procurement organizations have 20 percent lower operating costs and are five times more likely to be viewed as valued business partners, according to a Hackett Group report on world-class procurement.

**Garber:** Government organizations can reap significant value from strategic sourcing without a huge initial investment. You can start by targeting specific aspects of the procurement process with best-in-class technology. Focus on a few challenges you want to solve, and then grow from there.





## Close As You Go™ Disaster Recovery. Simplified.

### Hurricanes. Fires. Floods.

Billions of dollars are spent annually by state and local governments in the United States to prepare for, respond to, and recover from disasters that may impact their communities. The Federal Emergency Management Agency (FEMA) helps by implementing public assistance programs that reimburse these governments' eligible recovery expenses. As many governmental officials know, the FEMA reimbursement process can be complex and time-consuming, with constant hand-offs and the potential of clawbacks due to errors, such as including duplicate expenses.

### Join Deloitte in changing the way communities recover.

Deloitte's Close As You Go (CAYG) is a secure cloud-based software platform built to help agencies manage recovery documentation for procurement and contracting, model policies and procedures, and plan for disaster. Developed alongside emergency responders, public works departments, finance functions, and state granting agencies, CAYG helps you prepare, so you can focus on recovery.

### Discover a new way to prepare for FEMA public assistance.

#### Learn More

[deloitte.com/us/CAYG](https://deloitte.com/us/CAYG) | [CAYG@deloitte.com](mailto:CAYG@deloitte.com)



### Do more with CAYG



Accelerate recovery



Simplify retention



Reduce administrative costs



Mitigate risk



Build resiliency