

# Why Government Is Technology Challenged

## and Other Stumbling Blocks to Innovation

NTT DATA's yearly report measuring government and commercial innovation, the Innovation Index, found that government trails all other industries in technology investment. Respondents rightfully feel the pressure from the pace of technology change (20% negative impact on operations and performance over the next two years, vs. 11% survey average).





To fully understand the disparity in technology innovation between industry and government, let's take a closer look at some of the factors that influence technology adoption. When the coronavirus first hit, [over 450,000 individuals](#) visited the State of New York's unemployment insurance (UI) webpage – a 900% increase in the number of visitors to the site, which caused the system to crash. This scenario was not unique to New York. Sadly, this scenario played out across our nation's unemployment systems. Manual application filing processes and limited options for automated self-service exacerbated the problems.

Typically, the consequences of legacy technology are usually not as dramatic as the events that transpired in New York: Rather, outcomes are personal, with individuals becoming increasingly frustrated over complex systems, lengthy applications and extensive wait times. It should come as no surprise, that more than one-quarter of state and local government Innovation Index respondents cite inadequate or outdated technology as a weight that holds back innovation efforts significantly – more than all industries in the survey (26% vs. 18% survey average).

Much like federal agencies, moving to the cloud is arguably the best way for local governments to modernize how citizens engage and rebuild trust, but the Innovation Index uncovered that state and local governments have a long way to go before reaching equitable and efficient service delivery.

“State and local governments are significantly behind the private industry as far as how they’re managing their transformation,” explains Noel Hara, vice president & chief technology officer for NTT DATA. “Only 66% of them stated that they’ve adopted the public cloud, compared to 76% of our private sector respondents. And then we’ve also found that when we meet them, they may only have a couple of applications in the cloud.”

### Automation Nation?

Rather than utilizing modern applications that automate processes and optimize self-service, delivery of citizen services often relies on manual, outdated processes. For example, in Hara’s home state of Illinois, registering a vehicle requires citizens to fill out and present manual forms and a check to their local Secretary of State’s Office. An employee then takes this form and manually processes the application. However, as the employee enters the applicant’s information, they could make a mistake, and the applicant would not be alerted of a processing error until days or weeks later.

“All of these manual processes just drive-up costs and create frustrations for the citizens,” says Hara. “If you look at the process, many could easily be automated, and self-service options implemented.”

Automated workflows can simplify the entire process of registering a vehicle, simplifying both the citizen experience and the employee experience. By automating manual processes with native cloud services, local leaders can guard against these frustrations and reduce the potential of human errors. Despite the many advantages of automation, state and local governments remain significantly behind their commercial counterparts in adoption of AI-enabled technologies; Chatbot/virtual assistances implementation is reported at 35% vs. 52% and AI at 66% vs. 75%.

Reducing the potential for human errors could save state governments and local offices hundreds of thousands of dollars: But in order to recognize cost savings, leaders should look for intelligent robots designed for empathetic service delivery as a mechanism for citizen self-service and process automation.

At the height of the pandemic, “dumb bots” became the de facto standard. Unlike cognitive bots, these algorithms answer rudimentary questions based on a decision tree: Anything beyond basic “Yes” or “No” answers confound and confuse the system.

“They just had yes or no answers or gave you a script-based on the answer that you gave. It wasn’t looking up information anywhere or doing anything sophisticated,” says Hara. “Now we’re really seeing opportunities for a more cognitive bot, where you can actually interact with the bot using natural language to apply for services.”

Although the technology exists, are state and local governments likely to use it? State and local government respondents say that AI/ML (44%) and AR/VR (43%) are either most or second-most critical to providing a positive digital constituent experience. The good news is cognitive bots are gaining ground



in federal, state and local agencies. Applications could be as simple as chatting with [a digital human](#) that collects, records and disseminates information.

Chatbots, however, aren't the only recent technology with the potential to make an impact. Closer to home, the City of Las Vegas is leveraging artificial intelligence (AI) and machine learning (ML) to improve public safety across the city.

Within the city of Las Vegas, AI/ML is helping public safety officials quickly respond to potential crowd surges that can indicate a potential incident. [Las Vegas uses NTT's Smart Platform](#) collecting and analyzing information from nearby sensors to look for anomalies.

As the program scans through the crowd, it assesses the number of individuals and weighs that against a risk score based on several factors like the time of day and the weather. If there is a discrepancy, the platform sends a notification to a public safety team.

"It's using AI/ML to understand what behavior is normal, and it's looking for anomalies. It'll look at a crowd. Not just how many people are in the crowd, but how many people at 3:20 PM on a Friday are in the crowd? How many people were expected to be there on a normal Friday based on the temperature? It's grabbing data from multiple sources [to create a baseline]."

Data and analysis of data can help to solve many state and local government challenges, yet privacy and data security remain top concerns in achieving citizen satisfaction. (45% state/local vs. 35% total).

As federal, state and local governments look toward improving service delivery, partners in academia and the private sector stand ready to help leaders pursue incremental change.

"Start with incremental modernization. You don't have to boil the whole ocean," says Hara.

[Click here to explore the Innovation Index](#)