

Chairman Merrin, Vice Chair LaRe, Members of the Committee:

Thank you for the invitation to testify today. My name is Brad Hoffman and I oversee the state and local business for Google Cloud in our central region which includes Ohio.

Google Cloud is committed to investing in the US and our government partners. Combined with our R&D investments, Google's parent company Alphabet was the largest investor in the U.S. last year (according to a report from the Progressive Policy Institute). We are proud of our significant investments here in Ohio including our office in Cincinnati- where we have been since 2014. Just last year, Google helped provide \$8.31 billion of economic activity for over 34,000 Ohio businesses, publishers, nonprofits, creators, and developers. Additionally, we recently announced a \$600million investment in a New Albany data center - where we have partnered with AEP energy to ensure our facility will be matched with 100% renewable energy. We look forward to further strengthening ties in Ohio by creating more jobs, servicing more customers (including state and local government agencies), creating economic opportunity, and ensuring Ohio can be one of the world's engines of the internet.

Everywhere we invest, we strive to create meaningful opportunities for local communities and provide support in times of crisis such as this pandemic. In response to COVID-19, Google has partnered closely with your Department of Health helping your 112 local health districts monitor and analyze the progression of COVID-19 and communicate critical information to constituents. The application we deployed in March is the frontline tool fighting Covid 19 in your communities.

This pandemic has highlighted the important work governments do in protecting our health, jobs and financial security. The pressure on health, unemployment and other social services is greater than ever; government agencies are faced with the challenge of how to scale quickly and improve systems to meet unprecedented demand. At Google Cloud, we are excited about our new focus on supporting public sector partners and offering Ohio state government access to the innovative and secure infrastructure that powers our consumer business. We are committed to providing modern technology solutions that support the work being done by your state and local agencies.

Despite pushing the systems your constituents rely on to their limits to provide those essential services critical at this moment, they are failing to meet the current demands which has highlighted the importance of cloud services, like those of Google Cloud, to enable scalability, reliability and security. There is an opportunity for the Ohio state government to quickly embrace cloud services to meet the needs of today's crisis, while ensuring cost-effective and nimble solutions are in place for the future.

Google helps agencies identify issues and vulnerabilities and map out solutions that can be deployed swiftly, securely and efficiently. Every state's needs and existing technology are different. We are not currently working with the Department of Job and Family Services (JFS)

today, so what we can provide here are examples of how we assist other states addressing the massive influx of unemployment claims. There are three primary areas: elasticity, speed, and the use of artificial intelligence to address constituent inquiries.

1. Elasticity: There are 11 applications on earth that have over 1 billion active users. We operate 9 of them; we know a thing or two about scalability. The way nearly all government systems were built in the past, and unfortunately in many cases are currently being modernized, is with outdated architectural principles. Systems are built large enough to ensure the largest load the builders can imagine will be addressed. Once the ceiling is reached, adding capacity is difficult, time consuming and expensive. Also, consider that any cost for capacity added for a brief increase in load will have to be depreciated over the life of the equipment. You have likely heard people talk about adding servers? Our modern cloud native applications are what we call, “serverless” meaning they can expand and contract massively allowing our customers to pay for only the power they use by the microsecond. The technologies we have developed to address the challenges of global scale are the de facto industry standard for modern application design. Because we allow our customers to develop in nearly any modern code, they enjoy the freedom to move their workload from on-premise to Google Cloud or any other commercial cloud. This serverless platform enables much faster application improvements which leads me to the second area.
2. Speed and Agility: We are improving existing systems at a speed that is unheard of in the public sector. Using similar methodologies we use for development of Maps, YouTube, Search and Gmail, we are making it easier to process claims and allowing unemployment systems to be more mobile and user friendly...without taking several years and spending tens of millions of dollars. The applications we develop are extremely sound. We are the webpage people check first to see if the internet is up. Six weeks ago, the State of New York was struggling with their Pandemic Unemployment Assistance (PUA) site when we were asked to step in. In a matter of days we had completed a front end application portal allowing citizens the ability to complete the application process to the tune of 100,000 per day. Three weeks later we had successfully connected the new PUA to the existing system. Our performance in New York has been widely viewed as disruptive to the industry and will be a precursor to more public sector systems being reimaged from end to end as more agile, faster to market, constituent friendly and significantly less expensive.
3. Address Constituent Inquiries: We are making sure citizen questions get answered. No one answers questions like Google - this is at the core of what we do. Google’s mission statement is “to organize the world's information and make it universally accessible and useful.” We are ensuring more phone calls, emails, and web inquiries are responded to accurately for several unemployment systems in the US. We do this by using artificial intelligence and its sub-discipline, machine learning, otherwise known as AI/ML. AI/ML models depend on massive compute infrastructure, which Google has.

AI is not easy and who you do it with is as important as how you choose to deploy it. For example, if you ask the current chatbot on the JFS site, “where is my check” or “what is the best time to call” you will be answered with, “Unfortunately, I am not able to find an answer for that question.” followed by “Was this helpful?” Ask the same two questions on the chatbot on the Illinois' Department of Employment Security (IDES) site and you will receive well formed and complete answers to the questions. The reason is IDES is powered by Google's advanced machine learning algorithm. In IL we answer 400,000 questions a day in 150,000 unique interactions. Our virtual agents answer 40,000 calls per night during after hours. Our goal is not to deflect constituent inquiries, but rather to address them completely at massive scale, whether that be resetting PINs or helping folks check on the status of their claim. Other states are implementing our virtual agents to be the front line in addressing and sorting all calls made regarding unemployment insurance claims.

Google's culture of innovation allows us to pivot quickly to meet the changing state needs and also efficiently modernize or in some cases completely reimagine constituent facing systems

Unfortunately, this trend of state unemployment systems being overwhelmed is something we expect to spill over to other social services as we all work our way back from the economic impacts of this pandemic. Google is also helping other states to enhance downstream benefit platforms like Medicaid, SNAP, TANF and child welfare programs that we expect to see similar unprecedented loads.

We encourage some degree of reprioritization of ongoing enterprise IT projects. Public cloud services should be an essential part - both from a functionality and a cost perspective - of your road to recovery. For example, establishing virtual career centers streamlining antiquated business development and employment web pages to assist Ohio citizens and businesses get back to work quickly.

Finally we wish to sincerely thank you again for the opportunity to address you today. Google stands at the ready to assist Ohio. We are committed to supporting your recovery efforts. I am looking forward to answering any questions you may have.