



# Digital Government Rising:

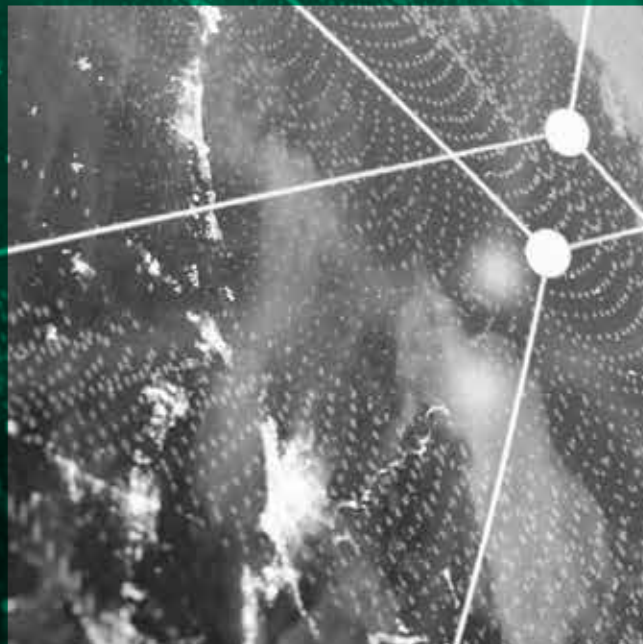
How AI is providing new opportunities to deliver value

CENTER FOR  
**DIGITAL**  
GOVERNMENT

**IBM**

N A S C I O  
★









# Contents

04	Acknowledgments
05	Foreword
06	Introduction
08	The State of AI in 2020
10	AI Promises Long-Term Benefits
14	Top AI Roadblocks and How CIOs are Addressing Them
20	Significant Payback
22	About
23	Contacts

# Acknowledgments

## NASCIO

- **Doug Robinson**, Executive Director
- **Amy Hille Glasscock**, Senior Policy Analyst

## IBM Subject Matter Expert Contributors

- **Daniel Chenok**, Executive Director, Center for The Business of Government, Global Business Services
- **Claude Yusti**, Partner, Advanced Analytics and AI, Global Business Services
- **Thomas Nisbet**, Associate Partner, Advanced Analytics, Global Business Services
- **Trey Tinnell**, Watson, AI & Deep Learning Leader, Public Sector

## Center for Digital Government Research and Content Team

- **Teri Takai**, Executive Director
- **Joe Morris**, Vice President of Research
- **Ryan Gallant**, Senior Researcher
- **Jeana Bigham**, Director of Content Studio
- **Maggie Cabrey**, Senior Project Manager

# Foreword

One year ago, the Center for Digital Government (CDG) and NASCIO, with support from IBM, sought to understand the promise and pitfalls of artificial intelligence in state governments by launching a national survey. Garnering responses from 45 states, the results reflected state leaders' eagerness to gain efficiencies and free up their workforces for higher-value work, tempered by caution due to concerns around lack of data maturity and privacy policies, as well as a dearth of employees with the necessary skills for AI adoption. At the time, we predicted that while AI was nascent in the public sector, it would at some point have a profound impact in government, particularly around agencies' ability to provide higher-quality services faster and more efficiently.

That day came much sooner than anyone imagined. Facing massive upheaval from the COVID-19 pandemic, state governments quickly rolled out chatbots and other digital assistants to handle huge surges in constituent inquiries around unemployment assistance and other vital services. As predicted, agency leaders found the technology allowed them to better serve more constituents with fewer resources and deploy limited staff to deal with more complex activities rather than answer routine questions. In addition to COVID-related deployments, state governments have also launched AI projects and pilots over the last year to harness their data for more informed decision-making, and have realized cost savings as a result.

To fully understand the rapid adoption of these technologies and the plans — and concerns — leaders have moving forward, NASCIO, IBM and CDG reached out to state CIOs and CTOs to comment on their strategies. In September 2020, we interviewed 21 of them about how their use of AI — as well as the associated technologies of machine learning and robotic process engineering — has evolved over the past year and what they predict for the future. Those conversations pointed to success in the implementation of low-hanging fruit like chatbots, and an emerging optimism in more sophisticated, next-generation applications around citizen service, cybersecurity, human resources and more.

We encourage you to take a look at the key challenges at the end of this report, as each highlights how leaders like yourself are working to address them. Finally, on behalf of CDG, NASCIO and IBM, we want to thank those CIOs and CTOs who graciously gave their time to be interviewed for this report. We sincerely appreciate your willingness to share your thoughts and experiences to guide others on their path to greater AI adoption.

**Joe Morris**

Vice President, Research,  
Center for Digital Government

**Courtney Bromley**

General Manager,  
Government and Education Industry, IBM

**Doug Robinson**

Executive Director,  
NASCIO

# Introduction

A year ago, artificial intelligence (AI) was starting to make inroads in state and local government agencies. CIOs were actively exploring — and in some cases implementing — applications powered by AI, machine learning (ML) and robotic process automation (RPA). This was one of the conclusions of an inaugural AI study by the National Association of State Chief Information Officers (NASCIO), IBM and the Center for Digital Government (CDG). The overriding goals then were to improve internal operations and deliver new digital services to citizens.

A new, follow-up investigation shows that 2020 is proving to be the year that pushes AI into the mainstream of government operations.

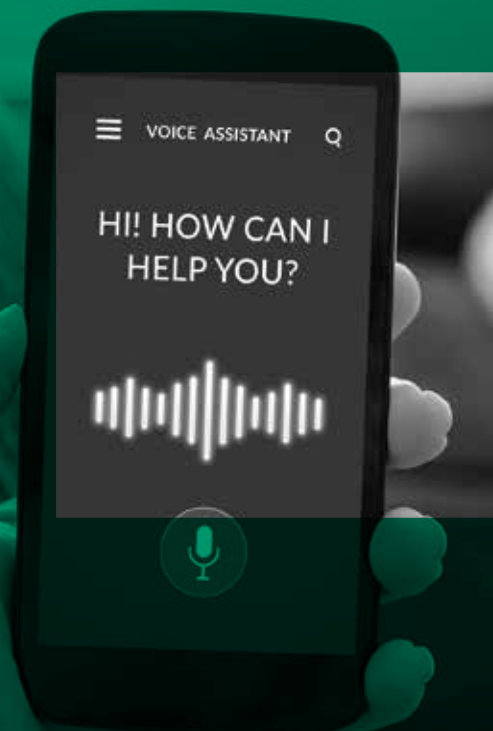
The COVID-19 outbreak is giving new urgency to AI initiatives, according to a study by the same trio of researchers. For example, the technology is providing health departments with deeper insights into emerging coronavirus hotspots while ML automation is acting as a force multiplier for strained call centers trying to connect citizens to unemployment benefits and other essential services.

“The COVID-19 pandemic opened the door for us to quickly move to some applications that we might not otherwise have considered,” says Stephanie Dedmon, CIO for the state of Tennessee.

In-depth interviews with CIOs and chief technology officers (CTOs) from nearly half of the states highlight the innovative ways agencies are currently using AI, ML and RPA. The research also shows how the technologies will continue to proliferate in the public sector in the months ahead as agencies seek new opportunities to save costs while improving citizen services. But while the COVID-19 crisis may be spurring agencies to look closer at AI and related technologies, the CIOs also acknowledge that lingering challenges are getting in the way of successful implementations. This report identifies the top technology, cultural and policy roadblocks that government must address and offers guidelines for capitalizing on AI and ML during the COVID-19 crisis and beyond.







# The State of AI in 2020

The adoption of AI — and the ML and RPA technology that fall under its umbrella — remains in early stages across state governments. However, the disruptions caused by COVID-19 are pressuring CIOs to accelerate efforts to investigate and adopt the technologies.

As in the 2019 research, government IT leaders and agency heads today are lured by the promise of automating manual tasks and the efficiencies and cost-cutting opportunities that come with it. For example, CIOs participating in the 2020 AI research report said the pandemic has rapidly expanded their use of chatbots to deal with two consequences of the pandemic. The first is in direct response to public health orders that closed government offices and required employees to work from home. The second impact from COVID-19 is the surge of citizen information requests in social services, such as applications for unemployment insurance. State CIOs and line-of-business leaders are looking to increase their use of online services and identify new ways to limit the public's in-person interaction with government.

States throughout the country expedited the use of AI-powered chatbots to handle extraordinarily high call volumes and the need to provide additional information and assistance to constituents. Utah CIO Michael Hussey says chatbots helped health services deal with call volumes that spiked 300 percent at one point.

The state of Georgia also turned to chatbots to respond to overwhelming call volumes. It deployed AI-powered digital

assistants in four key areas — public health, labor, motor vehicles and the governor's office.

"Like every other state, the pandemic caused us to go from zero to 60 with our rollout of chatbots," says Steve Nichols, Georgia's CTO.

One of the primary roles for chatbots is answering frequent questions that citizens have about eligibility requirements for assistance programs, including how to file applications. Bots in Massachusetts can answer about 450 questions related to unemployment assistance and related areas, says Curtis Wood, secretary of technology and CIO for the commonwealth. What's more, the digital assistants can do more than disseminate information. Tennessee CIO Dedmon says chatbots also collect information from callers so if their situation requires a government worker to step in, that person will be better prepared to serve the customer.

The rollout of chatbots isn't the only way states are accelerating AI adoption. They are also using the technology to mine data for insights that directly impact the health and safety of citizens. For example, when states were scrambling to respond in the early days of the outbreak, Ohio Governor Mike DeWine announced the decisive — and controversial — decision to bar attendees from the Arnold Sports and Fitness Expo. The annual event was expected to bring about 200,000 spectators to Columbus in early March. DeWine explained his decision by saying, "The mayor, our public health officials and I are gravely concerned that the event



# AI Today and Tomorrow

AI, ML and RPA offer near- and long-term benefits. Here is a sampling of how states use the technologies now and where they may apply them over the next 18 months.

Current Use Cases	Use Cases Under Review
Chatbots for help desks and call centers	Fraud detection in public assistance programs
Enhancing decision support systems and analyzing public health trends	Natural disaster forecasts and risk analyses
Resource scheduling and optimization	Monitoring transportation systems
Workforce augmentation	Capturing institutional knowledge and best practices
Improving operational efficiency	Enhancing constituent experience
Improving citizen access to government services and benefits	Streamlining workflows and forms processing
Cybersecurity threat assessments	Expanding use for cybersecurity threat assessments

as organized poses a unique and unacceptable risk for the spread of COVID-19.”<sup>1</sup>

Ohio CIO Ervan Rodgers says officials made the tough call after analyzing data with the help of AI and in retrospect believes it was the right decision.

“I can only imagine what would have happened otherwise because [the event] would have been right at the height of the outbreak in Ohio,” Rodgers says. “Things would have just gone out of control.” He adds the state is looking for ways to expand AI-powered decision-making in the future.

AI can also provide analytical insights about more routine government activities than public health emergencies. When Iowa CIO Annette Dunn served as the state’s transportation division director, she oversaw the implementation of a GPS-guided automatic vehicle location (AVL) system used by public works trucks. In addition to vehicle locations, the system relayed information about road conditions, how much road material crews were laying down and even what type of blades they chose to distribute the material.

“We used all this information to help us improve decision-making,” Dunn says.

At one point, the department conservatively estimated the data and advanced analyses were yielding a 10 percent cost savings from an overall budget of \$13 million.

In a similar project, Utah uses AI to sift through large volumes of public comments about state services, such as road repair, and determine whether citizens agree with the state’s priorities. AI separates positive and negative comments so officials can decide how best to respond.

“As we make changes to our services, we’ll use sentiment analysis to see how well we’re doing,” Hussey says.


“Like every other state, the pandemic caused us to go from zero to 60 with our rollout of chatbots.”

— Steve Nichols, CTO, State of Georgia





# AI Promises Long-Term Benefits



While low-hanging fruit applications like digital assistants and chatbots are the current focus, pilot projects in various government departments show AI's potential for more sophisticated, next-generation applications.

Bolstered by their AI successes so far, state CIOs are investigating a host of additional use cases for the technology, according to the new research. These new areas promise to improve internal government operations and enhance citizen services.

For example, Massachusetts officials are building on their chatbot experiences during the pandemic to investigate additional applications for AI and machine learning.

"We're now moving to the next phase, with the goal of using AI to become more customer centric," thanks to pilot projects that are using digital intelligence to help citizens complete public assistance forms accurately and more quickly, says Wood in Massachusetts.

Wood also sees a role for AI in cybersecurity. The Massachusetts security operations center has experimented with security orchestration and automation tools that use digital intelligence to help staff members sort through network log data to separate actual threats from false positives.

"We can leverage AI and machine learning to supplement security teams so they can be more productive and proactive, not reactive," Wood says.

This year's study also finds more optimism about AI's ability to free up the government workforce for higher-value work. Emerging themes include using AI and RPA to automate a host of manual data-entry tasks. One example is collecting information and verifying application forms for public assistance programs like Medicaid and SNAP. The move to a distributed workforce combined with tighter

**Bolstered by their AI successes so far, state CIOs are investigating a host of additional use cases for the technology.**



budgets and limited staff presents a unique opportunity for RPA to increase employee productivity and detect fraud in assistance applications.

Georgia completed an RPA pilot project for agencies dedicated to mental health, accounting and human capital management. Focus areas for the pilot included using robotic automation to streamline new employee background checks and onboarding procedures.

The breadth of new AI use cases being considered by state IT officials shows how upbeat they are about the technology's long-term potential. California Governor Gavin Newsom ordered a request for information to investigate how machine learning might help officials better understand the spread of wildfires and assess fire risks, says Justin Cohan-Shapiro, chief strategist

at the California Department of Technology. Other states are investigating the technology for processing reams of data about traffic and road conditions to help prioritize repairs.

Texas IT officials plan to look at how AI and ML may improve operations in two important areas. The first is internal operations, including enhancing staff efficiency, optimizing costs and promoting innovation. The second area targets improvements to citizen experience, namely how AI may expedite service delivery and ensure citizens receive accurate responses to inquiries whenever they need them, even if that's after normal office hours.

"There are enormous opportunities for AI to support people and processes," says John Hoffman, CTO and

## CIO Roles Evolve in the AI Era

State CIOs have played an active role in overseeing the use of AI ever since it moved from research labs to mainstream applications. But since the outbreak of COVID-19, the ability of CIOs to guide AI strategies has become more important than ever.

"The COVID experience in many ways has put a spotlight on technology," says John Hoffman, CTO and interim CIO for the state of Texas. "We're moving from IT being a support organization to becoming a partner for solutions."

What role a CIO plays in adopting AI depends on how IT is organized in his or her state. In states with centralized IT operations, CIOs have more direct influence over how and where AI is used. CIOs overseeing decentralized IT functions are more likely to act as an influencer who advises and guides AI applications in various departments and agencies. Although less direct, the role of CIOs is still important in this case. They help identify potential opportunities for AI, prove the viability of the technology and then promote it to end users.

Even so, CIOs from centralized and decentralized IT departments may find themselves adopting different personas depending on the project and the business need being addressed.

### The Trusted Adviser

This person helps agencies understand the potential value of AI, while also steering them clear of implementation hazards. For example, in Maine, which runs centralized statewide IT operations, CIO Fred Brittain promotes a central vision for applying digital innovation across the government. He sees himself as a "cautious promoter" of technology who must

retain the trust of his government peers by not pushing AI or another evolving technology beyond the limits of its current maturity level. "If something is not ready for prime time, it would cause a loss of confidence in exploring new technologies for the future," he says. "I don't need to be the first one to do everything. Let me see where somebody else has done it."

*Continued on next page*

interim CIO for Texas. “We’re really pushing to find ways of integrating AI into our existing solution sets to make IT more efficient and provide a better user experience.”

AI may also help capture years of institutional knowledge that is leaving government workplaces as Baby Boomers retire.

“In the past, it’s been really hard to pass along that expertise in a structured way,” says Mark Raymond, Connecticut’s CIO. “We’re looking into how the technology might be able to help us in that effort.”

And CIOs may expand AI’s role in managing limited resources when demands for information and services reach historic levels. For example, Ohio uses AI to match

the skills of call center reps with the types of calls that are coming in.

“We’re seeing some great dividends in that area, and I think that will continue to grow to additional parts of the state government,” says Rodgers. “AI offers an effective way to leverage key resources when we have a large population of our state who are trying to access benefits that they depend on each day.”

Finally, some state IT leaders are contemplating AI use cases that extend far afield — literally. Utah is looking into how people in its agricultural departments could take advantage of an AI-enabled image-recognition application to identify brands tattooed on livestock, a manual task that now must be completed by individuals.

## The Educator

This role is important when working with agency personnel who may not fully understand the value of still-maturing technologies like AI. The educator outlines potential AI use cases for agency managers and staff and helps them understand the art of the possible.

“It’s about information sharing, talking about the benefits and then discussing how the process works for going through a proof of concept,” says Stephanie Dedmon, Tennessee’s CIO.

## The Conductor

At other times, Dedmon sees herself as an orchestrator who coordinates internal resources with vendors.

“There may be some use cases where something is just better done by state employees for whatever reason,” she says. “But predominantly we work with outside partners when they have experience and can do it cheaper, better, faster. The IT staff becomes a coordinator who can get the best service for our customer.”

## The Business Adviser

Advisors actively work with cabinet secretaries and agency leaders to deliver better business outcomes using new technology. This hands-on role helps automate business practices, improve the efficiency of back-office processes and find ways for technology to free up staff so they can spend more time serving constituents.

“We now look at [innovation] from the customer experience side of things versus just the IT perspective,” says Massachusetts CIO Curtis Wood.

## The Superhero


The job of this CIO persona is to build a powerful corps of high-performing IT experts whose mission is to solve government problems using the latest technology.

“I’m into superheroes — like the ones in Marvel and DC comics,” says Ohio CIO Ervan Rodgers. “We have a number of IT Avengers here in Ohio who are bringing different perspectives to the table and working as a team.”



# Top AI Roadblocks and How CIOs are Addressing Them





State IT leaders are generally bullish about the current value and long-term potential of AI, but that is not blinding them to the realities of implementing technology that is not fully mature. As in the previous study, CIOs continue to iron out challenges related to workplace cultures, technology, and security and privacy policies. What is different this year is that some innovative CIOs are finding ways of dealing with these issues.

**“When constituents have to interact with government, they want to just get in, do whatever they have to do and get out. If we can meet that need with a chatbot or use RPA to speed the filling out of a form or application, we’ll see internal efficiencies and deliver a better quality of service for the constituent.”**

*— Steve Nichols, CTO, State of Georgia*

## **1 Replacing ad-hoc AI projects with a comprehensive, government-wide strategy.**

AI applications helped states respond to the unprecedented challenges brought on by the COVID-19 pandemic. And while these solutions provided welcome relief for resource-strained staffs, state CIOs are now looking to improve upon the AI-backed offerings they rushed into service during the early months of the crisis. Chatbots are one area ripe for enhancement, officials say. The digital assistants proved their usefulness in fielding hundreds of basic and predictable questions related to the pandemic and relevant assistance programs. Those benefits won’t disappear once COVID-19’s impact dissipates.

“When constituents have to interact with government, they want to just get in, do whatever they have to do and get out,” says Nichols. “If we can meet that need with a chatbot or use RPA to speed the filling out of a form or application, we’ll see internal efficiencies and deliver a better quality of service for the constituent.”

The task now is to provide more detailed information based on question-and-answer interactions that chatbots might

have with citizens. For example, a constituent might receive a tailored status update on his or her program application or learn when funds are due to hit their bank account, Nichols says.

How can CIOs expand upon their current base of applications and ensure they are fully capitalizing on what AI has to offer today while creating a foundation for future growth? It starts with an overall plan that encompasses both the tactical and strategic potential of AI.

**“A process doesn’t have to be perfect before moving to the stage of enhancing it with AI. Realize that if we wait until something is perfect, improvement will never happen.”**

— John Hoffman, CTO and Interim CIO, State of Texas

From a tactical standpoint, CIOs are focusing less on the allure of AI and imagining instead what types of new capabilities can be rolled out with the aid of AI.

“Implementing technology should be about solving a business problem and meeting a need,” says Dedmon in Tennessee. “It’s very easy for us in IT to become enamored with a shiny new toy. But if it doesn’t provide a better service or make somebody’s life easier, it’s very likely not worth doing.”

Connecticut’s Raymond agrees. “I never lead with the technology itself — that’s a losing conversation,” he says. “I lead with discussing the improved outcomes and then use the technology to help people get there.”

Thinking about business outcomes is important, but AI requires deeper analysis. Because the technology is still evolving, it may not be appropriate for some use cases. For example, Maine CIO Brittain says he is leery about using AI for determining complex questions like Medicaid eligibility. He ticks off specific concerns about privacy, cybersecurity and the accuracy of AI results. So, how does he decide what use cases are right for AI?

“I want to see the places where we have the right safety nets, since AI is not completely mainstream yet,” he says.

AI and ML work best when they are supported by large volumes of data, which algorithms use to “learn” about a specific domain — unemployment eligibility requirements, for example. The richer the information base the better the quality of analyses and automated processes.

“The places where AI is going to be brought to bear are the ones where we have big pools of data, such as a program that has been around for years and years that can generate a lot of training data,” says Nichols.

Examples include public assistance, unemployment, driver’s services and taxation, he says.

As a result, CIOs are evaluating new use cases based partly on the availability of relevant information. But that shouldn’t be the only consideration. CIOs must also recognize underlying problems in government data and analytics algorithms that can introduce hidden biases in AI outputs.

“AI will just perpetuate those biases even when you think the data is clean,” warns Nichols. “Do you really understand where the training data came from and what’s in the ‘black box’ that the vendor sold to you?” Answering those two questions isn’t easy if a vendor resists providing details about their technology in the name of intellectual property, he adds.

In addition, Nichols points out that AI analyses may change over time as agencies gather additional data that continues to train the algorithms.

“Potentially you could get a different answer today than a year from today,” he says. “CIOs need procedures in place to dissect the outcomes and understand what is behind the differences.”

CIOs also must ensure strict data governance rules protect the information.

“I’m cautious about processes that access HR or personal information,” Hoffman says. “Those processes would need to be very well understood to ensure that all the data is governed and that methodologies are still being adhered to.”

Finally, state officials must look carefully at the business processes they automate with ML and RPA tools. Automation alone won’t guarantee government operations will run more efficiently. The reason: the existing process may have become overly complex and riddled with redundant and unnecessary steps over time. Before automating processes, agencies should thoroughly review relevant workflows and look for ways to streamline

“Implementing technology should be about solving a business problem and meeting a need. It's very easy for us in IT to become enamored with a shiny new toy. But if it doesn't provide a better service or make somebody's life easier, it's very likely not worth doing.”

—Stephanie Dedmon, CIO, State of Tennessee



them before applying ML or RPA technology, Hoffman says. But he cautions officials to avoid taking the audits too far and ending up with analysis paralysis.

“A process doesn't have to be perfect before moving to the stage of enhancing it with AI,” Hoffman says. “Realize that if we wait until something is perfect, improvements will never happen.”

## **2 Cultural barriers and workforce concerns pose significant risks for AI projects.**

As with the 2019 study, CIOs reported concerns among line-of-business leaders and their staffs about the impact of AI on the government workforce. Government CIOs say employees fear that AI will lead to job cuts and downsizing. However, today's IT leaders voiced optimism that fears can be alleviated if managers convince skeptics that AI won't necessarily displace government employees. Instead, the wider adoption of AI promises to redefine how many government employees do their jobs.

In some cases, AI can be a powerful tool to augment today's workers and free them to deliver more personalized services to constituents. This is possible by reducing routine tasks, such as combing through applications to make sure citizens provided all the necessary information. RPA solutions can not only do this tedious work, they can improve quality control. For example, because of limited resources, some agencies may resort to having people spot check only a

fraction of each form. A machine could review the entire document for completeness and accuracy. Rather than eliminating jobs, AI would augment what people do.

“We have no shortage of high-value work that we can do if we automate some of our repeatable tasks,” says Raymond in Connecticut.

But getting government employees to see AI's potential benefits is not always easy. Referring to the data-capturing GPS AVL system Dunn oversaw when she was director of Iowa's transportation division, she says the millions of dollars in cost savings came about only after a significant change management effort.

“The [transportation] staff was really thinking I was being big brother,” she says. The problem: the fear that the performance data being collected would be used to judge employees negatively. Alleviating those concerns required her to do a lot of “handholding.”

“I literally had to go out to the garages and get in the trucks with individuals to gain their trust,” she recalls.

Dunn listened to their concerns and then asked them to hold off judgment for a year so she could prove the data was not going to be used punitively.

“After that year, we just didn't have those concerns anymore,” she says.



The key was offering transparency about how the initiative would work and demonstrating how data could lead to improved efficiency, Dunn adds.

What's more, winning support like this for one AI project can smooth the way for other initiatives.

"With new technology, it takes one or two successes for our stakeholders to see the art of the possible and to understand how it can assist them," says Dedmon.

### **3 Technology concerns go beyond AI's relative lack of maturity.**

CIOs in the latest study expressed technology-related worries across a wide range of issues, from how best to develop AI applications and uncover hidden biases in data and algorithms to how to modernize workflow processes.

As with other new technologies, CIOs are looking for answers about whether to build their own AI services or choose pre-configured solutions from vendors. In-house services are likely to conform more closely to the unique requirements of each agency, but most state CIOs say they lack the internal resources and expertise to successfully develop AI applications. For that reason, many states prefer to leverage solutions that have already been built and tested by vendors.

Chris Rein, CTO for the state of New Jersey, says he is working to get internal staff to understand the value of pre-configured cloud solutions for chatbots and RPA applications. In the past, the state's go-to approach was to build large, one-off systems using traditional waterfall methods.

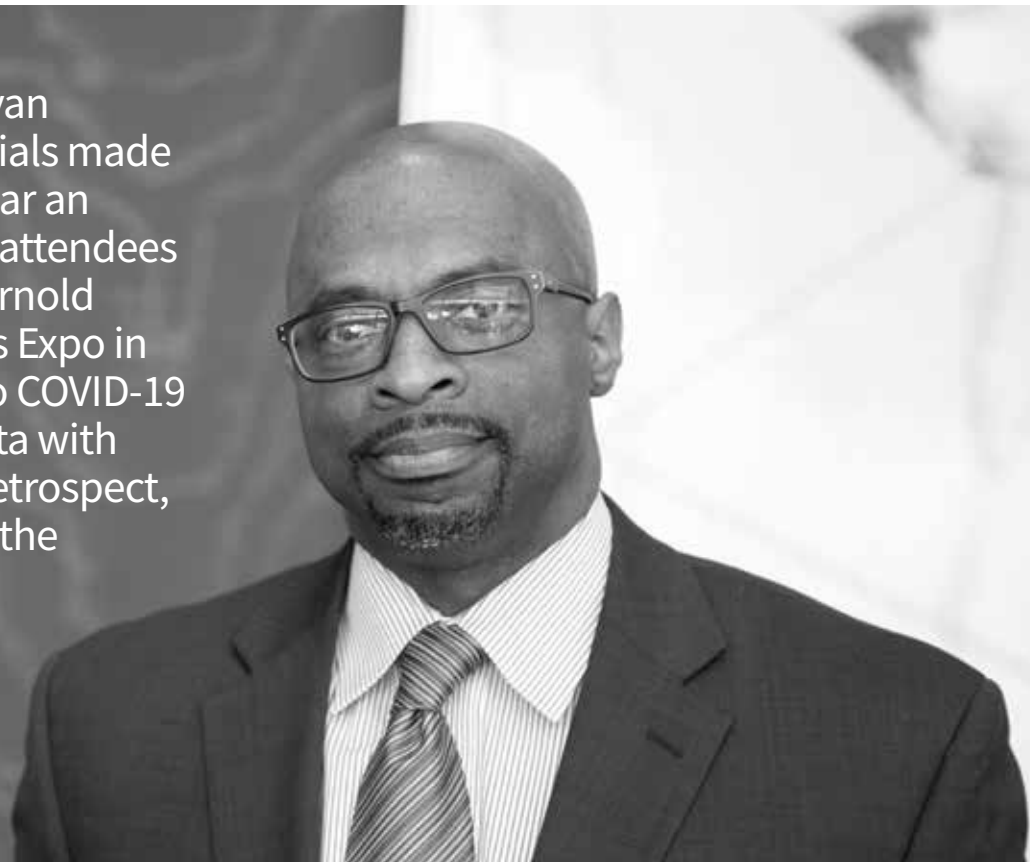
"Now I'm trying to get the business owners to see that cloud-based commercial-off-the-shelf products are the preferred direction, as opposed to building something that we have to maintain with limited staffing," he says.

The range of pre-configured choices is growing as vendors continue to roll out new AI-based offerings. For example, the IBM Law Enforcement Investigative Platform uses AI to analyze shared government data and public data to support incident responses, major crime investigations, counter-terrorism measures and other public safety activities conducted by state and local agencies.

In some cases a state may require a customized solution that is not available in the marketplace. But even then, IT departments may not have to develop solutions from scratch thanks to application programming interfaces (APIs) that can act as building blocks to integrate data and capabilities available from cloud-based products.

"Cloud platforms and APIs make it easy for our internal people to develop new processes," says David Fletcher, CTO for the

Ohio State CIO Ervan Rodgers says officials made the tough call to bar an expected 200,000 attendees from the annual Arnold Sports and Fitness Expo in early March due to COVID-19 after analyzing data with the help of AI. In retrospect, he believes it was the right decision.



state of Utah. “A lot of AI opportunities are enabled by simply migrating your data to a cloud platform.”

## **4 Updating security and privacy policies to support use of AI and ML.**

On paper, new opportunities arise when agencies apply the analytical and processing power of AI to the data government collects from its citizen interactions. For example, agencies can theoretically take a page from large e-commerce sites that crunch a shopper’s data to suggest additional products to buy based on past choices. In the public sector context, a state might use AI to point a new resident who has just obtained a driver’s license to a voter registration page.

“People don’t have to stand in line and they still get the help they need, in many cases without needing to talk to a live person,” says Dedmon.

But as new data privacy laws emerge and citizens become more sensitive to how their data is being used, states must redouble their efforts to update and enforce data governance policies. In addition, agencies shouldn’t migrate citizen data into a new AI application without notifying individuals and obtaining their approval. Georgia CTO Nichols advises the use of opt-in agreements to ensure citizens agree to having their information used in new ways.

Data sharing among state systems is “an area we must continue to monitor and pay attention to so it doesn’t catch up with us and surprise us,” he says. Opt-in programs also protect agencies from citizen lawsuits if privacy breaches occur, he adds.

Some states are expanding their efforts to protect data in the age of AI.

“One of the initiatives on our agenda is to create an ethics framework to make sure we’re doing things right,” says Fletcher in Utah. “There are certainly some gray areas, but we typically can find a way to deal with them ethically and still take advantage of the benefits that are available” from AI’s data-crunching capabilities.

## **5 Obtaining funding for new technology.**

Paying for technology initiatives can be particularly difficult in states that use a charge-back model where agencies procure digital services from central IT departments. The steep revenue declines and added costs associated with the pandemic are putting many state agencies in a belt tightening frame of mind that makes them balk at paying higher rates for new AI services.

**Developing a clear business case that lays out potential cost reduction and cost avoidance benefits can help convince agency heads that AI is a good buy. For example, even as help desk call volumes skyrocket, agencies can avoid staffing increases with digital assistants.**

Iowa CIO Dunn describes the dilemma this way: “How do [IT departments] invest in new technology like AI when people want all of the budgets to stay stagnant?”

Developing a clear business case that lays out potential cost reduction and cost avoidance can help convince agency heads that AI is a good buy. For example, even as help desk call volumes skyrocket, agencies can avoid staffing increases with digital assistants.

Digital assistants aren’t the only AI options to highlight when talking about costs. Rein predicts that three agencies in particular — the departments of Children and Families, Labor and Health — may be able to use AI and ML to reduce expenses.

“Those three areas are clearly looking to automate processes to drive out costs and improve services,” he says.

Similarly, as officials in Texas search for new ways to optimize IT costs and drive innovation, Hoffman and his team will examine “how we are leveraging AI to craft efficiencies or improve service levels,” he says. “There are enormous opportunities as we look at people and process components, which AI can support.”

Some states are also looking at new procurement vehicles that give multiple agencies access to the same contract, which may enable states to negotiate lower costs based on the volume of end users. Ohio is developing an RFP for emerging technologies, including AI and RPA.

“The RFP will allow us to prequalify a number of vendors in each of the technology categories,” says Rodgers. “If another pandemic hits, and we find ourselves in a bind, we can quickly engage with those prequalified vendors.”

# Significant Payback

Extensive interviews with IT leaders in states across the country show adoption of AI has not only grown in the past year, it is becoming a key element in IT roadmaps stretching into the next 18 months. The aftershocks of the COVID-19 outbreak spurred a sharp rise in chatbots as agencies scrambled to handle an unprecedented increase in calls to government help desks. Success in call centers is now encouraging CIOs to look for ongoing AI opportunities, whether that is using RPA to automate routine elements of workflow processes, strengthening cybersecurity efforts or thoroughly combing through public assistance applications for signs of fraud. CIOs are also acknowledging their roles are evolving in the age of AI. To promote new AI use cases and ensure the success of projects, CIOs must be actively involved in change management initiatives that help government workforces accept and capitalize on AI tools. At the same time, CIOs must help states address a range of technology, privacy and policy issues that threaten the smooth rollout of next-generation AI services.

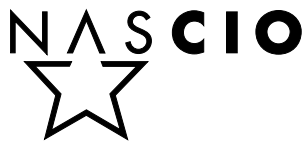
Although challenges remain, the business case for AI crystalized in 2020 and in turn CIOs appear more committed than ever to the technology.

“AI is one of those technologies that has broad applicability in government in terms of doing better and seeing a significant ROI in the future,” says Utah CTO Fletcher. “The payback on this technology can be significant.”





# About



Founded in 1969, the National Association of State Chief Information Officers (NASCIO) represents state chief information officers (CIOs) and information technology (IT) executives and managers from the states, territories, and District of Columbia. NASCIO's mission is to foster government excellence through quality business practices, information management, and technology policy. NASCIO provides state CIOs and state members with products and services designed to support the challenging role of the state CIO, stimulate the exchange of information, and promote the adoption of IT best practices and innovations. From national conferences to peer networking, research, publications, briefings, and government affairs, NASCIO is the premier network and resource for state CIOs.

**[www.nascio.org](http://www.nascio.org)**



The Center for Digital Government, a division of e.Republic, is a national research and advisory institute on information technology policies and best practices in state and local government. Through its diverse and dynamic programs and services, the Center provides public and private sector leaders with decision support, knowledge and opportunities to help them effectively incorporate new technologies in the 21<sup>st</sup> century.

**[www.centerdigitalgov.com](http://www.centerdigitalgov.com)**

Sponsored by



The world has changed. Citizens expect a personalized and secure experience from government. The time is now to fundamentally rethink the business of government. IBM brings a new approach to reinventing government through the cognitive enterprise using artificial intelligence (AI) and cloud technologies to truly transform service delivery. We help government understand the potential benefits of AI for agency leaders, business leaders and citizens alike. How it is helping us stay safe and well. How it is supporting our most vulnerable people and protecting our planet for future generations. We have the deep skills and experience to help government tackle the important challenges they face today. With access to a breadth of technologies and the most resilient, secure cloud platform for developing new services, IBM can deliver flexibility while preserving freedom of choice. Discover how AI can help make government smarter. Think big. Start small. And innovate quickly.

**[ibm.com](http://ibm.com)**

IBM, the IBM logo and ibm.com are trademarks of the International Business Machines Corp., registered in many jurisdictions worldwide.

# Contacts

## CDG

**Teri Takai**, Executive Director  
teri.takai@erepublic.com

**Joe Morris**, Vice President, Research  
916-932-1395  
jmorris@erepublic.com

**Jeana Bigham**, Director, Content Studio  
916-932-1322  
jbigham@erepublic.com

## NASCIO

**Doug Robinson**, Executive Director  
859-514-9153  
drobinson@nascio.org

**Amy Hille Glasscock**, Senior Policy Analyst  
859-514-9148  
aglasscock@nascio.org

## IBM

**Peter Korst**, Director, State and Local Government, West Region  
630-561-1323  
pkkorst@us.ibm.com

**Mike Ross**, Director, State and Local Government, East Region  
916-952-9813  
curtross@us.ibm.com

**Myles Lynch**, Vice President, State and Local Government, Global Business Services  
678-409-7953  
myles.lynch@us.ibm.com

**Dave Morales**, Partner, State and Local Government, Global Business Services  
201-965-7432  
Dave.Morales@ibm.com

**Thomas Infantino**, Vice President, Cloud & Software Solutions, Public Market  
617-719-7199  
infantin@us.ibm.com

**Suzanne Henkels**, Director, Security Solutions, Public Market  
216-577-2815  
shenkels@us.ibm.com



