Software Speeds Delivery of Aid, Helps States Respond to COVID-19

Introduction

With the effort to address the pandemic entering a new phase, it can be hard to appreciate just how quickly science turned a corner in the fight against COVID-19. Historically, vaccines took two to five years to develop at a minimum, and even with new advances, researchers estimated it would take 18 months to develop a vaccine to address last year’s pandemic.

The scientific advancements over the last year have been nothing short of miraculous, and software-enabled technologies played a crucial role every step of the way. Even today, software technologies—especially blockchain—continue to play a vital role in the distribution and supply chain security of COVID-19 vaccines.

Software helped ease the impact of the pandemic in another important way as well: speeding the response efforts of governments, particularly by expediting the delivery of relief aid to affected individuals and businesses. As soon as pandemic relief efforts started, local and state governments quickly became overwhelmed and overworked facilitating direct stimulus payments, unemployment assistance, nutrition assistance, housing aid, loans for small businesses, and more. Even after the passage of 2021’s $1.9 trillion relief plan, speedily getting the cash out of the Federal Reserve and into the hands of those who needed it most posed unique challenges for the myriad government agencies involved in the aid distribution process.
By implementing modern cloud-based software solutions, governments can streamline and secure their internal, inter-agency, and constituent-facing business processes to promptly deliver relief funds to eligible individuals and businesses and resume interrupted public services. This paper highlights some of the key software technologies at play in delivering relief funds and demonstrates how federal, state, and local agencies can succeed by putting software to work for their constituents.

**The Importance of Modernizing Government IT**

The pandemic laid bare an unfortunate fact: Too many government agencies continue to rely on outmoded, decades-old legacy IT systems to perform basic operational functions and deliver constituent services. This includes the core systems that process unemployment claims and manage direct aid payments. Governments depending on ancient, inflexible technology—some still stuck running a 60-year-old programming language for critical IT infrastructure—at the minimum have difficulty adjusting their workflows for the reality of the pandemic. At worst, internal and external systems fail entirely, paralyzing the aid process and resulting in massive delays before assistance can reach bank accounts.

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Over the past year, many of the technology failure horror stories could have been mitigated or avoided altogether had agencies taken proper precautions by investing in digital transformation before the pandemic struck. IT modernization was more important than ever as municipal, county, state, and federal agencies sought to maintain services and distribute eagerly awaited relief to constituents.

As Software.org: the BSA Foundation highlights in “The Case for Modernizing IT Now,” governments should prioritize the adoption of modern cloud-based software solutions that will allow agencies to improve quality of service, provide quicker response times, harden cybersecurity, and increase the versatility and resiliency of the agency and its workforce in case of future emergencies.

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Intelligent Software Streamlines the Aid Process from End to End

Upgrading government IT through digital transformation means more than simply owning the latest computers and hardware. Today, it is key for chief technology officers (CTOs) and procurement officials to welcome cutting-edge software solutions like advanced data analytics, remote collaboration tools, interactive dashboards generated in the cloud, automated digital workflows, and smart cybersecurity enhancements that keep confidential documents and personally identifiable information secure. Governments should provide their employees these 21st century tools needed to effectively navigate vaccine distribution and promptly administer COVID relief funds.

Software developers big and small are tackling this challenge with innovative solutions. When the City of Los Angeles needed a new way to facilitate the disbursement of monetary aid to residents impacted by COVID-19, Oracle partnered with Mastercard to pilot a software-based automated solution. The new tool drew on the power of Oracle Service to accept aid applications from a web portal, verify a constituent’s eligibility for aid, and collect necessary documentation through secure digital uploads. Applicants could check the status of their application on the portal and opt to receive the city’s monetary aid as either a virtual or physical prepaid debit card powered by Mastercard Send, allowing aid payments to be delivered in near real-time. Through this streamlined process, the city succeeded in distributing more than $36 million in direct financial assistance to more than 100,000 people.

On the East Coast, an end-to-end software tool built on the Salesforce platform assisted governments, health care providers, and community organizations with managing COVID-19 testing and vaccinations. In addition to this frontline vaccine tool, a stimulus management solution helped states and municipalities manage the intake of reimbursement requests, track cases at each stage of the approval process in real-time, and create configurable reports and dashboards at the click of a button. And because these software solutions are available as add-on services via the Salesforce AppExchange, they are comparatively easy to implement and stack with existing customizations and institutional data on an organization’s Salesforce system.

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AI and ML Digital Assistants Aid Government Officials

There is no doubt that the pandemic has highlighted the necessity of accurate, timely, transparent, and trustworthy information. The ability of artificial intelligence (AI) and machine learning (ML) to digest large quantities of data to identify relevant patterns and correlations has been critical to researchers’ ability to understand COVID-19 and to scaling up healthcare providers’ ability to deliver life-saving information to the public.

Software companies have been quick to develop various AI-powered technologies to help combat challenges faced during the pandemic. IBM Watson Assistant, an AI pop-up virtual agent, helped city officials in Lancaster County, California, provide citizens with critical information about symptoms and precautions related to COVID-19. Austin, Texas, similarly used Watson Assistant to develop a 24/7 interactive platform where citizens could ask questions related to COVID-19 testing and other information. This advanced and streamlined approach allowed employees to spend less time answering calls and devote time to more important tasks.

In New Mexico, the sudden increase in people filing for unemployment benefits, combined with various COVID-19 related relief funds, overwhelmed the state’s Department of Workforce Solutions. The team began receiving more than 900,000 calls per day, a significant increase compared to 4,000 calls per week prior to the pandemic. When it became impossible for state employees to answer all the calls, New Mexico partnered with Salesforce. Using Salesforce’s chatbot solution, powered by the integrated Einstein AI, the agency created their own bot named Olivia. And in just the first few days, Olivia managed more than 65,000 chat conversations and increased the number of chats per day to 7,500. Following the success of Olivia, the team launched a sister bot, Dorothy V., to help with technical support and agent interactions. With the help of Salesforce’s AI powered bots, the agency has now distributed more than $1.5 billion in benefits.

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Digital Signatures Securely Authenticate Transactions

E-signatures are a simple and powerful tool transforming the way organizations complete routine office tasks. The remote work and social-distanced reality of COVID-19 has exposed problems with rigid government processes dependent on in-person interactions or paper signatures for approval. Today, more than 3,000 federal, state, and local government agencies across the United States are reinventing their internal and constituent-facing processes using the power of digital signatures and secure online identity authentication cloud technology, such as DocuSign and Adobe Sign, and reaping the benefits.

For example, the State of Hawaii recently set an ambitious goal to digitize cumbersome, paper-based work processes as much as possible. The state believed that incorporating paperless digital workflows could cut costs, improve state services, and reduce its carbon footprint by slashing the government’s daily paper consumption. In partnership with Adobe, the Hawaii government developed an eSign Services initiative that was easy to implement across state agencies and integrated seamlessly with its existing Microsoft Office 365 products.

Hawaii now uses Adobe Sign to facilitate digital signatures on a wide range of internal and public-facing documents—from authorization forms and accounting paperwork to proposals and contracts—all from the comfort and convenience of a smartphone or tablet. Just two and a half years after implementation, Hawaii estimates it saved more than $5 million in printing, ink, and labor costs and saved more than 400,000 sheets of paper by delivering signatures electronically.

Beyond the dollars and cents associated with printing paper, Hawaii officials found that adopting digital signatures and digital workflows came with positive second-order effects: faster constituent service and increased transparency.

And it’s not just Hawaii. Utah experienced similarly impressive results using Adobe Sign to quickly spin up its remote work capacity and streamline the approval process for emergency aid. And the State of New York distributed

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more than $4 billion in COVID-19 relief to more than two million people with the assistance of digital signatures.

State and local governments elsewhere have been able to build on the digital signature concept by incorporating DocuSign’s SMS Delivery for eSignature to send SMS mass alerts to constituents, from emergency declarations to property tax payment reminders and parent notifications for K–12 schools.9 SMS is critical to notifying and delivering services to constituents without reliable access to broadband and makes systems more resilient in times of crisis by offering multi-channel government communications. Other agencies like the Louisville Metro Government also worked with DocuSign to accelerate the delivery of millions of dollars in federal CARES Act funds for utility and rental assistance. By using DocuSign e-signature, the committee was able to increase the delivery of funds by 70 percent.10

**Conclusion**

In the wake of COVID-19, many businesses, schools, government agencies, and organizations devised remote work strategies and invested in digital alternatives to replace in-person, paper-based methods of doing business. After experiencing how software can boost efficiency, conserve resources, and increase the speed, accuracy, and security of services, it comes as no surprise that several organizations plan to make these changes permanent or at least reimagine post-pandemic operations. There’s no time like the present for hesitant agencies to leave legacy hardware in the 20th century and outfit their IT infrastructure with modern, cloud-based software solutions suited for both times of calm and crisis.

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