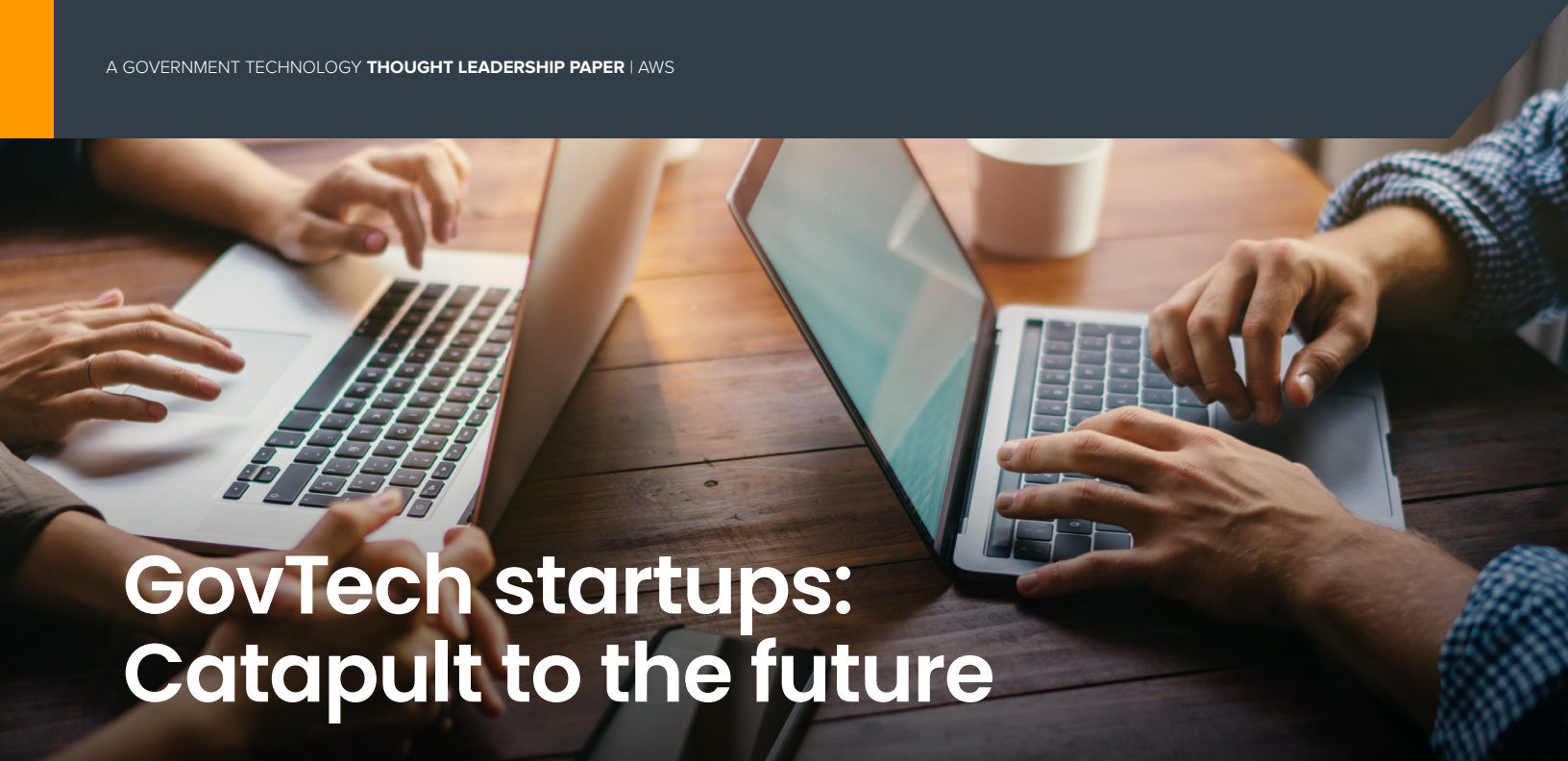




GovTech startups: Catapult to the future

The pandemic forced state and local government organizations to move faster, more flexibly, and more boldly than ever. Overwhelmed call centers, the massive shift to remote work, the need for digital services, evaporating revenue, and other urgent challenges highlighted deficiencies but also presented opportunities. Government leaders recognized that modernization and digital transformation were essential — not only to help communities and individuals get back on their feet but also to forge a more promising future.

Agencies deployed many cloud-based solutions in record time (and often for the first time), and provided real-life proof points for cloud solutions, artificial intelligence (AI), automation, and other advanced technologies. Federal stimulus funding and the [Infrastructure Investment and Jobs Act](#) have supported these efforts, giving state and local government leaders a rare opportunity to catch up on technology solutions and modernization.

As state and local governments pursue modernization, they're finding that GovTech startups (i.e., civic-focused technology companies in the early stages of operation) provide focused, cutting-edge innovation and other advantages that organizations need to meet their mission. The key to working successfully with startups is understanding when to

leverage their offerings, how to team up with the right startup, and how to chart a clear course for collaboration.

Go faster, further, and smarter

In general, startups are ideal for concrete point solutions. Most startups focus on doing one thing well and are not tied to traditional ways of operating. These qualities keep them nimble and allow them to bring fresh ideas to their state and local government customers. In many cases, they can tailor their solution without the overhead of more traditional companies. In addition, they offer a more agile, low-risk, and cost-effective way to address challenges and opportunities than larger companies. Because startups often rely on core cloud services, their solutions can scale quickly to accommodate customers' needs, more easily integrate data from disparate sources, and incorporate best practices for cybersecurity.

"Because they're a new company, they're not saddled with all the baggage of legacy technology. They're only building for the future, so you get to leapfrog a couple of stages in that development process and start off with an absolutely new product that is built for right now as opposed to something that was built back

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— Sahil Merchant, Chief Strategy Officer, Fusus

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Team up with the right startup: The Amazon Web Services (AWS) GovTechStart Program

The [AWS GovTechStart Program](#) helps state and local governments engage with technology startups by connecting agencies with carefully curated AWS GovTechStart Members. Member startups draw on technology, best practices, support, and other resources from AWS to offer innovative cloud-based solutions across a variety of use cases, technologies, and industries. By leveraging the creativity, flexibility, focus, and competitive pricing of these members, governments can rapidly meet

urgent needs and more vigorously pursue their long-range vision.

The following AWS GovTechStart Members exemplify the innovation, flexibility, and agility state and local governments need in the areas of public safety, health and human services (HHS), constituent services, transportation, and more.

Cardinality.ai

Uses a human-centric approach to help state agencies efficiently assist children, adults, and families in need

Cardinality.ai provides cloud-based workforce and HHS information systems for agencies that address child welfare, juvenile justice, child support, adult protective services, and more. It differentiates itself by focusing on modern AI technologies, pre-building its solutions specifically for government agencies, and providing intuitive user experiences that minimize learning curves. "With our approach, things that would take five years and more than \$50 million now take under two years and less than half the implementation costs," says Co-founder and Chief Executive Officer (CEO) Thiag Loganathan.

Early in the pandemic, Cardinality.ai worked with the Maryland Department of Human Services to quickly roll out a tablet-based child welfare solution that allows case workers to do their job from anywhere. Embedded AI draws on data from multiple sources to provide case workers, supervisors, and others with suggestions for things like the best foster care match for a child with special needs. The solution also acts as a "personal assistant" that actively tracks and informs the case worker of data related to the case — whether that's the recent arrest of a parent involved in a case, an upcoming court hearing, or legal decisions from similar cases. The security and elasticity of AWS GovCloud, as well as Amazon's flexible storage options, enable real-time access to information as well as longer-term storage for



compliance with data retention regulations.

Citibot

Leverages AI-powered chatbots to help serve residents 24/7 and promote digital equity

Citibot enables governments to connect with residents through AI-infused chat technology and to leverage chat data to automatically inform operations such as trash collection and pothole repair. Residents get their questions answered and can report issues in conversational language through text, web chat, or social media chats.

"To serve more residents and deliver a quality customer service experience regardless of socioeconomic, racial, or language factors, you have to open the door wider by offering services on residents' preferred channels and empowering conversations through AI," says Co-founder and CEO Bratton Riley. Toward that end, Citibot uses Amazon Lex, an AWS service for building conversational interfaces for applications using voice and text, to enhance its conversational AI and chatbot experience.

Like many startups, Citibot can quickly pivot and tailor solutions at a moment's notice. Orleans Parish in Louisiana

launched Citibot's solution in June 2021 to address non-emergency customer service issues. When Hurricane Ida hit that August and knocked out 911 and 311 systems, Citibot quickly converted its platform to handle emergency communications. As a lifeline to tens of thousands of residents, the chat system provided information about where to get free oxygen tanks, what roads were open, the location of emergency shelters, and more.

City Innovate

Accelerates procurement within government

City Innovate simplifies and accelerates government technology acquisitions by providing a purpose-built tool, called Solicitation Builder, that automates procurement. "The software is basically like TurboTax for procurement. We ask you a series of questions and as you answer them, we give you the appropriate procurement template," says Co-founder and Co-CEO Kamran Saddique. The tool, built on AWS GovCloud, also captures data from past solicitations to expedite template completion and support conformance with the agency's practices.

Solicitation Builder has been a cornerstone of the state of California's shift to challenge-based procurement for goods

and services. Challenge-based procurement focuses on identifying the challenge or problem that needs to be addressed instead of specifying the exact technology or solution that will best address the issue. City Innovate worked with the state's Department of Technology and Department of Public Health to procure and set up an enterprise solution to track, manage, and report on the flow of COVID-19 vaccines to healthcare entities that would administer the vaccine to millions of residents.

"The departments were leaders in utilizing challenge-based procurement to determine the best vendor. We ended up getting into contract and implementing 80 percent of the solution before any other state could even get a procurement out," says Saddique.

Fusus

Improves operational intelligence for law enforcement and public safety personnel

Fusus, which now serves more than 100 cities and counties nationwide with a real-time crime center in the cloud, is no longer a startup but remains an AWS GovTechStart Member. Unlike law enforcement platforms where cameras, computer-aided dispatch (CAD) feeds, geo-location systems, alerts, and other data sources exist in silos, the Fusus solution delivers an open, technology-agnostic platform that ties together data from disparate technologies. "Pulling together all these different technologies acts as a force multiplier. It helps people respond to emergent events more quickly, investigate crimes more easily, and correlate evidence from, say, a gunshot detector and a license plate reader. It leads to much better public safety outcomes and makes these technologies more affordable," says Chief Strategy Officer (CSO) Sahil Merchant. The solution runs on AWS GovCloud and also leverages Amazon SageMaker's machine learning functionality.

"We're a very small startup, but people think we're a lot bigger because of the power of the Amazon cloud."

— Alex Kozak, Co-founder, ThruGreen

ThruGreen

Turns old traffic lights smart by connecting them to traffic data

In just 15 to 20 minutes, ThruGreen can turn any traffic light into a smart light. The core offering helps cities improve maintenance by automatically notifying maintenance crews when a light is broken and by repairing some issues remotely. The solution can also use real-time and historical data from traffic lights, buses, and other sources to help reduce carbon emissions and improve traffic flow — for example, by modifying traffic lights to give first responders automatic green lights or to help buses and cars move more efficiently.

Much of the ThruGreen solution runs on Amazon services, including AWS Internet of Things (IoT) software solutions. "We're a very small startup, but people think we're a lot bigger because of the power of the Amazon cloud," says Co-founder Alex Kozak.

WorldSafe1st

Helps underserved communities reduce the spread of infectious disease

WorldSafe1st helps government organizations connect with traditionally underserved communities. Its services include providing technology solutions as well as on-the-ground personnel and resources (such as setting up and staffing COVID-19 testing and vaccination sites for communities in need). The company launched an anonymous reporting tool to help prevent gun violence in St. Louis, and the city asked the startup to repurpose the tool for reporting COVID-19 symptoms.

"When we were asked to help, 75 percent of people hospitalized for COVID and all who had died from COVID in St. Louis were African American. The city is predominantly African American, and there was a lot of fear and systemic mistrust. We viewed this as a positive opportunity to connect directly with residents who state and local governments have had trouble serving," says Co-founder and Chief Operating Officer (COO) Willmeisha Hall. Working with AWS, WorldSafe1st rolled out a comprehensive COVID-19 crisis management platform within three days. The platform has served hundreds of thousands of people. It provides a range of call center services to guide callers through COVID-19 symptoms, recommends next steps based on symptom severity, performs contact tracing, and more. The platform relies on Amazon Connect for omnichannel call center capabilities.

Zuul IoT

Protects industrial internet of things (IIoT) and IoT technology assets that support transportation, public transit, and other critical infrastructure

Zuul IoT specializes in helping state and local governments build more cybersecurity solutions for public transit, smart city projects, and other critical infrastructure, where the proliferation of IIoT and IoT devices has significantly expanded the attack surface and challenged traditional cybersecurity approaches. "Securing assets underpinning a transit agency's fare system is different from securing a laptop or server in an IT environment," says President and CEO John Parmley.

Zuul IoT enables organizations to address this challenge by protecting IoT devices (as well as the environment they operate in) through the use of digital certificates, a Zero-Trust IoT protection model, and an IoT-friendly network defense solution. “Amazon’s highly agile infrastructure allows us to be agile. This agility enables our state and local government customers to better support the public without the risk of exposing critical infrastructure to malicious activity that could impact the public’s health, safety, and well-being,” says Parmley. “AWS services such as [AWS Certificate Manager](#) enable companies to build secure solutions for government customers,” says Parmley.

Explore new pathways

Although initiatives like the AWS GovTech Startup Program connect agencies with leading technology innovators, there are many paths to innovation. Organizations must still exercise due diligence to find the startup that is best for them and chart a clear course that keeps the project on track.

When selecting a startup:

- **Stay current on technology, innovation, and the market.** New ideas and approaches are born every day. New startups enter the market, and more advanced startups constantly refine their solutions.

Think about the outcome you want to achieve rather than seeking a specific solution. Don’t exclude any startup that meets requirements, and be open to ideas.

- **Vet contenders.** Consider the team behind the startup and their experience. Ask how they have worked with other government customers, including pilot test experience. Seek input from colleagues who have worked with them.

- **Verify cybersecurity maturity.** Look for FedRAMP certification to verify the startup’s cybersecurity maturity. Checking their CJIS and HIPAA compliance will ensure their solutions are designed to ensure data security in law enforcement and/or protect patients’ healthcare data.

- **Get in early.** Newer startups often have more flexibility to customize solution designs and are eager to cultivate mutually beneficial relationships.

- **Conduct a pilot. Starting with a pilot is a low-risk way of identifying potential issues and determining whether the startup is a good fit.**

- **Streamline procurement.** Ensuring that software-as-a-service (SaaS) purchases conform to the organization’s procurement codes can be a lengthy process. To streamline procurement and reduce risk, work with vendors that make their solutions available through newer platforms that shorten the procurement process. For example, [AWS Marketplace](#) simplifies procurement by offering standardized license terms, custom terms and pricing options, cost management tools for budgeting and visibility, and procurement system integration to centralize the procurement workflow. These features make SaaS procurement significantly faster.

Chart a clear course

Once you’ve selected a startup, there are several best practices to help ensure a successful collaboration:

- **Clarify expectations.** Ask when to expect results and what metrics will be used to evaluate success. Determine which stakeholders need to be involved and for how long.

- **Assess internal resources and capacity.** Be realistic about whether your organization has the internal resources to support the project — both in terms of time and skills.

- **Designate a single point of contact within your organization.** This person keeps the project on track by fielding questions promptly, ensuring the right people are involved in decision-making, and acting as a single voice of authority.

- **Establish a cadence of accountability.** At a minimum, set up weekly check-ins where team leaders report to the executive team on project progress and challenges.

Reach new heights

GovTech startups help state and local governments better serve constituents by pursuing innovation, accelerating transformation, and responding more nimbly to unexpected events. The key is finding the right startup. AWS GovTechStart helps by providing an essential link between government organizations and early-stage companies, enabling the public sector to achieve its mission in dynamic and cost-effective new ways.

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