WRITTEN TESTIMONY

OF

TERI TAKAI

VICE PRESIDENT, CENTER FOR DIGITAL GOVERNMENT

E.REPUBLIC

AND

FORMER CHIEF INFORMATION OFFICER FOR THE STATE OF MICHIGAN,

STATE OF CALIFORNIA AND UNITED STATES DEPARTMENT OF DEFENSE

FOR A HEARING ON

MODERNIZATION OF STATE AND LOCAL GOVERNMENT IT SYSTEMS AND CRITICAL SERVICES

BEFORE THE

SUBCOMMITTEE ON GOVERNMENT OPERATIONS

COMMITTEE ON OVERSIGHT AND REFORM

Wednesday June 27, 2021

Washington, D.C.

Thank you, Chairwoman Connolly, Ranking Member Hice and the distinguished members of the subcommittee for inviting me today to speak on the challenges that state and local governments face in modernizing their IT systems and digitizing critical services. The current state of the technology services that state and local governments provide was severely tested during the COVID-19 pandemic. The challenges of providing critical citizen services and information highlighted the technical debt that government faces.

In my current role as Vice President for the Center for Digital Government at e.Republic, I work with state and local governments across the country as they drive the technology in their jurisdictions. As a former state and federal CIO as well as having extensive experience in the automotive industry, I am impressed with the work that the CIOs have done to meet the pandemic but see the work that lies ahead. I appreciate the opportunity to support their efforts to meet the increased requirement to meet the expanded digital expectations for our citizens.

State and Local Information Technology Priorities – Changing priorities from 2020 to 2021

Each year, the Center for Digital Government conducts key surveys at the city and county level. The state survey was conducted in 2020 as the pandemic was emerging. With 62 cities, 68 counties, and 47 states responding to the surveys, they laid out the priorities they are focused on and the surveys provided trend data on how the response to the pandemic shifted priorities dramatically toward citizen services and modernization.

The 2021 digital counties survey provides insight on how priorities are shifting for state and local government. For the 8th year in a row, cybersecurity is at the top of the priority list at number 1. Cyber-attacks increased during the pandemic and have no sign of slowing down. The number 2 priority is citizen/customer engagement and experience which is no surprise in a post-pandemic world. Business process automation jumped from number 6 to number 3 this year and can be attributed to government's need to enhance the function and capabilities of technologies that increase a government's ability to serve their citizens. Networks, broadband, connectivity, and addressing the digital divide took a major leap from number 12 last year to come in at number 4 which highlights the need to enhance connectivity for remote work and the ability for citizens to utilize digital government services more effectively. Cloud computing jumps up a bit and comes in at number 5 while business intelligence and analytics comes in at number 6.

Hiring, retaining, and nurturing a competent team moved up one spot to number 7 while disaster recovery and continuity of operations fell from number 4 to number 8 this year. Budget and cost control fell the farthest dropping from number 2 to number 9 this year. The only way to describe this is that counties believed that budgets would be much worse coming out of the pandemic than reality illustrated. Stimulus funds played a role in the budget perceptions and realities of this past year. Rounding out the top 10 is data governance, transparency and open data moving up one notch from last year. Data is playing a more important role as governments emerge from the pandemic.

These results reflect the trends across state, city, and county priorities. In 2020, the top 3 priorities across all three jurisdictions were cybersecurity, budget and cost control and citizen engagement/experience. These were the top 3 priorities as the impact of the pandemic was being felt. During the pandemic, there was a shift in priorities for all three jurisdictions. For states, budget and

cost control, citizen engagement/experience, increased agency/department IT collaboration, IT governance, networks including broadband, infrastructure modernization and business process modernization all rose in priority.

For counties, budget and cost control, disaster recovery/continuity of operations, business process automation, and cloud computing all came to the forefront as they faced the challenges of remote work and the need to increase citizen services while facing an uncertain budget and funding future. For cities, it was very similar – budget and cost control, business process automation, infrastructure modernization and networks including broadband increased in priority.

As governments are coming out of the crisis and federal funds are assisting, the concerns around budget and cost control are being somewhat mitigated depending on the sources of revenue. The Center for Digital Government projects that it is most likely that IT spending will grow by approximately 7% as governments recover from the impact of the pandemic and strengthen solutions that were quickly implemented to meet the needs. This does not, however, reflect the level of funding that will be needed to ensure that modernization and the continued growth of digital citizen services continues.

The Key to Successful Technology Modernization

The key to successful technology modernization is the collaboration between the agencies and departments that deliver essential citizen services and the technology organizations that support them. Technology alone cannot solve the challenges of providing improved citizen services. It must be a whole of government approach – across federal, state, and local government but also between executive, legislative, and agencies and departments within the jurisdiction. Utilization of technology to improve citizen services requires the examination and review of the underlying processes, roles, and responsibilities. This is especially true as government moves to embrace new technologies like artificial intelligence, machine learning and remote process automation.

IT Modernization, Digital Citizen Services and Cybersecurity

One key point is the relationship between IT modernization, digital citizen services and cybersecurity. There is a risk that these three critical technology efforts will be seen separately and that governments will fund only a portion of that is needed. The driver for IT modernization is the need for greater digital citizen services that are protected from increasing cyber threats. All three are driven by demands from citizens for improved transparency and services. It is impossible to drive digital transformation without focusing on an overall, enterprise approach.

Center for Digital Government – Priorities for the 'new normal' for state and local government

A key role of the Center for Digital Government is to work with state and local IT organizations across the country. We conduct workgroups, summits, and conversations to understand the 'mind of the CIO' and help technology companies support the needs of government. We anticipate that there will be eight key priorities for technology as state and local governments move forward:

1. Infrastructure and Process Modernization
2. Supporting and Enabling Hybrid Workforce and Work
3. Enabling Connectivity and Access

4. Securing the New 'Edge'
5. Operationalizing and Managing Data
6. Budget and Cost Control Initiatives
7. Redefining Organization Management, Roles, Skills
8. Rapidly Adapting and Support of New Use-Cases with Technology

The order of priority may differ by jurisdiction, but the CIO must juggle keeping the current technology operating effectively, efficiently, and securely while meeting the need to modernize, introduce new technologies, and improve citizen services.

Conclusion

In closing, beyond current relief funds through continuation of CARES Act and the American Rescue Plan, there is a need to ensure that the realization of the importance of technology in the operation of government remains a high funding and budget priority for state and local governments.

Moving forward, both the agencies and departments who are dependent on the technology and the executive and legislative branches of government must continue to see technology as the infrastructure that runs government as much as roads support transportation. More than pure infrastructure, technology can be the catalyst to reach citizens where they are and to build trust that all levels of government are truly there to service their needs.

Supplemental Material – Digital Transformation – What's Next

The following material was developed and distributed to 50 governors to provide context and education on their technology initiatives and plans. While written for the Executive level at state government, the same applies to local government as well. Large cities and counties face the same challenges as states, while smaller jurisdictions are further hampered by miniscule budgets, lack of understanding, and lack of skills to meet the technology challenges of the future.

Digital Transformation – What's Next?

2020 was a pivotal year for technology in state government. CIOs and IT organizations stepped up to ensure that government worked for citizens and businesses. The 'art of the possible' in the application of technology to government processes has never been more visible. It has driven significant discussion around Digital Transformation – but what does that really mean? What is the vision for state government in a digital world? How has it changed as we emerge from 2020? The following describes where the Center for Digital Government sees the future of technology in state government.

Emerging from 2020: How Government has Changed?

As states emerge from 2020, the technology priorities will range from continuing to support the needs of citizens and businesses in a socially distanced world to planning ahead with limited budgets and resources. The immediate needs will focus on activities like managing the process and data regarding vaccine distribution. States will continue to provide and improve citizen services for unemployment and health and human services benefits. But fundamental changes emerged as government moved to a largely remote workforce. Regardless of the hybrid work model that is ultimately implemented, this will drive change in the technologies supporting state government, the need for broadband access and affordability, and the challenges of cybersecurity – all while facing budget and cost control constraints. The good news is that the technology is ready – leadership across all of state government is essential to implementation.

Serve Citizens During Crisis: Resilience for What's Next

The COVID-19 pandemic exposed a preparedness gap that will need continued attention from state IT leaders to ensure continuity of operations under all circumstances. Being prepared for a natural or manmade crisis, from a hurricane to an electric grid blackout, is difficult enough. But being prepared for a long-term crisis requires a new, broader way of thinking about resilience. The core competencies of enabling first responders, standing up a command center and keeping citizens informed are just the price of admission to an uncertain future.

From K-12 to higher education, educational institutions need to be equally nimble, moving seamlessly to a remote learning or hybrid model. To bring new equity to another gap exposed by the pandemic, the digital divide, all students must have the connectivity they need to learn from home.

As citizens and businesses pivot to the new workplace, the digital divide will impact economic development and the ability to find employment and growth for all.

Improve Government Effectiveness: The Move to Digital

The ongoing challenges of 2020 have shed a bright light on the importance for state agencies to digitize operations in their interaction with citizens. That interaction has moved beyond the services that governments provide, to the way public meetings are held and how information is communicated. Operationally, government is moving towards greater use of digital documents, workflows, e-signatures, document collaboration, and intuitive self-service digital experiences, both internal and external facing and through a variety of devices. Government agencies, commissions and boards have found that the ability to connect to their constituents can be more effective with enhanced digital capabilities. The key is providing the right mix of in-person and virtual service options.

Put the Citizen First: Citizen-Centric Government

The pandemic reinforced the fact that people and businesses must have the ability to connect to essential government services, without waiting in long lines and regardless of office closings or safety precautions.

Consumer engagement focuses on the citizen experience first, providing a one-stop shop for interacting with agencies at all levels of government. A unified statewide consumer engagement platform provides the opportunity to customize the services to what the citizen needs – not how government is organized. States are leaning into and developing services that mirror what is available to the consumer as they shop online. Imagine a citizen experience that builds a citizen timeline which schedules government tasks for the year with reminders for property tax payments and vehicle registration expiration dates.

Putting the citizen first will require a continued focus on enabling connectivity and access for all citizens and businesses through broadband expansion. This requires not only connectivity, but affordability and access to equipment, education, and training.

Execute the Path to Modernization: Partnerships to Move to the Future

Modernizing legacy technology requires establishing priorities which include cybersecurity, citizen experience, workforce development, analytics, disaster recovery, data governance, infrastructure modernization, cloud computing, budget and cost control, as well as shared services. While this is a daunting list, with close collaboration between agencies, information technology organizations and private sector partners, states are making dramatic inroads in a timeframe that is significantly faster than in the past. Strengthening the relationships forged during the crisis can create a greater and more integrated role for non-government entities, businesses, and nonprofits.

One of the major technology impacts from the pandemic is the move forward to greater collaboration with private sector partners as states adopt technology “as-a-service” or “in the cloud”. This includes everything from access to Coronavirus Aid, Relief, and Economic Security (CARES) Act funds, unemployment insurance services, judiciary proceedings, and even reskilling programs for in-demand tech

jobs. The “as-a-service” model supported states as they struggled with adding capacity in call centers and providing service to citizens. This has continued as government responds to the next challenge of vaccine distribution and tracking. The ability to buy services as they are needed is a major resource in moving to modernization. But it brings with it the need for different budgeting and cost control processes to support the technology, procurement and finance organizations going forward.

As state agencies look to technology modernization, it is the opportune time to look at how the process of government can also be modernized to take advantage of the innovative technologies available from technology partners. The introduction of artificial intelligence to streamline and provide efficiency to administrative processes will be essential to support the revenue and skills gap that states are facing.

Protect Citizen Privacy: Understanding Cybersecurity Risk

Protecting state government data from cybersecurity threats is an ongoing and escalating issue. While the threat took a brief respite at the beginning of the pandemic, it came roaring back with new and varied approaches. Remote work presented new challenges with connectivity driven by where employees worked. Recent activity has resulted in an escalation of fraud and abuse with unemployment and health and human services funds. Modernization with the support of cloud and innovative technologies requires that state IT organizations ensure that their plans, strategies, and tools extend beyond what is controlled within state facilities. The good news is that government pivoted quickly and with amazing effectiveness. However, it requires continued vigilance to ensure that risk is understood and managed.

As states move aggressively to cloud services, it will be essential that they evaluate their cloud security risk and develop a strategy to protect citizen data by answering the following questions:

- Do I have visibility into cloud data?
- Do I have control over cloud data?
- Do I have secure access to cloud data and applications?
- Do I have access to the cloud data analytics that can manage persistent threats?
- Am I in compliance?

Modernization with the move to the cloud is only one aspect of a strong cybersecurity posture. Continuation of current cybersecurity plans and expenditures is essential so that employee training, cybersecurity exercises, and strengthening the IT infrastructure remain in place to manage the cybersecurity risk. As state organizations settle on whatever hybrid workplace they choose, it will bring new technology challenges in security. The introduction of the Internet of Things in law enforcement, transportation, and all physical services brings with it the challenge of securing the “new edge” that will require diligence to ensure that citizens’ data is safe and protected.

Introduce Innovation: Lessons Learned in 2020

Prior to 2020, introducing technology innovation was notoriously slow and fraught with funding difficulties, failed projects and project overruns. Driven by the immediate need for technology solutions, state agencies and their supporting IT organizations have changed that paradigm. States have adopted chatbots (an artificial intelligence and machine learning tool) expanding call centers' capabilities in days. With the support of the procurement organizations, the need for lengthy pilots and trials was replaced by with technology companies to implement tech to meet needs.

The challenge going forward will be to ensure that the lessons learned in procurement, implementation, security, and cost control are refined and developed to continue to introduce innovation quickly and responsibly without reverting to "the way things were done" in the past.

Move to a Digital State Culture: Crossing Agency Boundaries

Shrinking budgets combined with the desire to continue providing efficient and top-quality services have created an incentive for governments to look to shared services, both across the state, between states, and with local governments. In moving to a citizen-centric government, CIOs are becoming the focal point to drive greater collaboration and data sharing across state agencies while moving away from addressing issues on an agency-by-agency basis. This more holistic, enterprise approach addresses what the citizen needs regardless of where the service or support originates. The benefits of shared services can help governments realize cost savings and cost reductions. In addition to the financial cost savings, partnerships can stimulate innovation, maximize efficiencies, and improve decision making by bringing more voices to the table. Leading states, for example, have implemented programs to share cybersecurity skills and expertise utilizing a shared unemployment system as part of their modernization strategy.

Drive Policy and Decisions Through Data: Data-Driven Government

The pandemic drove the utilization of data analytics to a new level as governors relied on data to communicate to citizens and to develop next steps to meet the challenge. Chief Data Officers in the health and human services agencies were often elevated to support the effort.

Moving forward it is essential that the momentum continue as agencies see the value of protecting and utilizing data to drive decision and policy making. The ability to draw from the vast data that government and external sources provide has an opportunity for decisions that make government more effective and efficient as the budget challenges continue.

Envision an election where data on voter turnout, voting method, and issues are aggregated from the local jurisdictions to a state level where predictive analytics can help to predict voter turnout, wait times, and resolve issues for future elections which can improve voter satisfaction and trust.

Govern Technology: Facing the Budget Challenge

State governments are moving forward with their digital transformation efforts, in spite of significant budget reductions that will continue into 2022 and beyond. The need to ensure that the technology plans are structured to fit the priorities of the governor, legislature and agencies is the challenge. The shape and structure of IT governance must fit with the overall organization of state government and the roles of the Governor's Office and state agencies.

In determining a state's IT governance structure, leading states adopt an enterprise IT governance function that:

- Delivers a single digital experience to citizens and businesses
- Drives enterprise cybersecurity risk management
- Drives efficiency and effectiveness through shared technology platforms
- Facilitates cross-agency collaboration, innovation and data sharing

- Ensures that the right technology talent is in place
- Provides transparency into enterprise and agency technology spending

Enabling the Digital Workforce: The New Workplace

The rapid move to remote work has changed the landscape of the government workplace forever. As states prepare for work after COVID-19, building a resilient workforce is a priority. This means balancing productivity and outcomes with safety. Most states are planning to continue remote work – either full time or in some hybrid approach. It may be flexible working hours or "hoteling" – using the same space for different employee work schedules or permanent remote work.

To support this change, employee policies and practices are rapidly being reviewed and revised. Governors are forming task forces to look at the potential for reducing the facilities necessary for state employees as part of their cost saving efforts. Agencies including IT are looking at the potential for remote workers to expand the talent pool – both inside and possibly outside the state. The impacts on union contracts and economic development are only a few of the ramifications yet to be resolved.

The nature of work is also changing. The advent of innovations like artificial intelligence will change the way technology can support the more routine tasks of government like call centers and help desks. These technologies are driving an examination of the processes that governments use to serve citizens. While brick and mortar offices are not disappearing anytime soon, the gradual shift away from face to face for many services will continue.

The management and support of government employees is a work in progress. Employee services driven by the same technologies being used to reach citizens will be needed. Different management processes and measures will be developed as well as the difficult topic of maintaining the culture and morale of the organization. These are exciting but yet uncharted times as states emerge in 2021.

Leading Technology: The Role of the State Chief Information Officer

In the course of a few weeks, the state CIOs and IT organizations stepped up to ensure state governments were operating remotely. As the ramifications of the crisis continued, they worked with the agencies and external partners to stand up and expand services in days. The relationship between the CIOs, agency leadership and the governor's office is now moving to the next steps outlined here. Today's CIO must have a unique combination of technical, interpersonal relationship building and negotiation skills to deliver technology that fits the needs of the state into the future.