From an election to a pandemic

Los Angeles County turned to the cloud to tackle 2020
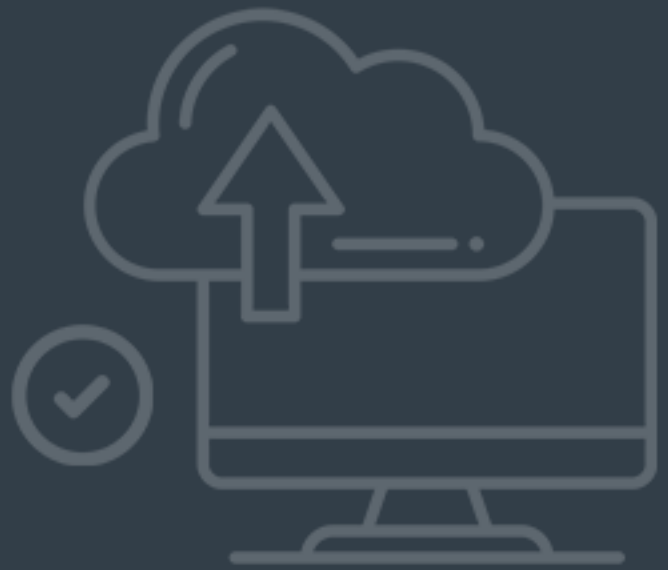
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Despite being one of the most populous jurisdictions in the country, Los Angeles County faced a myriad of trials in 2020. With the help of Amazon Web Services (AWS), these three local government agencies rose to the challenge.

There is no denying that 2020 threw every government organization for a loop. Whether transitioning to remote workspaces to keep staff safe and healthy, pivoting in-office constituent services to digital environments, or hardening systems to handle the 2020 presidential election, local government IT teams had their work cut out for them.

Despite the myriad of trials, all agencies had one thing in common: They had to rise to the challenge. Working hand-in-hand with contractors and technology vendors, agencies evolved to a new, more digital way of working and serving constituents and forged new paths that lay the groundwork for a more efficient digital government.

A prime example of this ingenuity is Los Angeles County, which serves over 10 million citizens across more than 4,000 square miles. Departments across the county worked for many years to embrace technology as a means to usher in efficiency and improve the citizen experience across a massive spectrum of demographics. When 2020 rolled around, many departments turned once again to technology to innovate accordingly. Here are three success stories looking into how county departments are leading through the pandemic and into the future with the cloud.

A seamless transition to remote work

When the pandemic hit in March 2020, organizations and agencies everywhere faced the monumental challenge to transition employees and services to operate in remote environments virtually overnight.

This was the case for the L.A. County Department of Public Social Services (DPSS), an agency that includes more than 14,000 employees and serves over 3.5 million residents by providing Medi-Cal health insurance, CalFresh food assistance, CalWORKs cash assistance for families, and General Relief cash assistance for individuals. The agency also assists constituents experiencing homelessness, domestic violence, and substance use disorders and provides a variety of social service programs.

"Since shelter-in-place orders came into effect due to COVID-19 in March 2020, DPSS' workforce has shifted dramatically to remote work and it drastically changed our way of delivering services," explains L.A. County DPSS Chief Technical Officer Christina A. Nguyen. "Before, we had most DPSS staff working onsite using desktops with a few thousand of employees that had laptops and could be truly mobile. We had to figure out a way expand the ability for most of our workforce to work remotely."

To keep remote workers online and serving citizens, the agency turned to Amazon AppStream 2.0, a solution that enables secure remote streaming of desktops and applications.

"AppStream 2.0 was very quick for us to deploy," Nguyen says. "It really helped our department to quickly and securely enable a remote workforceto maintain operations and effectively service our customers."

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> **The pandemic drastically changed our way of working and providing services. DPSS's workforce has shifted dramatically to remote work and has made a positive change to our way of delivering services through omni-channels and extended hours.**
>
> Christina A. Nguyen,
> L.A. County DPSS Chief of Information Technology

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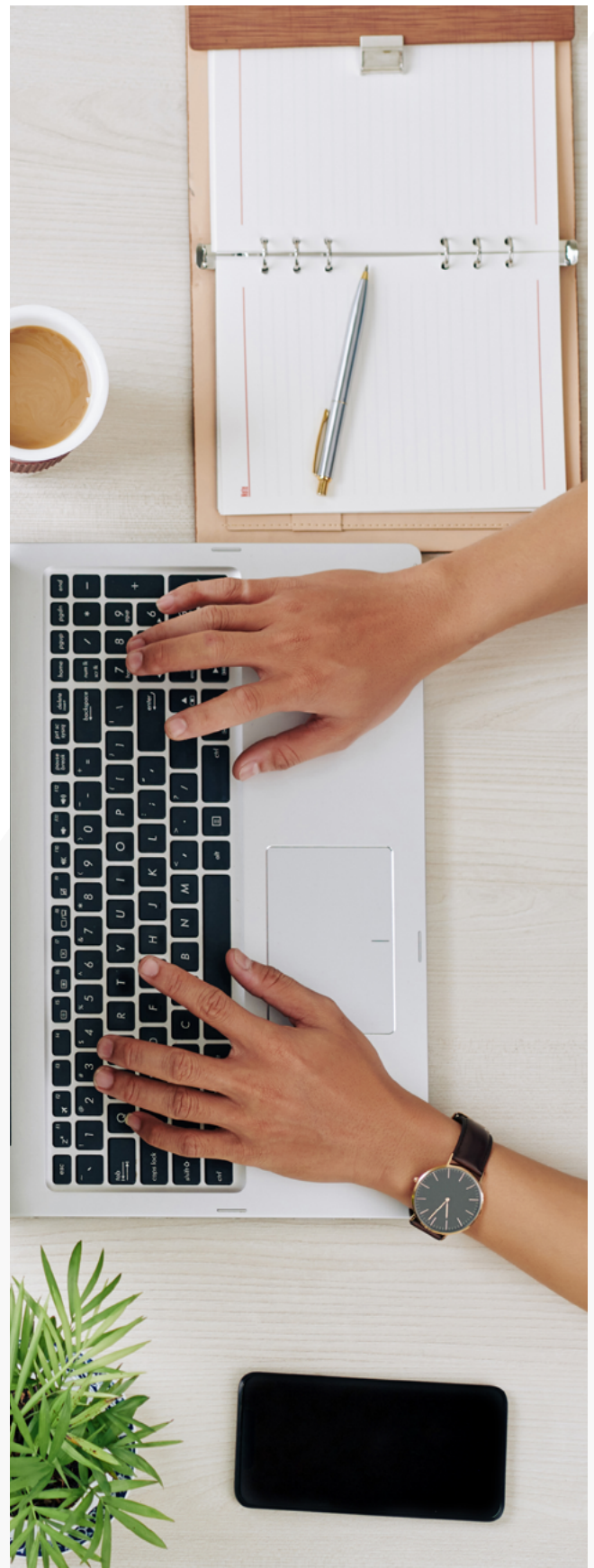
Digitizing citizen services

The need to continue supporting citizens through a crisis compounded the urgency around the pandemic. Many found themselves in greater need of social services, but with traditional government buildings closed digital access to those same services became a top priority.

Major digital transformation was required on all fronts—and fast.

"Typically, participants would come into district offices to receive services. It was a brick-and-mortar model," Nguyen explains. "Overnight, that changed, and we had to determine how to quickly deliver services remotely and virtually without any disruption quickly."

Jerry Aoki, chief information officer of the L.A. County Department of Children and Family Services (DCFS), says his agency faced a similar trial. As one of the largest child welfare organizations in the nation, with nearly 9,000 employees, DCFS provides crucial aid, promotes child safety, offers prevention services to strengthen families, and connects children with stable, loving homes in times of need. The agency also turned to AppStream 2.0 to enable telework. However, once remote work was up and running, the agency experienced a parallel challenge: The phone was not ringing as much as it should be.

"When school starts, there is a series of mandated reporters, law enforcements, and other people who typically call in cases of suspected abuse or neglect," Aoki says. "With kids not returning to physical schools, we began to see a reduction of calls that would typically come in from those who are more easily positioned to report these cases."

> **50% +**
>
> of our call center staff are working from home due to the features provided by Amazon Connect
>
> Source: Jerry Aoki, chief information officer, L.A. County Department of Children and Family Services (DCFS)

With COVID-19 restrictions in place, more people were home for more extended periods, creating tension for families and resulting in the possibility of more domestic violence or negligence. As a result, it became a priority for DCFS to ensure its 24/7 mission-critical child protection hotline was accessible and easy for citizens to use.

Luckily, the agency had already set out to revamp the largely outdated legacy technology behind the hotline prior to the pandemic.

"Our old PBX-based system was more than 15 years old, and in order to leverage the features within the call center, the staff member had to be inside the building literally," Aoki says. "And when there was a situation where calls were disrupted, reestablishing calls was nearly impossible. There was almost no failover capability. The update was long overdue."

With this in mind, DCFS implemented Amazon Connect to enable remote work, assure uptime and security of sensitive information, as well as provide better data and insight to the social workers taking calls. Moreover, the technology also helped the agency automate tasks and reduce pressure for staff.

"Amazon Connect provided many features that were essential to our ability to walk out the door of the physical call center, and today we have over 50 percent of our call center staff working from home," Aoki says. There were other advantages, he adds. Since the solution included a softphone app, which mimics the capabilities of a telephone but lives on a desktop application, failover and backup were built into the solution. The agency previously faced issues with outages, so implementing a solution with load balancing capabilities that was highly available was paramount.

"With this hotline, we really need to make sure we are up 24/7, and AWS has the most resilient infrastructure out there," adds Aoki. "So, Amazon Connect really solved a lot of our longstanding challenges."

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Scaling systems to support a historic election

A pandemic was not the only major event that seized government organizations' attention in 2020. In November, citizens across the country lined up to cast votes in an election that saw the most participation in 120 years. Whereas a presidential election is always a major event, pandemic restrictions and increased scrutiny on security added new facets of concern for government leaders. L.A. County, the largest and most complex election jurisdiction in the country, faced a compounded challenge.

"L.A. County alone has a larger population than 42 of the 50 states so when it comes to mere population size; and we are huge. Nevertheless, our jurisdiction is also comprised of various demographics, all of which speak different languages and have different accessibility needs," explains Aman Bhullar, chief information officer of the L.A. County Registrar-Recorder/ County Clerk's office, which provides records management and election services to the county. "All this combined makes it a very complex jurisdiction when it comes to running elections."


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Aman Bhullar, chief information officer,
L.A. County Registrar-Recorder/County Clerk's office

L.A. County faced challenges with its election services in the past. During the 2018 primary, the crucial websites hosted by the registrar's office had challenges serving a large number of visitors. The pandemic was sure to bring more visitors to the agency's primary voter information website, not only because more voters needed information on the mail-in ballot process, but also to create transparency to the voting process that typically happened in person.

"Traditionally, people come into our facilities to observe the tabulation process," Bhullar says. Because of the pandemic, we knew that people may not want to come into the facilities themselves, so we started working on streaming capabilities that allowed people at home to observe tabulation process in the Tally Operations Center."
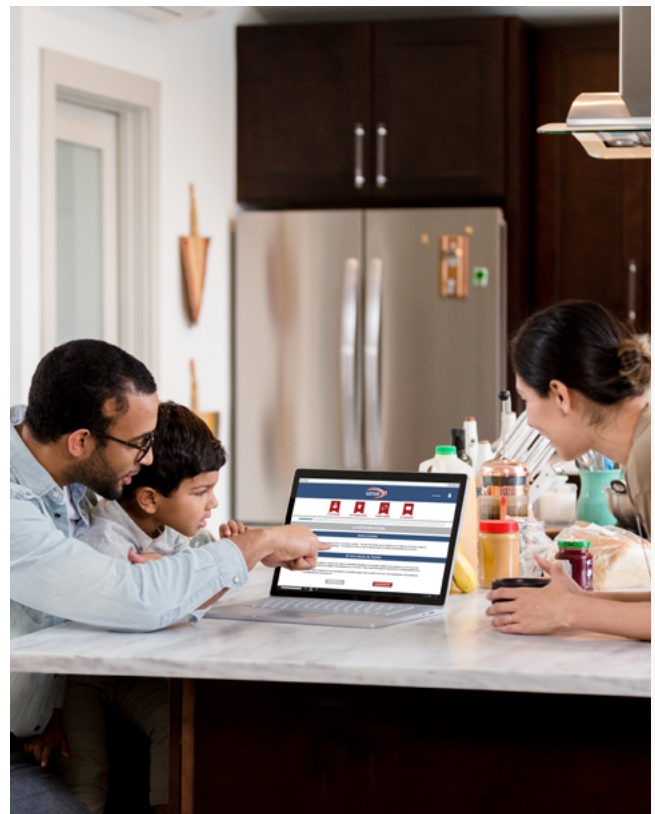
To make sure voters in the 2020 election had the information necessary to vote, find polling stations, and view results, the agency turned to AWS to securely scale its legacy .NET websites and accommodate the coming influx of visitors. AWS helped the agency re-architect the solution and moved it onto the AWS Cloud, making it scalable, secure, and highly available.

The result? The agency's websites can now handle hundreds of thousands of visitors per second, staying live and available before, during, and after election day.

"It's a success story no matter what way you look at it," Bhullar says. "On election night, when people were visiting the site frequently to see results, the site performed perfectly. Overall, people were extremely happy with the technology when they interacted with it—it was very user friendly."

And by ensuring the websites were ready for anything, the county was able to serve all constituents without issue.

"We were able to ensure that every voter of L.A. County had the ability to cast a ballot. That is the most important thing," Bhullar adds.

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Looking ahead

However, the transformation journey is not over yet. As state and local agencies across the country are finding out, many of these transitions have laid the groundwork both culturally and technologically to roll out more upgrades and capabilities.

"As we go into 2021, AWS fits into our cloud-first strategy. We want to leverage the power of the cloud, the resources that are out there and the scalability options," says Bhullar.

In particular, Bhullar aims to expand the cloud infrastructure to the records department and, eventually, roll out the infrastructure to support all web-based applications the L.A. County Registrar-Recorder/County Clerk's office maintains.

"It is not just one website that people interact with us on, it's dozens of them, and to improve their experience, we will need to make use of the high availability and other offerings that the AWS Cloud has," says Bhullar. "It's definitely a long-term strategy."

Indeed, it is time for many in local government to begin reevaluating their IT infrastructure, Aoki notes.

"If you have been in the same technology environment for more than five or six years, it is definitely time to poke your head up and look around because there is been a quantum change in the approach as to how technology is being utilized, how it is implemented, and what it can do," Aoki says.

And for jurisdictions looking to begin that exploration into upgrading their infrastructure, Bhullar says he is here to help them get started on their journey.

"Eventually we are looking to make some of our applications open source so other jurisdictions can take our source code and take the technology investments we have made and leverage the same solution," he says. "And it is not just limited to technology, we are also happy to help them learn from our experience. We can offer best practices and insight so they can find their own cloud strategy."

[Learn more](#) about how AWS can help your local agency embrace transformation with the cloud.

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