# SOFTWARE UPDATE REQUIRED: COVID–19 EXPOSES NEED FOR FEDERAL INVESTMENTS IN TECHNOLOGY

## HEARING

BEFORE THE

## COMMITTEE ON THE BUDGET
## HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

HEARING HELD IN WASHINGTON, D.C., JULY 15, 2020

**Serial No. 116–29**

Printed for the use of the Committee on the Budget

Available on the Internet:
*www.govinfo.gov*

U.S. GOVERNMENT PUBLISHING OFFICE
42–321 WASHINGTON : 2020

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# SOFTWARE UPDATE REQUIRED: COVID–19 EXPOSES NEED FOR FEDERAL INVESTMENTS IN TECHNOLOGY

**WEDNESDAY, JULY 15, 2020**

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
*Washington, D.C.*

The Committee met, pursuant to notice, at 2:07 p.m., via Webex, Hon. John A. Yarmuth [Chairman of the Committee] presiding.

Present: Representatives Yarmuth, Moulton, Higgins, Schakowsky, Kildee, Panetta, Morelle, Horsford, Scott, Jackson Lee; Woodall, Johnson, Flores, Meuser, Crenshaw, and Burchett.

Chairman YARMUTH. This hearing will come to order.

Good afternoon, and welcome to the Budget Committee's hearing entitled Software Update Required: COVID–19 Exposes Need for Federal Investments in Technology.

I want to welcome our witnesses who are here with us today. At the outset,—I ask unanimous consent that the Chair be authorized to declare a recess at any time to address technical difficulties that may arise with such remote proceedings.

Without objection, so ordered.

As a reminder, we are holding this hearing virtually in compliance with the regulations for committee proceedings pursuant to House Resolution 965. First, consistent with regulations, the Chair or staff designated by the Chair may mute participants' microphones when they are not under recognition for the purposes of eliminating inadvertent background noise.

Members are responsible for unmuting themselves when they seek recognition or when they are recognized for their five minutes. We are not permitted to unmute Members unless they explicitly request assistance. If I notice if you have not unmuted yourself, I will ask if you would like the staff to unmute you. If you indicate approval by nodding, staff will unmute your microphone. They will not unmute you under any other conditions.

Second, Members must have their cameras on throughout this proceeding and must be visible on screen in order to be recognized. As a reminder, Members may not participate in more than one committee proceeding simultaneously.

Finally, to maintain safety in light of the Attending Physician's new guidance, any Members present in the hearing room—must wear a mask at all times when they are not speaking. Those Members not wanting to wear a mask, the House rules provide a way

to participate remotely from your office without being physically present in the hearing room.

Now I will introduce our witnesses.

This afternoon, we will be hearing from Ms. Teresa Gerton, president and CEO of the National Academy of Public Administration; Ms. Jennifer Pahlka, founder of Code for America and cofounder of U.S. Digital Response; Ms. Rebecca Dixon, executive director of the National Employment Law Project; and Dr. Robert Wah, a physician leader in healthcare and technology.

I will now yield myself five minutes for an opening statement.

It is appropriate that today, on our postponed tax day, we are discussing how our nation's outdated information technology systems have failed to meet the needs of the American people. Rash funding cuts over the past decade have prevented the IRS from modernizing its IT systems, deteriorating the agency's ability not only to carry out its core function of tax collection and enforcement, but also needlessly prolonging the delivery of stimulus payments to workers and families during the coronavirus pandemic and recession.

The pandemic has proved that the quicker the response, the better the outcome, and that the steps taken by Congress to help American workers and families are only as effective as the agencies delivering that relief. Unfortunately, the IRS is not alone in its inability to meet the needs of the American people in these perilous times.

Instead of helping to generate much needed solutions, outdated IT systems are worsening an already difficult situation as Americans grapple with unreliable or insufficient internet access, useless automated systems, and overwhelmed and underprepared agencies. Emergency assistance programs across the board have been hampered by our antiquated IT systems, leaving families with delayed relief or no relief at all.

The most glaring example is unemployment assistance. We are four months into the worst economic downturn since the Great Depression, and there are still tens of thousands of workers who have filed for jobless claims but have not yet received a single payment. Many are going into debt or default, skipping meals, or losing their homes.

State unemployment offices, already underfunded and understaffed, were left completely unprepared for the massive influx of need, and the big reason for that is the fact that the national—administrative funding essentially is the same as it was in 2001, and that is before accounting for inflation.

This lack of federal investment, combined with old hardware, crashing web services, and the need for new hires proficient in COBOL, their systems' 60-year-old coding language, have left states scrambling. The antiquated IT systems failed and continue to fail repeatedly. American workers, those who lost their jobs through no fault of their own, are paying the price.

This aspect of our ongoing crisis is not new. The federal government has long sought to prioritize modern, secure, and shared IT solutions, but funding uncertainties stemming from constrained discretionary funding under budget caps, shutdown threats, and continuing resolutions have made agencies more likely to update

instead of modernize. And I might add, after reading today's testimony, that it may be—another factor may be a flawed philosophy of how to handle the whole data management system.

GAO reports that while the total share of federal IT spending is increasing, it isn't because we are investing in better and new technology; it is because the price of updating our existing systems is snowballing as our ancient software becomes increasingly outdated and hardware parts nearly impossible to find. We are passing these acute problems on to state and local partners that distribute unemployment insurance, nutrition assistance, and other support to workers and families on behalf of the federal government.

Federal and state governments are in dire need of solutions and investments now. We cannot foster a successful recovery while relying on IT systems from the 1950's. We cannot meet the demands of today when we are depending on software that is older than some Members of this Committee.

To date, Congress has passed legislation that includes $1 billion in grants to state unemployment offices to help process claims faster, and more is needed.

By refusing to bring the Heroes Act to the floor, Leader McConnell is holding up an additional $1 billion for the Federal Technology Modernization Fund and a combined $5.5 billion to help schools, libraries, and impacted families access high-speed connectivity and devices to facilitate distance learning, something we must prioritize in order to protect our children and educators.

Earlier this month, House Democrats passed the Moving Forward Act, a comprehensive infrastructure package that includes $100 billion in broadband funding to extend high-speed internet to underserved and hard to reach communities.

We have to invest in modernization now so that the federal government can help provide workers, families, and state and local governments with the necessary tools and resources to support our nation's recovery act efforts. I look forward to discussing this urgent need with our witnesses.

I now yield five minutes to the Ranking Vice Chair, Mr. Johnson of Ohio.

[The prepared statement of Chairman Yarmuth follows:]

**Chairman John A. Yarmuth**
**Hearing on Software Update Required:**
**COVID-19 Exposes the Need for Federal Investments in Technology**
**Opening Statement**
**July 15, 2020**

It's appropriate that today, on our postponed Tax Day, we are discussing how our nation's outdated information technology systems have failed to meet the needs of the American people. Rash funding cuts over the past decade have prevented the IRS from modernizing its IT systems, deteriorating the agency's ability to not only carry out its core function of tax collection and enforcement, but also needlessly prolonging the delivery of stimulus payments to workers and families during the coronavirus pandemic and recession.

The coronavirus pandemic has proved that the quicker the response the better the outcome – and that the steps taken by Congress to help American workers and families are only as effective as the agencies delivering that relief. Unfortunately, the IRS is not alone in its inability to meet the needs of the American people in this perilous time.

Instead of helping to generate much-needed solutions, outdated IT systems are worsening an already difficult situation as Americans grapple with unreliable or insufficient internet access, useless automated systems, and overwhelmed and underprepared agencies. Emergency assistance programs across the board have been hampered by our antiquated IT systems – leaving families with delayed relief or no help at all.

The most glaring example is unemployment assistance. We are four months into the worst economic downturn since the Great Depression, and there are still tens of thousands of workers who have filed for jobless claims but have not yet received a single payment. Many are going into debt or default, skipping meals, or losing their homes.

State unemployment offices, already underfunded and understaffed, were left completely unprepared for the massive influx of need. And a big reason for that is that fact that national administrative funding is essentially the same as it was in 2001 – and that's *before* accounting for inflation.

This lack of federal investment combined with old hardware, crashing web servers, and the need for new-hires proficient in COBOL – their systems' 60-year old coding language – have left states scrambling. Their antiquated IT systems failed and continue to fail repeatedly – and American workers, those who lost their jobs through no fault of their own, are paying the price.

This aspect of our ongoing crisis is not new. The federal government has long sought to prioritize modern, secure, and shared IT solutions, but funding uncertainties – stemming from constrained discretionary funding under budget caps, shutdown threats, and continuing resolutions – have made agencies more likely to update instead of modernize. GAO reports that while the total share of federal IT spending is increasing, it isn't because we are investing in better and new technology. It's because the price of updating our existing systems is snowballing as our ancient software becomes increasingly outdated and hardware parts nearly impossible to find.

We are passing these acute problems on to state and local partners that distribute unemployment insurance, nutrition assistance, and other support to workers and families on behalf of the federal government.

*Federal and state governments are in dire need of solutions – and investments – now.* We cannot foster a successful recovery while relying on IT systems from the 1950s. We cannot meet the demands of today when we are depending on software that is older than some Members of this Committee.

To date, Congress has passed legislation that includes $1 billion in grants to state unemployment offices to help process claims faster, more is needed.

By refusing to bring the Heroes Act to the floor, Leader McConnell is holding up an additional $1 billion for the federal Technology Modernization Fund and a *combined $5.5 billion* to help schools, libraries, and impacted families access high speed connectivity and devices to facilitate distance learning – something we *must prioritize* in order to protect our children and educators.

And earlier this month, House Democrats passed the Moving Forward Act, a comprehensive infrastructure package that includes $100 billion in broadband funding to extend high speed internet to underserved and hard to reach communities.

We have to invest in modernization now, so that the federal government can help provide workers, families, and state and local governments with the necessary tools and resources to support our nation's recovery efforts. I look forward to discussing this urgent need with our witnesses.

Mr. JOHNSON. Well, thank you, Mr. Chairman, and thank you for holding this important hearing. And a special thanks to our witnesses for joining us today.

You know, as an information technology professional with over 30 years in the industry, I understand just how important IT is in today's digitally connected world, and there is no doubt that the coronavirus pandemic has demonstrated the need for workers, businesses, and students all across America to have reliable access to the internet. And these networks must be secure. Instances of Zoom bombing cannot become commonplace in our children's online classrooms, nor can businesses operate on hacked systems.

In areas such as eastern and southeastern Ohio, other rural parts of the country, the coronavirus has emphasized the need for broadband internet access, period. Our students in rural Appalachia are not, for example, able to take advantage of e-learning because they simply don't have access to the internet.

I have even heard horror stories from local teachers having to teach their classes remotely from their cars parked in a McDonald's parking lot because they don't have access to internet at home. While I applaud their dedication to their students, I am simultaneously frustrated by the lack of progress we have made on solving the digital divide.

It is also imperative that federal information technology systems are safe, secure, and reliable. Federal workers, many of whom have been working remotely the last several months, often handle sensitive or classified data. It is vitally important that we have procedures in place to ensure that only authorized personnel have access to such data so that we can prevent exposure of personally identifiable data and avoid greater national security risks.

And we have seen how the coronavirus has heightened our awareness of just how fragile our supply chains are, including our reliance on other countries for critical items, including the dangers of companies controlled by our adversaries that are equipping our networks. We must ensure that companies like Huawei and ZTE no longer have access to our networks.

While these concerns call for federal assistance for efforts such as rip-and-replace programs, the federal government should also leverage American ingenuity. I have often said technology industries have, in part, been so successful because the federal government can never find a way to regulate them.

Public-private partnerships and investments in tech startups here at home can be more cost effective and, in the long run, more advantageous in terms of providing methodologies for advancing needed IT solutions. America has always been and must continue to be the frontrunner in technological innovation.

Information technology crosses every sector of our economy, and investments in IT can drastically improve our way of life by creating efficiency, providing access to an ever increasing digital global economy, lifesaving medical treatments, motor vehicle safety, advanced weapons systems to provide our national security, and countless other solutions to problems that we haven't even begun to realize yet.

However, we must ensure that federal funds are used efficiently and transparently, particularly when it comes to IT. We have seen

far too many instances of the federal government throwing money at a problem instead of investing in carefully detailed and proven solutions. One example of this occurred at the VA back in 2012. Then VA Secretary Shinseki's main objective was creating an electronic health record, yet his top IT adviser could not show me a graphic of the Department's IT architecture.

If a federal agency can't show Congress exactly where the IT funding would be going, how the systems connect, how the IT investments would enable the agency to further its main missions, then we shouldn't be supporting and increasing in an IT's—in an agency's IT budget.

There is no question that federal funding for IT modernization is important, but many challenges of IT modernization efforts have included missed deadlines, cost overruns, and the abandonment of failed programs, not to mention a lack of transparency.

Federal IT programs are important, but Congress must focus on reining in auto-pilot spending, while prioritizing limited discretionary resources on federal IT investments that demand agency accountability, efficiency, and ultimately successful execution.

I look forward to hearing from our witnesses on this important topic.

Mr. Chairman, thanks again for this hearing, and I yield back.

Mr. Chairman, you are muted.

[The prepared statement of Bill Johnson follows:]

BUDGET | HOUSE BUDGET REPUBLICANS

**VICE RANKING MEMBER BILL JOHNSON'S (R-OH-6) OPENING REMARKS:**

Hearing: *"Software Update Required: COVID-19 Exposes Need for Federal Investments in Technology"*

July 15, 2020

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*(As Prepared for Delivery)*

Thank you, Mr. Chairman for holding this important hearing, and thank you to the witnesses for joining us today.

As an information technology (IT) professional with over 30 years in the industry, I understand just how important IT is in today's digitally connected world. There is no doubt that the coronavirus has demonstrated the need for workers, businesses, students to have reliable access to the internet. And, these networks must also be secure. Instances of "zoom bombing" cannot become commonplace in our children's online classrooms, nor can businesses operate on hacked systems.

In areas such as Eastern and Southeastern Ohio, the coronavirus has emphasized the need for broadband internet access period. Our students in rural Appalachia are not able to take advantage of e-learning. I've even heard stories of local teachers having to teach their classes remotely in their cars from a McDonald's parking lot because they don't have access to internet at home. While I applaud their dedication to their students, I'm simultaneously frustrated by the lack of progress we've made on solving the digital divide.

It is imperative that federal IT systems are safe, secure and reliable. Federal workers, many of whom have been working remotely the last several months, often handle sensitive or classified data. It is vitally important that we have procedures in place to ensure that only authorized personnel have access to such data to prevent exposure of personally identifiable data (PII) and greater national security risks.

We've seen how the coronavirus has heightened our awareness of just how fragile our supply chains are and our reliance on other countries for critical items, including the dangers of companies controlled by our adversaries equipping our networks. We must ensure that companies like Huawei and ZTE no longer have access to our networks. While these concerns call for federal assistance for efforts such as "rip and replace" programs, the federal government should also leverage American ingenuity.

I've often said, technology industries have, in part, been so successful because the federal government never found a way to regulate them. Public-private partnerships and investments in tech startups here at home can be more cost-effective, and in the long run, more advantageous in terms of providing methodologies for advancing needed IT solutions.

America always has been, and must continue to be, the frontrunner in advancements in technology. Technology crosses every sector of our economy; and investments in IT can drastically improve our way of life – by creating efficiency, providing access to a global economy, lifesaving medical treatments, motor vehicle safety, advanced weapons systems to provide for our national security, and countless other solutions to problems we have yet to even realize.

However, we must ensure that federal funds are used efficiently and transparently, particularly when it comes to IT. We've seen far too many instances of the Federal government throwing money at a problem instead of investing in carefully detailed and proven solutions. Once example of this occurred at the VA: back in 2012, then-VA Secretary Shinseki's main objective was creating an electronic health record, yet his top IT advisor couldn't show me a graphic of the Department's IT infrastructure. If a federal agency cannot show Congress exactly where the IT funding would be going, how the systems connect, and how the IT investments would enable the agency to further its main mission, then we should not be supporting an increase in an agency's IT budget.

There is no question that federal funding for IT modernization is important, but many challenges of IT modernization efforts have included missed deadlines, cost overruns, and the abandonment of failed programs - not to mention a lack of transparency. Federal IT programs are important, but Congress must focus on reining in autopilot spending while prioritizing limited discretionary resources on federal IT investments that demand agency accountability, efficiency, and ultimately successful execution.

I look forward to hearing from our witnesses on this important topic.

Mr. Chairman, I yield back.

Chairman YARMUTH. Thank you. See, they mute me too, automatically.

Anyway, thank you, Mr. Johnson, for your opening statement.

In the interest of time, if any other Members have opening statements, you may submit those statements electronically to the clerk for the record.

Once again, I want to thank our witnesses for being here this afternoon. The Committee has received your written testimony, and they will be made part of the formal hearing record. Each of you will have five minutes to give your oral remarks. As a reminder, please unmute your microphone before speaking.

Ms. Gerton, you will be recognized first for five minutes. Please unmute your microphone. You may begin when you are ready.

## STATEMENTS OF TERESA GERTON, PRESIDENT AND CEO, NATIONAL ACADEMY OF PUBLIC ADMINISTRATION; JENNIFER PAHLKA, FOUNDER, CODE FOR AMERICA, AND CO-FOUNDER, U.S. DIGITAL RESPONSE; REBECCA DIXON, EXECUTIVE DIRECTOR, NATIONAL EMPLOYMENT LAW PROJECT; AND ROBERT WAH, MD, PHYSICIAN LEADER IN HEALTHCARE AND TECHNOLOGY

### STATEMENT OF TERESA GERTON

Ms. GERTON. Thank you, Chairman Yarmuth, Ranking Member—Vice Chair Johnson, and Members of the Committee. I appreciate the opportunity to testify today.

I am a fellow of the National Academy of Public Administration and have served as its president and chief executive officer since January 2017. Established in 1967 and chartered by Congress in 1984, the Academy is an independent, nonprofit, and nonpartisan organization with a proven record of improving the quality, performance, and accountability of government at all levels.

As the title of this hearing plainly states, the coronavirus pandemic has laid bare the challenging state of government IT systems at every level, but this is not a new problem.

In 2016, the Government Accountability Office identified the 10 oldest IT systems in the federal government. At that time, they included the IRS Individual Master File that receives taxpayer data and dispenses refund, the Department of Veteran Affairs Benefit Delivery Network that tracks benefit claims filed by veterans, and the Transportation Department's Hazardous Material Information System.

IT modernization has been on GAO's High Risk List for decades, and critical IT-related topics on the most recent list include the 2020 Census, DoD's business systems modernization, and the nation's cybersecurity.

This situation, though, does not surprise those in government who have been keeping these outdated systems operational through both extraordinary ingenuity and the electronic equivalent of baling wire and duct tape. But it does beg another question: If government officials know how close these critical systems are to failure, why haven't they fixed them before now?

As our government IT systems rely on programming language and hardware developed in the mid–20th century, our federal

budgeting and acquisition systems are equally archaic. In the simplest example, it is far easier to get budget authority to maintain those old COBOL systems than it is to procure an agile software development and sustainment contract that would deliver modern functionality, improve cybersecurity, and better citizen service.

Regarding acquisition practices, the federal acquisition regulation unrealistically categorizes all purchases as either supplies or services. This distinction, established decades ago, is too rigid to effectively procure modern technology solutions with evolving delivery models. It often leads to contracts that are neither optimized, nor appropriate for the solution being acquired.

Ironically, government bears an extra cost burden for such strategies because they must allocate expensive resources to maintain obsolete and inefficient solutions, which by any reasonable standard should have been rationalized and replaced long ago.

Institutionally, we approach IT as an overhead cost, always seeking to minimize it instead of seeing it as a fundamental tool in the 21st century that would deliver increased accountability, better outcomes, and improved citizen satisfaction.

In a recent attempt to address this situation, Congress authorized the Technology Modernization Fund in the Modernizing Government Technology Act of 2017. The TMF received $100 million in 2018 to fund modernization projects, $25 million in 2019, and an additional $25 million in Fiscal Year 2020, and yet Members of Congress remainskeptical of a revolving fund approach to IT investment.

The Academy recognized these challenges when we released last November our list of 12 grand challenges in public administration. Our list of grand challenges includes ensure data security and privacy rights of individuals and make government AI ready. We also established the Agile Government Center to assist government agencies with applying to their business practices the agile development processes that have made software development so rapid and responsive. We are currently developing proposed agendas in these and all 12 of the grand challenges, the drive change beginning in January 2021.

In our ongoing mission to promote best practices, the Academy has partnered with sponsors to cohost a monthly forum on shared services and quarterly forums on grants management and working capital fund management. Taken together, these three venues are helping managers across the federal government modernize their business practices and IT investment strategies to improve operations and reduce costs. They are making the improvements they can within the rules they currently operate under. But to really change the future, we must change the rules.

Today, the government has challenges with cloud procurement, but the market is constantly evolving. More things will be sold as a service in the future. And with enablers like quantum computing and machine learning, technology innovation will inevitably continue at an increased rate. We must be ready to effectively acquire the resultant solutions or risk failures in our support to our citizens and potentially catastrophic failures in our ability to govern.

The National Academy of Public Administration stands ready to assist in all of these efforts.

Mr. Chairman, that concludes my statement, and I would be pleased to answer any questions you or the Committee Members may have.

[The prepared statement of Teresa Gerton follows:]

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**Testimony**

**of**

**Teresa W. Gerton**

**President and Chief Executive Officer**

**National Academy of Public Administration**

**Before the**

**Budget Committee**

**U. S. House of Representatives**

**July 15, 2020**

Mr. Chairman and Members of the Committee, I appreciate the opportunity to testify today. I am a Fellow of the National Academy of Public Administration (the Academy) and have served as its President and Chief Executive Officer since January 2017. Established in 1967 and chartered by Congress in 1984, the Academy is an independent, non-profit, and non-partisan organization dedicated to helping government leaders address today's most critical and complex challenges. The Academy has a strong organizational assessment capacity; a thorough grasp of cutting-edge needs and solutions across federal, state, and local governments; and unmatched independence, credibility, and expertise. Our organization consists of over 900 Fellows—including former cabinet officers, Members of Congress, governors, mayors, and state legislators, as well as distinguished scholars, business executives, and public administrators. The Academy has a proven record of improving the quality, performance, and accountability of government at all levels, and expertise in the intergovernmental system is one of its most enduring characteristics.

I am pleased to offer the Academy's perspective on the need for a new federal approach to investment in information technology (IT). Our Congressional charter precludes the organization itself from taking an official position on legislation, and so my testimony today will reflect the Academy's history on this topic, its expectations for the future, and my own general recommendations.

**COVID-19 EXPOSES NEED FOR FEDERAL INVESTMENTS IN TECHNOLOGY**

As the title of this hearing plainly states, the coronavirus pandemic has laid bare the challenging state of government IT systems at every level. The lead stories highlighted the surprise that state unemployment insurance systems, written in COBOL, could not handle the surge in unemployment compensation claims, and that the IRS' check issuing system, also written in COBOL, struggled to meet the demands placed on it by the CARES Act. As many of you know, there are more federal IT employees over the age of 60 than under the age of 30. When major government systems are written in a programming language that was new in 1960, those who learned that language when they entered the workforce are exactly those who can still tend those creaky systems decades later.

In 2016, the Government Accountability Office identified the 10 oldest IT systems in the federal government. At that time, they included IRS' Individual Master File, the system that receives taxpayer data and dispenses refunds; the Department of Veterans Affairs' Benefits Delivery Network that tracks benefit claims filed by veterans; and the Transportation Department's Hazardous Materials Information System, used to track incidents involving hazardous materials. IT modernization has been on GAO's High Risk List for decades. Critical IT-related topics on the most recent list include the 2020 Census, DOD's Business Systems Modernization, and the nation's cybersecurity.

While the average citizen may be surprised to learn about the risks inherent in the government systems on which they depend, it does not surprise those in government who have been keeping these outdated systems operational through extraordinary ingenuity, ceaseless maintenance hours, and the electronic equivalent of "baling wire and duct tape." But that begs another

question—if government officials know how close these critical systems are to failure, why haven't they fixed them before now?

**FUNDING GOVERNMENT INVESTMENT IN INFORMATION TECHNOLOGY**

As our government IT systems rely on programming language and hardware developed in the mid-twentieth century, our federal budgeting and acquisition systems are equally archaic. Modern IT systems in most non-governmental organizations live in the cloud and are managed and sold as a service. Software is developed using agile methods that provide frequent incremental updates while always improving functionality. Software updates and cybersecurity protections are centrally applied and pushed to individual workstations. In the government, we still treat IT as a physical piece of hardware—a server or a mainframe—that we buy, maintain, and depreciate. Our linear IT acquisition processes reflect that appropriation focus on hardware. We rely on waterfall software development practices that deliver the perfect software program on a disk drive after a long sequential development process, only to find that the system is no longer useful because the world, and specific needs, changed in those intervening years—that software is "obsolete upon receipt". Institutionally, we approach IT as an overhead cost, always seeking to minimize it, instead of seeing it as fundamental tool in the twenty first century to increased accountability, better outcomes, and improved citizen satisfaction.

In the simplest example, it is far easier to get budget authority to maintain those old COBOL systems than it is to procure an agile software development and sustainment contract to deliver modern functionality, improved cybersecurity, and better citizen service. No wonder we are frustrated by the number of major IT acquisitions, costing billions of dollars collectively, that are started over and over, often modified, and seldom completed. The commercial IT world moves so much faster than our government procurement and management processes that it is difficult to keep up.

The Report of the Advisory Panel on Streamlining and Codifying Acquisition Regulations, commonly known as the "Section 809 Panel", released Volume 3 of 3 of its recommendations in January 2019. Recommendation 43 specifically addresses the procurement of consumption-based services such as cloud computing and gets directly to the core of the challenge:

> *The FAR unrealistically categorizes all purchases as either supplies or services. This distinction, established decades ago, is too rigid to effectively procure modern technology solutions with evolving delivery models. Solutions include hardware, software, and labor/services that together provide a seamless capability. Acquisition professionals struggle to determine whether certain solutions should be procured as a supply or a service, often leading to contracts that are neither optimized nor appropriate for the solution being acquired.*

In a recent attempt to address this situation, Congress authorized the Technology Modernization Fund (TMF) in the Modernizing Government Technology Act of 2017. The TMF received $100 million in FY 2018 to fund modernization projects, and another $25 million in FY 2019. The President's FY 2020 Budget requested an additional $150 million, but the TMF received only $25 million. By the end of 2019, the TMF had awarded nine projects worth a total of more than

$87.5 million. Those projects included modernizing the code base and accelerating the migration of five of Housing and Urban Development's most critical business systems from an on-premise mainframe database to the cloud ($13.85 million); enterprise cloud e-mail for the Department of Energy ($5.98 million), and a better and more complete Citizen Experience for America's farmers through Farmers.gov ($10 million). Every one of these projects will resolve a critical government vulnerability, and agencies who receive TMF funds are required to pay them back within five years. And yet, a 2019 GAO report found that the TMF is not collecting enough administrative fees to make it self-sustaining, and Members of Congress remain skeptical of a revolving fund approach to IT investment.

**GROWING CHALLENGES IN THE INFORMATION TECHNOLOGY ENVIRONMENT**

The world is not waiting on us to improve our funding and acquisition models. The coronavirus pandemic is an immediate challenge that has clearly shown that IT issues—including data privacy and security, artificial intelligence, integration of systems across multiple levels of government, remote work, and rapid flexible response—must be addressed as critical capabilities underpinning an effective national response to crisis.

The Academy anticipated these challenges when we released last November our list of twelve Grand Challenges in Public Administration. At the time, we described a compelling urgency for this agenda:

> *As the world moves quickly from the industrial age into the information age, new challenges have arisen and demands on government have increased. But the public sector has often been in a reactive mode—struggling to adapt to a rapidly evolving international, economic, social, technological, and cultural environment. Over the next decade, all sectors of society must work together to address the critical issues of protecting and advancing democracy, strengthening social and economic development, ensuring environmental sustainability, and managing technological changes. And governments at all levels must improve their operations so that they can tackle problems in new ways and earn the public's trust.*

Our list of Grand Challenges includes "Ensure Data Security and Privacy Rights of Individuals" and "Make Government AI Ready." We also established the Agile Government Center to assist government agencies with applying to their business practices the agile development processes that have made software development so rapid and responsive. These initiatives are described in more detail below.

*Ensure Data Security and Privacy Rights of Individuals*

In the digital age, the American people knowingly and unknowingly produce huge amounts of data on a daily basis, and governments at all levels increasingly rely on digital systems to manage their internal operations and deliver public services. Through widespread e-commerce, ubiquitous GPS maps, and regular social media interactions, the public transmits their sensitive financial, health, and other personal information through online platforms. Americans need

assurance that all sectors will keep their personal data private and safeguarded from abuse, but our data security infrastructure in both the public and the private sectors is vulnerable to exploitations, hacks, and breaches. With malevolent foreign intelligence entities, the hacking of public agencies, the infiltration of hostile agents in private organizations, and other dangers, the threat of data insecurity and exposure to breaches is real and immediate for governments, companies, and individuals.

Non-state cyber actors and nation-states have developed sophisticated mechanisms for exploiting the vulnerabilities of government systems. Not only do they steal information and money; they increasingly disrupt, destroy, or threaten the delivery of essential public services. For example, hackers have been targeting local governments for ransomware attacks, with important systems and data being blocked until a ransom payment is made. In the summer of 2019, a host of local governments—including Baltimore, MD; Albany, NY; Laredo, TX; and 22 small Texas towns—had their operations disrupted by such attacks. The City of Baltimore experienced a hack that prevented the locality from issuing health alerts and delayed water bill delivery. Similarly, the City of Atlanta's systems for police reports and employment applications were down for days due to a March 2018 cyberattack. State and county governments, school districts, hospitals, and court systems have also become common targets of ransomware attacks.

Over the next decade, technology will continue to evolve, and data security programs in both the public and the private sectors will face new vulnerabilities. Public agencies and administrators have a critical role in ensuring data security and privacy by:

- Establishing and enforcing the regulations regarding technology surveillance, non-consensual data collection, and commercial selling of individual data to private or public entities;
- Ensuring that the regulatory framework is informed by the careful consideration of the ethical aspects of data collection and dissemination;
- Making regulatory adjustments based on new technologies and other lessons learned;
- Ensuring that public agencies themselves only collect and maintain the minimal amount of data necessary to achieve their missions; and
- Developing a workforce with the core competencies to protect data systems, use data to strengthen operations, and improve services while safeguarding privacy and preventing breaches.

You can read more about "Ensure Data Security and Privacy Rights of Individuals" at https://www.napawash.org/gc/challenge/ensure-data-security-and-individual-privacy

*Make Government AI Ready*

Artificial Intelligence (AI) allows computerized systems to perform tasks traditionally requiring human intelligence: analytics, decision support, visual perception, and foreign language translation. AI and Robotics Process Automation (RPA) have the potential to spur economic growth, enhance national security, and improve the quality of life. In a world of "Big Data" and

"Thick Data," AI tools can process huge amounts of data in seconds, automating tasks that would take days or longer for human beings to perform.

The public sector in the United States is at the very beginning of a long-term journey to develop and harness these tools. Chatbots are being used in citizen engagement systems; AI technology is augmenting decision-making in the areas of cyber security monitoring, public policy modeling, database anomalies, and waste and abuse identification. AI system utilization can:

- Improve speed, efficiency, and effectiveness;
- Save scarce public funds;
- Reach quicker conclusions than humans;
- Transform public sector work life;
- Allow more time to be spent on core agency missions; and
- Facilitate the development and utilization of more personalized services to agency stakeholders.

At the same time, AI raises concerns about bias, security, transparency, and budget and procurement processes. With biased data, AI systems will produce biased results. Cybersecurity will be more important than ever to protect against malicious actors that, by taking over AI systems, could do significant damage very quickly. Without transparency, the public may be confused about how key decisions were made. And governments may need to revamp their budgeting and procurement processes to be able to quickly acquire and deploy advanced technologies.

To continue to develop AI systems, the federal government, in particular, must play a leading role by facilitating AI research and development and protecting the nation's AI technology base from adversaries and competitors. Accordingly, governments at all levels must work collaboratively to promote public trust in the development and deployment of AI tools; train an AI-ready workforce for both the public and the private sectors; and address the ethical concerns about AI's potential downsides in the areas of discrimination, civil liberties, and privacy.

Public agencies and administrators will be key in helping government become AI ready by developing new policies, systems, and processes to ensure that these systems can be harnessed to inform decision-making, provide insight on the public's needs and perspectives, increase public communications, and improve service delivery. Because governments will have far fewer employees performing data entry or other repetitious tasks, they will need to retrain employees and reshape their workforce to ensure it has the core competencies required to oversee, manage, and develop AI systems. And schools of public administration and public affairs will need to be more intentional about incorporating AI, along with related technical and data skills, into their core curriculum.

You can read more about Making Government AI Ready at
https://www.napawash.org/gc/challenge/make-government-ai-ready

*Agile Government Center*

The Agile Government Center (AGC) serves as the hub of a network that brings together governments, non-profits, foundations, academic institutions and private sector partners to assist in developing and disseminating agile government principles and case studies of agile policies and programs. This network is a source of assistance to those who want to adopt and implement agile to provide public goods and services that fully meet customer needs and build public trust.

The AGC is working with government organizations around the world to finalize and disseminate a set of Agile Principles for Government that will help agencies operate more flexibly and responsively. The current set of principles is provided below:

- **Mission.** Mission should be extremely clear, and the organizational unit/team laser-focused on achieving it.
- **Metrics for Success.** Metrics will be widely agreed upon, outcome-focused, evidence-based, and easily tracked.
- **Customer-Driven Behavior.** Customers should be part of the teams that design and implement agile programs. There will be continuous iteration and improvement based on customer feedback.
- **Speed.** Appropriate speed should be encouraged in order to produce quality outcomes and regulatory consistency and a clear focus on managing risks.
- **Empowered, Highly-Skilled, Cross-Functional Teams and Networks.** Team members should engage in continual face-to-face communication, replacing siloed bureaucratic systems and sectoral isolation. Networks should be invoked as a default for action.
- **Innovation.** Innovation should be rewarded, and rules and regulations that hinder problem solving should be examined and changed as necessary.
- **Persistence.** Persistence requires continuous experimentation, evaluation, and improvement in order to learn from both success and failure.
- **Evidence informed solutions.** Solid evidence should form the foundation for designing and implementing policy and program options.
- **Organizational leaders.** Leaders should eliminate roadblocks, aggregate and assume risks, empower teams to make decisions and hold them accountable, and reward good outcomes.
- **Diversity of thought.** Different viewpoints should be engaged in both identifying problems and crafting their solutions.

In addition to these ten principles, the AGC is developing and sharing case studies of agencies that have implemented agile practices. The case studies indicate that a transformation to agile business practices often begins with a transition to agile software development. Agencies then use these modern software practices, that have service to the customer as a central foundation, to

drive changes in their own business practices. As they leverage that customer-centric approach to change their business processes, they find that modern data sharing and security practices, AI and robotic process engineering, and interagency collaboration are essential to their success.

The Academy has also recently been commissioned by the Samuel Freeman Charitable Trust and the Project Management Institute to produce a white paper on how to increase the agility of the federal government. This work began in June 2020 and will conclude in December 2020. It focuses on the following issues:

- How would an agile federal government differ from current management practices?
- What are the issues and impediments to an agile federal government?
- Under what circumstances is it most appropriate for the federal government to become more agile? Are there circumstances when it would be inappropriate for the federal government to become more agile? If so, when?
- How should an agile federal government be promoted by central management agencies such as the Office of Management and Budget, the Office of Personnel Management, and the General Services Administration?
- How should the President's Management Agenda be used to promote an agile federal government?
- What specific implementation actions should federal departments and agencies undertake to make their organizations more agile?

The white paper will be both an agenda-setting document and a practical guide for policymakers. It will address these issues and (1) identify the issues and challenges, (2) develop innovative solutions and recommendations, (3) lay the groundwork for any needed legislative and administrative changes. The result will provide input to the Administration in 2021 as it develops the President's Management Agenda (likely to be released in 2022).

You can read more about the Agile Government Center at
https://www.napawash.org/grandchallenges/challenge/agile-government-center

**OPPORTUNITIES FOR CHANGE**

It is a truism that we should not waste the crisis induced by the coronavirus pandemic. Congress has already provided trillions of dollars to address urgent needs across the nation. Some of those funds went to government agencies to address immediate needs associated with support to telework for the federal workforce and to modernize systems and processes necessary to providing essential services. Nonetheless, future legislation could implement institutional and process reforms that could shape a different future for government services.

*Shared Services*

The Academy has partnered with the Shared Services Leadership Coalition (SSLC) and the Senior Executives Association (SEA) for the past couple of years to host a monthly forum that combines agency leaders across the federal government charged with implementing shared services within their agencies with industry experts to facilitate implementation. According to SSLC:

> *"Shared services" is a business model for delivery of common back office administrative services, e.g., human resources (HR), financial management (FM), purchasing, etc., and common mission-support services, e.g., geospatial services, in which customer organizations receive services from experienced third party providers with high capacity platforms who can serve multiple customers more cost effectively than individual customers can serve themselves.*

Over 50 government executives representing over 20 agencies are participating, and the agency leaders who have presented their challenges as cases studies have all received high value through practical feedback and are experiencing encouraging early results. Key topics addressed include how to use digital Human Resources (HR) solutions and how to get input from customers within the shared services context. We believe the Forum represents a breakthrough in effective problem-solving that can become a model for other modernization efforts.

The Office of Management and Budget (OMB) is in the process of identifying Quality Service Management Offices (QSMOs) in support of the Sharing Quality Services Cross Agency Performance (CAP) goal. OMB has formally designated three QSMOs, as of July 1, 2020:

- Department of Treasury—Core Financial Services
- General Services Agency—HR Transaction Services
- Department of Homeland Security—Cybersecurity Services
- Department of Health and Human Services—Grants Management (preliminary designation)

Shared services across the federal government or within a department offer a tremendous opportunity to simplify, consolidate, and modernize IT systems and structures in anticipation of reduced operating costs and improved services. However, while the expectation is that return on investment will be positive, there are initial investment costs that agencies often struggle to fund, along with perpetual operating costs for the servicing organization that do not fit neatly into government budget structures.

*Working Capital Funds*

Establishing functional working capital funds is an essential step in enabling effective shared services operations at the federal level. Agencies pursuing shared services currently struggle to adapt a myriad of financing options, including fee-for-service, franchise funds, in-agency discretionary funding, and direct appropriations to a shared

services mission, but none offer the long-term, sustainable, transparent structure of a working capital fund.

The Academy has, in partnership with Grant Thornton, hosted a quarterly Working Capital Fund Forum (WCFF) to help agencies plan for and implement WCFs in their organizations. WCFs provide authority, without fiscal year limitation, for expenses necessary to provide certain services and activities on a centralized basis. They provide agencies with a tool to finance and deliver common management and administrative functions in a centralized manner that promotes efficiency and cost effectiveness. They require full cost recovery and, in the process, require negotiated rates for services with customers to achieve that goal. In the process, customers are able to estimate their costs for the service and reflect those costs in their budget requests, while the service provider is able to plan to expected levels of demand and make the investments necessary to meet those demands at an appropriate level of quality.

A crucial feature of a WCF is that the service provider may reflect the depreciation expense associated with capital investment, including investments in IT capability and capacity, as a cost in their rate structure and seek reimbursement through that mechanism from their customers as opposed to requiring a direct appropriation for the investment.

A properly constructed WCF arrangement approximates an economic market where customers can compare prices and services and choose their provider based on their own performance objectives, and where providers are incentivized toward efficiency and effectiveness by that same market mechanism. In this way, service providers find it in their interest to implement and sustain modern and efficient IT systems that improve customer service, and the costs are dispersed over the entire customer base over many years.

*Sharing Data for More Effective Programs & Improving Grants Management*

Through sponsorship from Grant Thornton, the Academy also presents the Grants Management Symposium—a collaborative discussion series designed to foster knowledge sharing and problem-solving in the grants management community. The Grants Management Symposium aims to assist federal agencies in adopting more streamlined grants management approaches to help address common critical issues and problems. Specifically, it provides:

- Government to government exchange of best practices and lessons learned to address common challenges;
- Access to broad audience of subject matter experts & thought leaders from the Academy, public and private sectors, policymakers, non-partisan non-profit State and Local organizations (i.e. the Big Seven), and OMB.
- A forum to influence and promote change, develop new methodologies and best practices, reduce inefficiencies, enhance grant outputs and improve Government ROI on financial assistance awards.

The federal government spends over $600 billion annually to improve the lives of individuals and families through health, income security, education, training and social services programs

administered by state and local governments and their non-profit partners. State and local governments are eager to build capacity to integrate and analyze data and evaluate what works in order to improve outcomes and cost-effectiveness. However, while some jurisdictions have made great strides in recent years, many are struggling to create modernized data infrastructure and processes that are essential to understanding the needs of their populations, targeting and coordinating services effectively, and continuously evaluating their strategies to inform improvements. The challenges they face are exacerbated by fragmented, uncoordinated federal policies and rules that, often unintentionally, reinforce program silos and compliance activity that impedes innovation and improvement.

At the federal level, funding and rules governing investments in data, analytical, and evaluation capacity of state, local and non-profit grantees are scattered across numerous federal agencies and levels of government. There is no institutionalized structure or process for collaborating across federal agencies, in consultation with state and local stakeholders, to devise coordinated, cost-effective strategies to strengthen grantee capacity. At the same time, there are several promising federal initiatives underway (e.g., the federal data strategy, results-oriented accountability for grants, improving the workforce through regional collaborations) that provide important building blocks for future collaborations to improve state and local capacity.

The recently enacted Foundations for Evidence-Based Policymaking Act charged OMB and federal agencies with strengthening capacity to harness federal data for research and evaluation using modern technology and new governance structures. To date, however, no Congressional committee, federal agency, or set of federal agencies has taken responsibility for helping states and localities develop commensurate capacity. Because every state and community has unique needs requiring tailored strategies, progress on pressing social challenges will remain elusive if they cannot access, integrate and analyze data on the populations they serve and evaluate which approaches work best.

The Grants Management Symposium has clearly demonstrated that information technology can be used to facilitate state and local innovations in data integration practices aimed at improving grant outcomes. The Reimagine HHS Initiative, for example, aims to put the users at the center of programs. Traditional approaches look at problems from the perspective of how to achieve organizational goals and priorities. Human-centered design looks at problems by first developing a deep understanding of users and designing services tailored to the users. This requires dedicated resources to support data collection, analysis, and evaluation. State and local governments struggle with expensive and duplicative data systems. The federal government should work to harmonize and centralize data systems to the extent possible and allow state and local governments to use sufficient resources from grants and other services to improve data collection, analysis, and evaluation.

**CONCLUSION**

The government's IT infrastructure is heavily dependent upon technologies that were invented in the mid-twentieth century. The coronavirus pandemic has made it abundantly clear that those systems pose extraordinary risk to government operations in a steady state environment, and they may fail catastrophically in a crisis. And yet, government budgeting rules and appropriation law have created IT acquisition challenges for almost as long as the term "IT" has existed.

Insufficient funding for capital improvements has forced agencies to repeat a cycle in which robust plans submitted with their budget requests have to be scaled back to align with the reduced funding amounts they eventually receive. Insufficient funding leads to implementation of sub-optimal solutions with limited impact on improving efficiency. Ironically, governments bear an extra cost burden for such strategies because they must allocate expensive resources to maintain obsolete and inefficient solutions, which by any reasonable business standard should have been rationalized and replaced.

To really change the future, we must change the rules. Today the government has challenges with cloud procurement, but the market is constantly evolving. More things will be sold as a service in the future. With enablers like quantum computing and machine learning, technology innovation will inevitably continue at an increasing rate. Given the economic, demographic, and social challenges facing this nation, the federal government must find new ways to invest in and to improve its effectiveness and efficiency to successfully meet the current and future demands of the American public. We must provide acquisition and sustainment flexibility that reflects what the commercial market is selling, and we must adapt our accounting and auditing rules to encourage, not discourage, the use of these flexibilities. We must be ready to effectively acquire and deploy modern technology solutions or risk failures in our support to our citizens, and potentially calamitous failures in our ability to govern.

I believe that the approaches outlined above could be the early steps of a new way of investing to ensure that our national system of government works better for all of us. The National Academy of Public Administration stands ready to assist in these efforts.

Mr. Chairman, that concludes my written statement, and I would be pleased to answer any questions you or the Committee members may have.

Chairman YARMUTH. Thank you, Ms. Gerton, for your testimony.

I now recognize Ms. Pahlka for five minutes. Please unmute your mic and proceed.

**STATEMENT OF JENNIFER PAHLKA**

Ms. PAHLKA. Thank you.

Chair Yarmuth, Ranking Member Womack, and Members of the Committee, I very much appreciate your inviting me here today to add my voice to this critical topic.

A common proverb tells us that the best time to plant a tree was 20 years ago, and the second best time is now. Now that COVID has thrown millions of Americans' lives into chaos and created unprecedented need for support, it is clear that the best time to modernize government services was 20 years ago.

We have largely failed to update our policies, processes, and technology to enable scalable, agile, human-centered services, and now we find that while Congress has the will to support the American people through this crisis, in too many areas the machinery of government just can't deliver.

Up to 15 million people have not received their stimulus checks. People who may have been exposed to the virus are not alerted quickly because too many counties still share data by fax machine. It is clear that the next best time to modernize our government is now.

We must invest in modernizing the technology that runs our services, but I am deeply concerned that the urgency of the moment will cause us to forget that we must also change how we make these investments. Now, more than ever we cannot afford to pour time, attention, and enormous sums of money into a process for building and buying software that hasn't worked for decades.

Let's take unemployment benefits. The state systems that deliver this service rely on a hodgepodge of legacy systems, and as has been already called out in this hearing, at their core, many of them still use mainframe systems running a programming language designed in 1959. We are asking this technology to be agile, handling now the demands of three programs with dependencies between each instead of one; we are asking it to scale, in some places to nine to 20 times the previous volume; and we are asking it to work for people, for the questions and processes to be clear so that applicants know how to answer them accurately without assistance, for the people who administer the program to be empowered to make decisions that get the benefit to those in need as fast as possible.

Neither the technology nor the policies were designed to be agile, scalable, or get to yes, and we have known this for decades.

Ten years ago, the National Association of State Workforce Agencies stated that most state IT systems cannot efficiently handle today's demands. Many states joined consortia to contract for new systems together. Some of these systems have been implemented in the states for which they were procured. Others are somewhere along in the 10-, 12-, even 15-year procurement and development cycles. Collectively, they have spent billions of taxpayer dollars, and, yet even the states that had supposedly modernized are struggling to respond to this crisis.

Modernization has largely failed in these cases and will continue to fail as long as these projects and others that support other very needed benefits follow the basic recipe of large, slow government procurement and development done in the conventional model. By definition, you cannot modernize if the project takes over a decade. By definition—excuse me,-and you cannot modernize by simply moving legacy policies and practices that have accumulated over decades to slightly less outdated technology platforms.

True modernization breaks down the silos between policy, technology, and other disciplines so that the service itself can be co-designed to work for its users and the people who administer in it. True modernization means that services provide real-time data about their usage, and that program administrators analyze that data to understand what is working, what is not working, and what can be done about it so that it can get constantly better.

These agile, human-centered models for developing government software systems work. When public servants are allowed to use them, these models reduce risk, and the projects that use them cost less and deliver results faster. These models are currently in use at all levels of government, at places like the United States Digital Service, GSA's 18F, Kessel Run at the Air Force, Defense Digital Service, the Centers for Medicare and Medicaid Services. Several states also have stood up their own digital service teams.

But the vast majority of government technology projects still do things the old way. Why? A common belief, or perhaps an excuse, is that Congress dictates the old model and will punish any deviation from how it has always been done. To fix this, Congress will need to be more than a checkbook. This body will have to become a staunch and visible ally of hybrid tech policy teams who practice agile development and user-centered design wherever they exist.

To use a metaphor beloved by my former boss, Todd Park, we need to stop arming the empire and start arming the rebels. Stop pouring millions of dollars into projects everyone knows will fail. Fund the USDS and the state digital services who can help others across government successfully implement these practices. This is not just the next best time to truly modernize government services; it is our last chance.

Thank you.

[The prepared statement of Jennifer Pahlka follows:]

TESTIMONY OF JENNIFER PAHLKA, FOUNDER OF CODE FOR AMERICA AND CO-FOUNDER OF U.S. DIGITAL RESPONSE
BEFORE THE COMMITTEE ON THE BUDGET, U.S. HOUSE OF REPRESENTATIVES
ON SOFTWARE UPDATE REQUIRED: COVID-19 EXPOSES NEED FOR FEDERAL INVESTMENTS IN TECHNOLOGY
JULY 15, 2020

Chair Yarmuth, Ranking Member Womack and Members of the Committee, I appreciate you inviting me here today to speak on this critical topic.

I have spent the past 10 years working with federal, state and local governments on their transition to effective delivery of services through technology and design as the founder and executive director of Code for America and also as the U.S. Deputy Chief Technology Officer. I had gotten used to how things work. In March of this year, when it became clear that COVID-19 was going to stretch the capacities of state and local government, I and several others started recruiting skilled tech professionals to work alongside government officials in an effort that became U.S. Digital Response, which has now helped over 60 state and local governments respond to the crisis at "the speed of need." This has once again given me the opportunity to see government technology and service delivery through the eyes of the uninitiated, and the question I am asked over and over again is, "Why does it work that way?"

U.S. Digital Response's tech volunteers ask the question out of genuine confusion and concern when they see how our government systems work. Many of our volunteers have spent their careers building the digital experiences we rely on today when we order and pay for goods and services, communicate with our friends and colleagues, or research a new topic. People use their products and processes every day with confidence. These are not whiz kids enamored with every latest gadget and fad. They are professionals who see technology as a way to serve vast numbers of people, humanely and effectively. They know that the trick with tech—and, coincidently, for a government of the people—is to get it to work for real human beings in all their glorious diversity. Agile, scalable, human-centered technology is important because it allows you to be responsive to changing conditions and human needs.

Changing conditions and acute human needs are why we are here today. A catastrophic event threatens the lives and livelihoods of millions and the only institutions with the ability to respond at this massive scale are governments. And yet we find that scaling up to meet the moment is exactly what American government at every level is struggling to do. Up to 15 million eligible people have not received their stimulus checks and, sadly, it's the least economically stable among us who are mostly likely to have been missed.[1] Families in need across the country are still waiting and wondering about their unemployment checks. Congress has pressed the gas

[1] https://www.newsweek.com/many-15-million-americans-could-still-missing-stimulus-checks-1512830

pedal all the way down, but the engine isn't revving the way we need it to and it looks like the hill we're climbing is only getting steeper. Why is this and what can be done?

First, I hope everyone here can relate to the stresses that government systems come under when asked to do 10 times the work they did before our current crisis. Yes, we can give them more resources, but new staffers must be trained, policies and procedures clarified and implemented, and these are not exactly normal working conditions; COVID-19 affects the offices assigned to dealing with the crisis in disruptive and challenging ways. We expect—and should expect—the human and procedural part of government systems to take some time to scale.

The part of these systems we expect to flex and scale quickly and efficiently is the technology, because that's what they do when we use them in our daily lives. But the technology most of our governments are using to help people access critical services is sorely outdated and lacks the capacity to do just that, for a number of reasons. We must invest in modernizing the technology that runs our services, but I am deeply concerned that the urgency of the moment will cause us to forget that **we must also change how we make these investments**. Now more than ever, we cannot afford to pour time, attention and enormous sums of money into a process for building and buying software that has not worked for decades.

Let's take unemployment insurance benefits. The state systems that deliver this service rely on a hodgepodge of legacy systems onto which websites have been bolted. As has been widely reported, at their core, many of them still use a mainframe system programmed in COBOL. COBOL is a programming language dating back to the 1970s, which means that it's doing a great job standing the test of time. If you're still driving a car from the 1970s, that means it was built to last and it's a classic! But you can't expect that car to suddenly get the gas mileage of a modern hybrid or electric car. At best, it's going to perform as it was designed to do decades ago.

We're asking that 1970s car to do quite a few new tricks today.

We're asking it to be **agile**: the pre-COVID unemployment system had a single application form, for conventional unemployment insurance, and a weekly certification form. Now there are three applications for three different unemployment programs, with dependencies between each, and all those changes must be reflected in the digital code that runs the system. More modern programming languages are designed for greater speed and flexibility and would make that task easier. But the bigger barriers to the quick adaptations we need are the shortage of COBOL programmers in the market and the fact that the code that runs these systems has evolved in archaeological layers over decades; as technology and policy have changed, they've been modified and hacked here and there to the point that a precious few long-standing employees know how these systems work. In some cases, no one at the Department of Labor or the vendor who provides the system actually knows how the system works anymore. It is very hard for systems to adapt quickly under these conditions.

We're asking our systems to **scale**: in one state, from about 6,000 inquiries a week before the pandemic to about 50,000 per week since, almost nine times the volume. If it were just a matter of processing checks, these legacy systems would perform reasonably well. But in one state that U.S. Digital Response worked with, only 33% to 50% of applications were automatically accepted or denied; up to 67% of applications required review and determination of next steps by a staff member. This large number of exceptions means not only that the load on the system is far greater, but it also illustrates how much the speed and quality of service delivery is a function of policy and process as much as technology. This is why we advocate for hybrid teams that include people who touch every aspect of the technology, design, policy, process and compliance working together to get the results we want. Technology, especially software that runs in the cloud, is uniquely capable of scaling up on demand, but when the process requires manual intervention that benefit disappears.

And we're asking it to **work for people**, for the questions and the process to be clear so applicants know how to answer them accurately without assistance, for the people who administer the program to be empowered to make decisions that get the benefit to those in need as fast as possible. That's hard to do when, as the director of Michigan's Unemployment Insurance Agency told *The New York Times*, these systems were "built to assume that you're guilty and make you prove that you're innocent," and partly as a consequence, pre-COVID-19, only one-in-four unemployed people in Michigan received benefits.[2]

Neither the technology nor the policies were designed for any of these things, and we have known this for decades. Ten years ago, the National Association of State Workforce Agencies (NASWA) stated clearly that "most state IT systems cannot efficiently handle today's demands" and detailed the skyrocketing costs that states pay: nine out of 10 states reported support costs that rapidly escalate every year.[3] Many states joined consortia to contract for new systems together, in the hopes of reducing the cost to each. Some of these projects have been implemented in the states for which they were procured; others are somewhere along in 10-, 12-, even 15-year procurement and development cycles. Collectively, they've spent billions of taxpayer dollars. And yet, when people started applying for unemployment at levels not seen since the Great Depression, even the states that had supposedly modernized struggled to respond.

Some say these projects were underfunded or that we wouldn't be in this position if modernization had started sooner. The reality is that neither of those would have helped much. As long as these projects follow the basic recipe of conventional government procurement and development, the result will be the same overscoped requirements documents, the same bidding rules that ensure the contract will go to the same vendors, the same disconnect from the policy teams that prohibits collaborative problem solving, and ultimately the same outcome.

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[2] https://www.nytimes.com/2020/04/30/upshot/unemployment-state-restrictions-pandemic.html
[3] http://www.itsc.org/itsc%20public%20library/NationalViewUI_IT%20Systems.pdf

Our mistake has been believing that we're funding "modernization" through projects that take over a decade to produce. We know technology moves too fast for something designed 10 years ago to be useful or cost efficient. Would you pay top dollar for a 12-year-old cellphone? More importantly, our world moves too fast—policies change, habits change and, as we're seeing acutely today, needs change. But our bigger mistake has been thinking we're funding modernization when we hire a vendor to take a spaghetti bowl of policy and process that's accumulated over decades and simply recreate it on slightly less outdated technology platforms without rethinking the design of the service itself. To truly modernize our services, we must not only use more current technology; **we must prioritize agility and human-centered design in both the development of our services and the services themselves.**

To get government tech right, we of course need to be able to procure more modern technology platforms. But that will be insufficient if we don't also do three things that support **agility and human-centered design.**

- The first is to break down the silos between policy, technology and other disciplines. Technology can't speed a process in which most cases must be handled manually, as I described above in the case of unemployment benefits under the CARES Act. A similar problem is that many states require applicants for Pandemic Unemployment Assistance (PUA) to apply for regular unemployment first, wait to receive their rejection, and only then apply for PUA. Tech, operations, policy and compliance staff must work together to solve these problems, and agile development models allow for this collaboration in ways that legacy models do not. We must even have digital professionals at the table when we craft policy; understanding how the service will be delivered is critical to getting the outcomes the policy seeks, especially now, as we face greater and greater needs and limited delivery capabilities. As the former head of the White House Domestic Policy Council Cecilia Muñoz has said, "Policy leaders must learn the skills of human-centered design, and technology must have a seat at the strategy table."

- The second is to encourage rapid prototyping and continuous development. Our legacy process involves a requirements gathering period that can take many years, followed by the development of a Request for Proposal that can be thousands of pages long, lengthy contracting and development periods, and then a move into what's called sustainment. This process may work for constructing buildings, but it's simply not how good software comes to life. It is better, faster and cheaper when interdisciplinary teams start small, build iteratively, work closely with the users of the software all the way through, and continuously update and improve the application.

- The third is to demand that all services provide real-time data about their usage and that human beings are assigned to looking at that data to understand what's working, what's not working and what can be done about it. When Code for America started working to decrease the participation gap in Supplemental Nutrition Assistance (SNAP) in California, our team found that the program leadership had very little insight into the

> reasons people tried to apply and couldn't, or applied but couldn't make it through the burdensome process despite being eligible. It wasn't that they didn't care; the systems they'd been given to manage eligibility and enrollment simply didn't provide that data, and what data they did get was usually months, if not years, old by the time they got it. Creating an online application that was simpler and easier to use had huge benefits for the people applying, but an equally important benefit was that the system was instrumented to allow decision-makers to see in near real-time where users got stuck and begin to fix those issues. This access to real-time data is part of what's needed as we deal with today's crisis.

These agile, human-centered models for developing government software systems work. When public servants are allowed to use them, these models have a far higher success rate, which is not difficult given that the legacy model has been estimated to fail 94% of the time. These new models reduce risk and the projects that use them cost less and deliver results faster. They are first and foremost designed around meeting the needs of the users of the system (both the public servants who administer these programs and the American public who use them), and secondarily around meeting the significant burdens of compliance that have been placed on them by this body and others over the years.

These models are currently in use at all levels of government, at places like the United States Digital Service, GSA's 18F unit, the U.S. Air Force's Kessel Run, the State of New Jersey's Office of Innovation and the Colorado Digital Service. This model was given the official stamp of approval by the Office of Management and Budget under Federal CIO Steve Van Roekel in the form of the Digital Services Playbook[4] after a group of people who practice this model helped rescue the embattled healthcare.gov site. This model is responsible for subsequent successes at the Department of Veterans Affairs (the new va.gov), the Federal Elections Commission, the Centers for Medicare and Medicaid Services, U.S. Citizenship and Immigration and dozens of other places.

It's why the Department of Defense turned to the Defense Digital Service when it needed a COVID-19 symptom tracking tool within a week[5]. Leadership knew they could deliver based on their track record of speed, quality and cost; in an environment where it routinely takes 12-18 months **after the project is complete** to get an authority to operate (ATO), DDS had just built a software application for a logistics workflow within 90 days and had it approved to launch in just over two weeks. These are not private sector practices that we naively hope will work in a government context; they are grounded in proven fundamental principles and adapted to work with our existing law, policy and regulation. The good news is that Congress doesn't need to pass a law to make these practices legal.

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[4] https://playbook.cio.gov/
[5] https://mysymptoms.mil/

However, despite the documented successes of this agile model, the vast majority of government technology projects still do things the old way. Why? For one, because while this isn't complicated (in fact, this way of doing things is much simpler) it is still very hard to do. It requires the support of leadership across silos, because technology, design, procurement and policy must work together as one team for this model to work. It requires the support of leadership because it looks very different in practice from how traditional acquisition occurs, and because of that, it makes stakeholders of all stripes nervous, and even threatened. Leadership at all levels and across many domains must be there to protect digital teams using this model from constant attacks.

It saddens me to report that when I ask defenders of the status quo why they won't support an agile model for a project, or even why they are actively undermining one to revert it to the old model, the most common answer is that Congress won't let them. I don't believe this to be true, but there is certainly a disconnect and an enormous fear of being seen to have broken protocol, even when that protocol is "how it's always been done" rather than defined by law. For example, it is perfectly legal to use Other Transaction Authorities (OTA) to support an agile procurement, but many contracting officers will refuse to do so out of fear that someone—anyone!—will say it was improperly used. The safer thing to do is to take the longer, more complex path and justify it by saying that any deviation in the model could result in being called before Congress. And no one wants to be called before Congress.

Congress can no longer be used as an excuse for holding back progress in our digital capabilities when the American people need government services to work better and faster than ever. To fix this, Congress will have to be more than a checkbook; this body will have to become a staunch ally of hybrid tech-policy teams who practice agile development and user-centered design, whether they exist in the USDS, GSA, federal agencies, the military, state agencies responsible for services, at new efforts like the State Software Collaborative at Georgetown's Beeck Center, or, even at vendors. It will have to visibly demonstrate support for agile projects, teams and practices, and back them even when they experience setbacks; small, visible failures early on are part of the process of learning, but can be weaponized by protectors of the status quo if those in charge allow it. In addition to rewarding the use of Other Transaction Authorities, Congress should double down on the tests it has currently authorized at the Department of Defense to let nine programs break free from "color of money" strictures and ensure no other agencies are forced to budget for software in ways that hold back critical progress.

Congress will have to also be a watchdog, but a different kind of watchdog. As we move from outdated development practices, Congress, Inspectors General, the Government Accountability Office (GAO) and others will have to reinvent oversight, changing assumptions (such as that more money is better for a project—we now know that something akin to the opposite is true) resetting expectations (expect working software much sooner and to fund continual iterative development rather than distinct build and sustain phases) and asking different questions.

Congress will have to stand up to the companies who benefit most from the status quo, as they have invested a lot in playing the game with today's rules. You will be told by lobbyists and others that terrible things will happen if we invest in governments' digital capacities and do things differently. The reality is that these companies will be fine. If we change the rules of the game, a few contracts will go to new players and some contracts will be smaller, but there will be more of them because there's so much work to be done. You need only to look around to see the needs! And the companies will adapt to the new rules. They'll be fine in this new world, but the American people will not be fine if we don't make these changes.

Most importantly, Congress needs to support different ways of building and buying software, and expanding government's core competency in digital delivery. We will always hire vendors but, today, we often don't even know what we really need when we contract. For example, states are still struggling to deliver on the CARES Act provided unemployment insurance, as applicants wait weeks and even months for their application to be processed. More legislation is on the way to dictate additional relief, current thinking would suggest more money for each of our 50 states to support the software systems that deliver unemployment and other benefits. Some of that funding is definitely needed, but it will cost much more if we ignore higher leverage opportunities. For example, while federal legislation dictates eligibility for each program, every state must figure out how to determine whether a given applicant is in fact eligible, which requires systems to verify their identity, validate their reported income, check on whether they've applied for or received benefits in another state and screen for fraud. This is not only a technology and data challenge that could be solved once for all states, it's also the single biggest cause of delay in receiving benefits, as each state bears the burden of proof. A state Department of Labor employee operates out of fear—much like the procurement officer who won't use an OTA—that someone will say that she has approved someone who was in fact ineligible. A central service for eligibility checks that also gives each state safe harbor to award benefits without repercussions if they use it would cut out weeks of delays in millions of cases around the country, much as E-Verify works at the federal level to allow employers to hire workers. Money is one resource; tech and service delivery insight and expertise is needed to surface and implement these kinds of interventions. Increasing funding for digital service teams like USDS will save millions, even billions of dollars in the long run, but more importantly, get help quickly where it's needed.

Change will not happen without leadership and political will. More funding that flows into the legacy model will get us more of the same. But if we recognize the need for real change, systemic change in which many stakeholders will need to play a part, and do the much harder work of building government's capacity for digital service delivery, protecting our nation's innovators instead of constantly letting them be crushed by a culture of fear, we can get the American people what they need. What Congress has already recognized they need—through services that are in fact, though you've been told you can never have all three—better, faster AND cheaper. Services that are flexible, scalable and designed to work for people. To do that, to use a metaphor beloved by my former boss, U.S. Chief Technology Officer Todd Park, you'll need to stop arming the empire and start arming the rebels. Stop pouring hundreds of millions of

dollars into projects everyone knows will fail. Fund the United States Digital Service and state digital services who can help others across the government ecosystem safely and successfully implement these practices. We have the know-how to make government effective and responsive. We need Congress's air cover to run the new playbook, so government gets ahead of needs, not woefully far behind.

A common proverb tells us the best time to plant a tree was 20 years ago, and the second best time is now. It is true that the best time to modernize government services was 20 years ago, because change of the kind we need will take time. We can and must move much faster in the development of digital services in order to succeed, but changing behavior across the vast landscape that is government is much harder than changing a rule. Which is why we must do it now.

Indeed, the tree is planted. Today, we are blessed to have some of the best digital professionals in the country already working for government at places like U.S. Digital Service. We have hundreds, even thousands, more waking up to the impact they can have by working with government through efforts like U.S. Digital Response, Code for America and others. More and more dedicated, passionate public servants want to truly serve the public by following the digital services model instead of the broken model that doesn't work. More and more examples of success exist to inspire them. But this tree is still a tiny sapling in a giant forest. It needs water and sunlight. It can only get them if our leadership is willing to clear some space.

Chairman YARMUTH. Thank you, Ms. Pahlka, for your testimony.

I now recognize Ms. Dixon for five minutes. Please unmute your mic and proceed.

Looks like you haven't, Ms. Dixon.

**STATEMENT OF REBECCA DIXON**

Ms. DIXON. Thank you, Chairman Yarmuth and Ranking Member Womack and Members of the Committee, for the opportunity to testify today. I am Rebecca Dixon, executive director of the National Employment Law Project, NELP.

The challenges facing workers seeking access to unemployment insurance payments is an issue that NELP has been working on for many years. I appreciate the Committee's work to ensure robust UI access for millions of workers and job seekers, especially underpaid Black, indigenous, Latinx people, and workers of color.

The current employment surge poses—unemployment surge poses an unprecedented challenge. Although new claims peaked at 6.6 million this week, this spring, states are still processing upwards of two million claims a week, which is twice the highest week in history. Workers are understandably frustrated.

During the course of this pandemic, it has been impossible to ignore the human suffering from workers unsuccessfully attempting to access UI. Entire online systems crashed in several states. Workers trying to contact the agency with questions about online applications have been unable to get through. Some report calling dozens of times a day. Claimants were confused about how to check the status of their claim and were left in limbo for weeks.

States had difficulty reprogramming their systems to provide expanded benefits. In some states, that took up to a month and a half to establish the online application process for the new pandemic unemployment assistance.

For underpaid workers, two months' delay can be the difference between surviving and losing everything. For example, Rheana from California was furloughed from a small event production company, that the industry won't return for a long time. She has already had to move to a cheaper apartment, gone through her entire life savings waiting for unemployment, and now is worried that she is going to lose her health insurance, home, car, and even ability to eat.

Meanwhile, the program has been especially important for workers of color. According to the CBO, 47 percent of workers receiving UI in July are workers of color. This includes 16 percent of Black workers, 14 percent of Latinx workers, 10 percent of White workers, and 14 percent of workers of other backgrounds.

Seven years ago, I wrote a report called Federal Neglect Leaves State Unemployment Insurance Systems in Disrepair, and, unfortunately, much of what I wrote remains true today.

Only 16 states have fully modernized their systems with the rest operating on, as others have mentioned, a COBOL mainframe. In addition, when states do not move to update these—do move to update these outdated systems, we have seen significant delays and service disruptions, breakdowns, backlogs, and delays.

It is also important to recognize that modernization is not a panacea and does not always mean progress. After all, Florida has,

quote, "modernized their system," but it was built on a foundation of public policy choices that were designed to limit access to UI.

Few people realize that Florida's catastrophically failed system was modernized with a consortium with Massachusetts and New Mexico. When the other states in the consortium ran into problems with user access, they went back to work with their vendor to improve their systems, and as a result, did not have the same results as Florida.

Michigan's IT system was also designed to fail. Its MiDAS system flagged more than 40,000 workers for fraud, and its accuracy was—it was 93 percent inaccurate. This is a really big penalty. In Michigan, four times the amount paid, plus 12 percent interest, and as a result, some claimants lost everything.

The new administration in Michigan has committed to improving these systems and now has shifted course and become one of the fastest states in terms of payment processing. We know that faster payment processing is possible for all states.

Congress must ensure that UI IT systems are functional and accessible. Specifically, NELP recommends funding modernization, requiring input from workers and advocates from beginning to end, and comprehensive user testing to ensure participation from Black people who face the most barriers and all communities of color.

We also want to include those who are on the other side of the digital divide, people with limited English proficiency, people with disabilities. DOL should also create a unit devoted to IT that can give states hands-on assistance in modernization, review contractor agreements, audit contractors where necessary, and require states to document contractor performance.

Creating a federal task force to evaluate program performance and recommend reforms, including compliance with civil rights laws. This task force would function to determine whether some parts of this system need to be federalized, would also have the authority to negotiate favorable terms with vendors, and take advantage of the government's ability to leverage cost savings and produce high-quality systems.

More broadly centered, customer-centered design and user experience testing is also a recommendation. There are widely accepted practices in the private sector that can be implemented here. Unemployed workers need 24/7 online access, mobile services, and they need their password reset protocols improved.

In closing, the crisis has highlighted gaping holes in accessing unemployment, but it has also created an opportunity. We can build a 21st century system that is nimble enough to handle disasters and designed to meet the needs of customers who are depending on access to UI.

Thank you.

[The prepared statement of Rebecca Dixon follows:]

NATIONAL EMPLOYMENT LAW PROJECT



**Testimony of Rebecca Dixon**
National Employment Law Project

# Software Update Required: COVID-19 Exposes Need for Federal Investments in Technology

## Hearing before U.S. House of Representatives

Committee on the Budget

July 15, 2020

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# From Disrepair to Transformation: How to Revive Unemployment Insurance Information Technology & Infrastucture

Thank you, Chair Yarmouth, Ranking Member Womack, and Members of the Committee, for the opportunity to testify today. I am Rebecca Dixon, Executive Director of the National Employment Law Project. The challenges facing workers seeking to access their unemployment insurance (UI) payments is an issue that NELP has been working to correct structurally for many years, and we continue to do so with a view toward long-term impact and with great urgency in light of the COVID-19 pandemic and long-predicted economic crisis. I appreciate the Committee's attention to making a commitment to meaningful changes that will help ensure robust access for the millions of workers and jobseekers in need of a critical lifeline—especially underpaid Black, Indigenous, and Latinx people, and workers of color.

## The Initial Federal Response to the Pandemic

While I am here today to take a critical look at the infrastructure challenges facing the UI system, it is important to first recognize the major impact of the measures promptly put in place by Congress to help protect unemployed and self-employed workers and their families, which include the $1 billion in state UI administrative funding provided by the Families First Coronavirus Response Act and the critical relief provided by the CARES Act, most notably the $600 boost in weekly unemployment payments and the creation of the Pandemic Unemployment Assistance (PUA) program for self-employed workers and others who do not qualify for regular state UI.

The state UI agencies have processed unemployment insurance for over 30 million workers as a result the federal administrative funding and the CARES Act programs, which has sustained many families hardest hit by the worst economic downturn since the Great Depression and provided the necessary consumption power to help prevent an even more severe economic collapse.

As the Economic Policy Institute recently reported, the $600 in weekly payments (called Pandemic Unemployment Compensation, or PUC) have increased incomes by $842 billion, which represents 14.6 percent of total wages and salary income (or seven times more than the prior record back in 2010).[1] As a result, the PUC program also has the potential to save millions of jobs across the states (ranging from over 800,000 jobs in California to almost 5,000 in Wyoming).[2] Thus, it is critically important that the Senate follow the lead of the House of Representatives and extend the $600 in PUC before it expires at the end of this month and continue the other CARES Act programs until the economy recovers.

## Unemployment Insurance Infrastructure in Need of Transformation

Since the start of the pandemic, crashing computer systems and slow claims processing have taken center stage as the struggling unemployment insurance (UI) information technology (IT) systems have proven the nation has not invested the resources needed to pay historically high levels of new claims in a timely manner. The personal computer and the smartphone were invented in the United States; now the government must channel ingenuity for the public good to ensure UI systems are not overwhelmed by the basic task of accepting claims. How did this happen, and what can we do about it?

Seven years ago, I wrote a NELP report called *Federal Neglect Leaves State Unemployment Systems in Disrepair*. Unfortunately, much of what I wrote remains true today. For example, I pointed out, "The neglected state of the UI system, which has been prominently featured in local press accounts across the country, harshly affects millions of unemployed workers and their families when hard times hit. Yet, the problem persists but has gained little attention from policymakers at the national level, where Congress and the executive branch determine the fate of the program." It is distressing that I could accurately write that same statement today about the system.

To make matters worse, as Dr. William Spriggs pointed out in his recent testimony to the House Oversight and Reform Committee's Select Subcommittee on the Coronavirus Crisis, the states slowest to set up the IT infrastructure to pay Pandemic Unemployment Assistance were more often states with higher populations of Black workers. He also analyzed access data from the height of the spike in new claims and found that Black workers were far more likely to be unable to apply. Application rates across races were similar, but Black males were half as likely to receive unemployment compensation as white men, and Black women were about a third as likely to actually receive compensation compared to white women. This is unacceptable in a pandemic that is disproportionately costing Black, Latinx, Indigenous, and other workers of color's lives.

To be sure, the surge in unemployment this spring poses an unprecedented and monumental challenge. In the past few weeks, more than 22 million people filed initial claims for unemployment insurance, which has broken all records. Most states are handling a workload 20 times the normal size as well as they can under the circumstances, but this is likely just the beginning of an ongoing crush. States are still processing upwards of two million new claims a week, which is more than twice the highest week in history, which was 695,000 in 1982. Workers are understandably frustrated, and many are suffering. At the same time, in 2020, federal administrative funding for UI was $2.14 billion. Back in 2001, that funding was $2.21 billion. Given increases in the cost of living and the growth in the working population, that marks a dramatic reduction over time. Using a simple inflation calculator on the Bureau of Labor Statistics website, the 2001 funding level is roughly $3.2 billion in today's dollars.

These challenges have exposed an unemployment insurance system in a state of disrepair—a system that forces laid-off workers already struggling to find work to navigate extensive backlogs, jammed phone lines, and often unreliable online claims systems. These breakdowns threaten to undermine the most basic tenets of the program—accessible, efficient claim-filing and timely eligibility determinations and payments.

UI was established in 1935 on the heels of the Great Depression to help those involuntarily out of work during an economic downturn and to be responsive to mass economic catastrophe in the future. The program was built with white men in mind and excluded a great deal of Black people who were domestic and agricultural workers (as is true of most New Deal programs). The exclusions were geographically targeted to workers in the South and West: Nearly half of all Black men, Mexican American men, and Native American men and women were excluded, plus significant numbers of Asian American workers as well. Significantly, the greatest harm was felt by Black women—9 out of 10 were excluded.

Although many excluded occupations were added to the program later, the program still does not provide equal access to all workers. However, during the pandemic, this program has been especially important for workers of color. According to the Congressional Budget Office, 47 percent of workers receiving UI in July are workers of color. This includes 16 percent of Black workers, 14 percent of Latinx workers, 10 percent of white workers, and 14 percent of other workers.[3] Given the staggering racial wealth gap, delays in payments have a devastating effect on Black families.[4] But it does not have to be that way. With some conscious efforts to build a system that looks at the challenges that the most underserved face, we can build a system that works for everyone, now and into the future.

In late 2018, NELP, The Century Foundation, and Philadelphia Legal Assistance launched a project with funding provided by the Robert Wood Johnson Foundation (RWJF) to study and report on states that have undertaken modernization of their UI IT systems. The project, which will release its final report shortly, seeks to identify the factors that contribute to positive outcomes for unemployed workers and establish sound practices to inform future UI IT projects. Drawing on the lessons learned from this initiative, I recommend some relatively simple steps that states can take to ensure better processing of claims as well as the role that Congress and the federal government can play to ensure that all states develop sustainable and equitable systems. If there ever was a time to do something about the cracks in our unemployment insurance systems, especially in the context of IT systems, that time is now.

### The Federal Role Regulating State UI Administration

Revenues generated from the Federal Unemployment Tax Act (FUTA) primarily fund the administration of the state UI programs, including eligibility determinations, tax collections from employers, and the appeals process. Administrative grants are based on the amount of UI claims paid by the state, and so they drop when unemployment drops. As I mentioned earlier, overall funding has eroded dramatically over the past decades, and there is no dedicated funding stream for IT systems. It tends to be the case that Congress appropriates additional funding during economic downturns to supplement this low overall level. Paying attention to the system only during crises is not a way to build in the kinds of sustained reliable systems necessary to kick in during an economic downturn.

During the last recession, funding was provided to states to improve UI administration. Thirty-nine states received a total of $4.5 billion to enact a range of modernization improvements, including upgrades to IT systems.[5] The Department of Labor (DOL) provided funding for IT modernization, but only if states participated in consortia, where multiple states submit a joint plan to modernize their systems.[6] Some of these consortia provided

bargaining advantages to states with vendors, but several never realized their potential as they disbanded due to changing political leadership in states or differing visions about how best to manage their systems.

In March 2015, the DOL in alliance with the Information Technology Support Center (ITSC) at the National Association of State Workforce Agencies (NASWA) developed a checklist to help states modernize their IT systems.[7] Later that year, it issued critical new guidance clarifying claimant rights to unemployment insurance when due, and states' responsibility to provide compensation to individuals with limited English proficiency and people with disabilities.[8] Upon recognizing continuing challenges that states faced rolling out new systems, the Employment and Training Administration (ETA) issued additional guidance in 2018 that included a pre-implementation checklist to provide additional help to prevent the widespread service disruptions and delays in processing that many states experienced.[9] Most recently, the ETA issued a further refinement of the pre-implementation checklist on May 31, 2019.[10]

A Government Accountability Office report from 2016 identified that despite extensive work by ITSC and ETA to provide guidance to states in modernizing, states indicated that they could benefit further from additional sharing of best practices across states.[11] In NELP's work with several states to assess best practices in IT modernization, that sentiment carries forward to the present. Despite the work already done to share this information, negotiating with vendors on the myriad of implementation issues that could arise is a significant and daunting undertaking.

### The Current Modernization Situation in the States

Many states are struggling because they rely on antiquated mainframe systems that use COBOL, a computer language invented in 1959, when some "boomers" were still babies. Only 16 states have fully modernized their unemployment insurance systems. Many of those that did modernize, made mistakes along the way that compromised the quality of their service. In addition, as recent examples have shown, when states do move to modernize and upgrade outdated computer systems for their UI programs, or make changes to their phone systems, they often experience significant disruptions of service, systems breakdowns, and further claims backlogs and delays.

While the news has been focused on state IT systems that have not modernized, it is also important to recognize that modernization is not a panacea. After all, one of the states to perform the most poorly in processing claims has a "modernized" system that was built on a foundation of public policy designed to limit access to unemployment insurance. Florida's long lines for paper unemployment applications made national news when a system designed to fail workers ended up failing workers during the pandemic.[12] The number of workers disqualified because Florida's Department of Economic Opportunity (DEO) found they were not "able and available for work" or not "actively seeking work" more than doubled in the year following the launch of CONNECT, the state's updated system, even though weekly claims declined by 20 percent in that same year.[13]

The U.S. Department of Labor's Civil Rights Center found the system to be uniquely discriminatory following a NELP complaint about the system, filed with Florida advocates. It

was particularly inaccessible to claimants with limited English proficiency. Two failed audits later, with few of the issues in either audit addressed, the system failed so badly in this crisis that early on, they resorted to handing out paper applications to the throngs of Floridians unable to file online or reach anyone by phone. Treasury reports as late as mid-April showed increases in the state trust fund dollars because so few payments had been released.[14]

Michigan's IT system was also uniquely designed to fail after being implemented following historic legislation intended to flag and penalize fraud at unprecedented levels. The MiDAS system flagged more than 40,000 workers for fraud, and it was 93 percent inaccurate. The penalty for fraud in Michigan is four times the amount paid, plus 12 percent interest. As a result of these false flags, innocent claimants lost everything, including homes, and in severe cases, lives. Yet, despite the horrific system design, the new administration demonstrated a commitment to improving systems in a way that ensures access for UI applicants. As a result, Michigan has shifted course and become one of the fastest states in terms of payment processing.[15]

This story of political will shifting outcomes is an important part of the discussion of IT modernization. Few people realize that Florida's catastrophically failed system was modernized in a consortium with Massachusetts and New Mexico. When the other states in the consortium rolled out the new system and experienced user access problems, complaints, and poor performance, they went back to work with the vendor to improve their systems, and as a result, did not experience the catastrophic failure that Florida did.

During our work with the RWJF project, we visited three states that we identified as having done some positive things in their work to modernize: Washington, Maine, and Minnesota. One of the most important things that these three states had in common was a willingness to continually modernize. While all three states experienced an immediate increase in user confusion, denials, and increased calls, these states remained committed to a continued and sustained effort to keep implementing improvements. These states also engaged in robust community engagement and listened to complaints to work to address them. These three states also all expressed a wariness about automated decision-making and have maintained a high degree of human involvement in the adjudication process. As important as good technology is, we share the view that decisions about whether someone should get unemployment compensation that they are legally entitled to should be made by highly trained merit staff.

The data analysis prepared for the RWJF project identified several additional areas of concern. It showed a systematic connection between modernization and the increasing rates of denials of those who apply for unemployment insurance. In other words, modernization has presented additional challenges for those who make the effort to apply for compensation. For example, denial rates were statistically different between modernized and non-modernized states. Among modernized states, the number of unemployment insurance denials increased over a period of time that they had decreased in non-modernized states. These denials are largely driven by the online automation of state work-search mandates, which can be more difficult for workers to navigate than the phone-based systems that they replaced.

### The Current Human Situation

During the course of this pandemic, it has been impossible to ignore the human suffering resulting from workers unsuccessfully attempting to access the UI system. Entire online systems crashed in several states. Workers trying to contact the agency with questions about the online application were simply unable to get through, some reporting calling dozens of times per day. Claimants were confused about how to check on the status of their claim, and anxious to find out whether they were approved, were left in limbo for weeks and months. States had difficulty reprogramming their systems to provide the new CARES Act expanded unemployment insurance. While states were able to set up the additional $600 Pandemic Unemployment Compensation somewhat quickly, it took some states nearly a month and a half[16] to establish an online application process for the new Pandemic Unemployment Assistance.[17] Only after the new systems are established can workers eligible for these new programs begin to make their way through the system. For underpaid workers, two months can make the difference between surviving this crisis and losing everything.

For example, Rheana from California was furloughed from a small event production company, and the industry won't be able to return for a long time. She has already had to move to a cheaper apartment and gone through nearly her entire life savings waiting for unemployment and is now worried she will lose her health insurance, home, car, and ability to eat. Yvonne in Florida was about to open a restaurant. Now she's worried about losing everything: housing, car, health insurance. Unemployment has covered her paying the minimum on her bills and food. She has borrowed some money from family but now they are struggling too.

To make matters worse, a coordinated fraud ring is systemically attacking state UI systems at a time when they are at their greatest stress level.[18] When systems are attacked, people are victimized in three ways. First, there are people whose identities are used to gain access. Second, when a massive fraud ring is identified, states are obliged to flag all users with characteristics matching the scam artists until they can re-verify their identity with the agency. This is a time-consuming process that can result in cutting off claimants' earned compensation for weeks. Finally, all of the claimants awaiting their original determination end up having to wait even longer while the agency must work to resolve the fraud issue.

## Conclusion and Recommendations

Given the indispensable role that the federal government plays in funding and regulating the state UI programs, it is the responsibility of Congress to put in place a new regimen that leads to a short- and a long-term vision for a fully functioning and readily accessible UI program that serves all those who qualify, especially when serious economic downturns hit. Accordingly, we recommend the following federal reforms be immediately prioritized, together with a number of immediate and near-term measures that can be adopted at the state level to help improve performance now and as the economic downturn and the pandemic continue.

## Federal Recommendations

We urge Congress to immediately take the following steps, which will help stabilize and ensure greater accountability and transparency over the state IT systems.

**1. Fully Fund the States Linked to Strong Accountability Standards:** Most importantly, the federal government must make a sizable commitment to provide dedicated funding of IT modernization and far more adequate levels of basic state UI administration funding. With the additional funding should come strong federal oversight and enforcement, including tangible requirements that the modernization process include input from stakeholders (including workers and their advocates) from beginning to end, and comprehensive user testing that ensures participation from Black people who are faced with the most barriers, and all communities of color; those on the other side of the digital divide; people with limited English proficiency; and people with disabilities.

**2. Expand DOL's IT Expertise and Mandate to Ensure Full Access:** There is extremely limited independent capacity and IT expertise on the part of DOL to actively monitor and enforce the state UI systems. DOL should create a specialized unit devoted to the IT, phone and other state UI agency infrastructure needs. DOL's new regime should include strong measures of state success and failure (including adequate customer service) that can be assigned a grade that should be prominently featured on the DOL website to provide transparency to the public and compare the operation of programs across the states. For example, DOL should extend the timeliness regulations to ensure that workers are able to successfully reach a claims agent by phone within a reasonable period of time. In addition, DOL's Center for Civil Rights should also be fully resourced to more promptly investigate and respond to complaints and make the results of their investigations public. DOL should also have the authority to review IT contractor agreements, audit contractors where necessary, and require the states to produce data documenting contractor performance.

**3. Federal Commission on Modernization of Federally Funded Benefit Programs:** A federal task force should be immediately created to evaluate the performance of federally funded programs, including UI, and make recommendations for reform related to funding, the creation of robust standards and metrics, contractor accountability, best practices, and the adequacy of federal agency oversight and enforcement, including compliance with civil rights laws. The task force should also explore whether certain administrative and infrastructure functions (especially in response to disasters and public health emergencies) should be federalized, and whether federal agencies should have the authority to negotiate favorable terms with IT and phone system vendors that take advantage of the federal government's ability to leverage cost savings while also producing more compatible and high-quality state systems. Federalization in whole or part may be the simplest solution. The patchwork of state systems means that each state has to struggle with the modernization process and vendor negotiations. While some states have banded together into consortia to get a better deal, those consortia can dissolve as political leadership shifts in allied states or as states develop different modernization goals, wasting time and money. A federal process could achieve these goals on the largest possible scale.

**State Recommendations**

The single strongest recommendation generated by the RWJF project is for states to put their customers at the center of a modernization project, from start to finish. The biggest mistake states made was failing to involve their customers—workers and employers—at critical junctures in the modernization process. This led to systems touted as convenient and accessible, but which claimants often found challenging and unintuitive.

Customer-centered design and user experience (UX) testing are widely accepted best practices in the private sector, and should be a core part of any UI modernization effort. At the planning, design and implementation stages of the modernization project, special care must be taken to ensure customer feedback, extensive input and training of staff at all levels of responsibility, extensive testing and "sandbox" time for agency staff to become proficient in the new systems, as well as other basic measures that are core to any IT upgrade and implementation project.

**Immediate State Fixes:** State systems have been overwhelmed by the basic task of accepting claims, and workers are frustrated. However, there are immediate steps states can take to improve access, even within outdated systems. Some states are already moving to implement these reforms, and others should follow their lead as quickly as possible.

While states are unlikely to be able to fully replace their UI systems in the midst of this crisis, they can and must improve their technology. Several of our recommendations could be immediately implemented.

One of the most obvious considerations is that unemployed workers need 24-7 access to online and mobile services, which not all states provide. We live in a country where you can shop online at any hour of the day. Filing for unemployment shouldn't be restricted to 9-5 on weekdays.

Similarly, unemployment websites and applications must be mobile-responsive. More people have mobile phones than desktop or laptop computers, and public access to computers has vanished in an era of social distancing. Workers in low-paid jobs and workers of color are particularly likely to rely on their phones for Internet access. While more than 80 percent of white adults report owning a desktop or laptop, fewer than 60 percent of Black and Latinx adults do. States must also allow workers and employers to email in or upload documents from their phones. Believe it or not, some states are still asking workers to fax in documents. Whatever options and support materials state agencies provide to apply for unemployment insurance programs need to account for accessibility and language translation. And according to federal law, states need to offer a way other than online filing if there are technology hurdles that would "interfere with a claimant's access in applying for benefits."

As is true for other government IT systems, states should update their password reset protocols. In some states, workers must be mailed a new password; in others, staff cannot process claims because they are busy answering phone calls about password resets. Technology exists for states to implement secure password reset protocols that do not require action by the agency, which saves time for everyone.

Another key consideration is that civil rights laws require that states translate their websites and applications into Spanish and other commonly spoken languages. Right now, an unemployed worker with limited English skills may have no choice but to file an application over the phone with an interpreter. With so many seeking help, workers are stuck on hold for hours when they manage to get past a busy signal. It would be more efficient to translate the online materials and ensure equal access.

There are several small things states could do to relieve particular pain points. For example, it should also be easier for workers to go back to a previous page when they realize they have made an error. Online portals should give claimants a clear picture about what their claim status is—not just for their peace of mind, but also to relieve pressure on phone lines. States should identify common errors that users make and post tutorials or application guides to help avoid mistakes. Sites should autosave applications as of the last page completed and warn users if their session is about to end. All of these small user experience issues could be identified and addressed through robust public engagement strategies.

One thing that many states have been implementing that has helped to address long backlogs in a claimant-friendly manner is to set up callback systems and establish online chat technology to answer basic questions and help people avoid common mistakes. States can also establish triage protocols as a part of their business practices so they can better allocate resources. That way, calls coming in about password resets or claim status can be directed to staff specialized to handle simpler questions, freeing up adjudicative staff time.

Outside of concrete steps, it is important to acknowledge that any new IT system is bound to have glitches during the original "go live" phase, and states should plan for that. Additional staff and call center capacity should be funded and built into the process. Systems should understand that modernization is not a one-time endeavor, but rather an ongoing process.

In recent years, a number of states have released comprehensive audits of their state contracts to upgrade their UI IT systems, which often documented major cost overruns and other serious deficiencies. Additional states should follow their lead, and the U.S. Department of Labor should institute a new regime requiring systematic auditing of the state IT systems. The DOL regime should include basic measures of success and failure (including adequate customer service) that can be assigned a grade that should be prominently featured on the DOL website to provide transparency to the public and compare the operation of programs across the states.

Even if these measures take a number of weeks or months to implement, the investment will be well worth it. This crisis has highlighted gaping holes in accessing unemployment, but it has also created an opportunity. We can build 21st century systems nimble enough to handle disasters and designed to meet the needs of customers who are depending on access to unemployment insurance in this traumatic time.

Never before have workers so desperately depended on access to unemployment insurance—and never before has our interdependence with workers been so important to our collective survival. Let's use the technological capacity available in 2020 to deliver the help all workers need during this traumatic time.

## Endnotes

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[15] Michele Evermore, Testimony Before the Michigan Legislature, May 21, 2020 https://www.nelp.org/publication/nelp-testimony-michele-evermore-michigan-unemployment-claims-processing/
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Chairman YARMUTH. Thank you, Ms. Dixon, for your statement.

And I now recognize Dr. Wah for five minutes. Please unmute and proceed when you are ready.

**STATEMENT OF ROBERT WAH, MD**

Dr. WAH. Chairman Yarmuth, Vice Ranking Member Johnson, and Committee Members, thank you for inviting me to testify today.

My name is Robert Wah. I am a physician with over 23 years of Active Duty Naval service and have worked in health IT for over 25 years. I was the associate chief information officer for Military Health at DoD, and then the first deputy national coordinator at HHS, setting up the Office of the National Coordinator for Health IT that we now call ONC. I also worked in the private sector IT.

Health IT has advanced in three major waves. First, we moved from paper records to digital information. Next, the digital information was networked together. The third wave uses this virtual pool of networked digital information for analytics, machine learning, research, and population health.

Picture everyone in healthcare—patients, doctors and providers, hospitals, pharmacies, payers, government, and researchers—all around this virtual pool of interoperable health information, putting in and taking data out.

The ONC has nearly completed Wave 1, and they are advancing Wave 2 and 3. This work must be continued, supported, and funded.

As has been noted, COVID–19 has exposed many needs and opportunities for federal health IT funding beyond the continued work on Waves 2 and 3. COVID–19 has highlighted the value of virtual remote healthcare as effective, efficient, and well accepted. Investment is needed to connect telemedicine with this virtual pool of interoperable health information, just like in-person care.

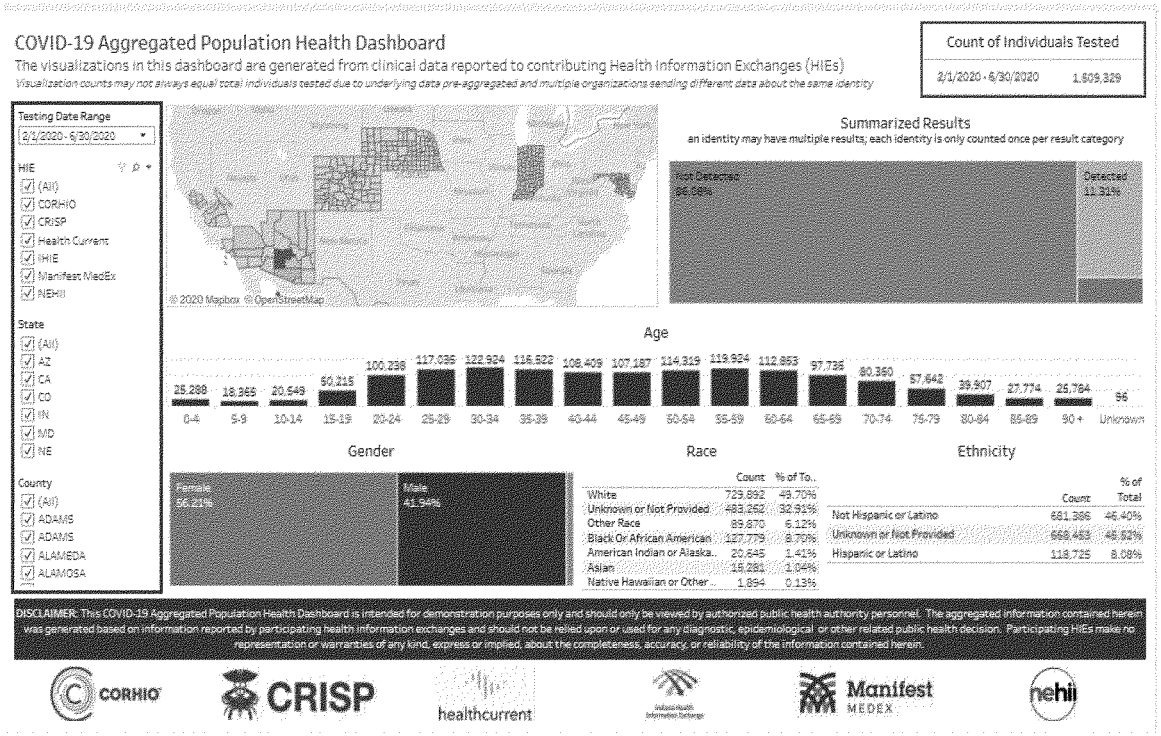
Health information exchanges formed in Wave 2 need to support public health and research. Traditional public health asks that certain diseases be reported when they are found, like tuberculosis or sexually transmitted diseases.

The virtual pool of information will allow public health officials to see patterns of new diseases and epidemics before they are even named or reports are formulated. Clusters of patients with fever, cough, and sudden loss of taste and smell could be identified before we even knew to call it COVID. Funding to connect public health agencies to this Wave 2 virtual pool is critical.

In parallel, investment is needed to connect research innovation to the pool to expand clinical trials and use real-world evidence about new COVID treatments and vaccines. The pool has information about millions of people, not just the few hundred or thousand in clinical trials.

Sam, if you could show my graphic, I would appreciate it.

[Graph.]


COVID-19 Aggregated Population Health Dashboard
The visualizations in this dashboard are generated from clinical data reported to contributing Health Information Exchanges (HIEs)
Visualization counts may not always equal total individuals tested due to underlying data pre-aggregated and multiple organizations sending different data about the same identity
Count of Individuals Tested
2/1/2020 - 6/30/2020 1,609,329
Testing Date Range
2/1/2020 - 6/30/2020
HIE
(All)
CORHIO
CRISP
Health Current
IHIE
Manifest MedEx
NEHII
State
(All)
AZ
CA
CO
IN
MD
NE
County
(All)
ADAMS
ADAMS
ALAMEDA
ALAMOSA
© 2020 Mapbox © OpenStreetMap
Summarized Results
an identity may have multiple results, each identity is only counted once per result category
Not Detected
88.68%
Detected
11.31%
Age
25,288
18,365
20,549
50,215
100,236
117,035
122,924
116,522
108,409
107,187
114,319
119,924
112,853
97,736
80,350
57,642
39,907
27,774
25,764
96
0-4
5-9
10-14
15-19
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
75-79
80-84
85-89
90 +
Unknown
Gender
Female
56.21%
Male
41.94%
Race
Count % of To..
White 729,892 49.70%
Unknown or Not Provided 483,262 32.91%
Other Race 89,870 6.12%
Black Or African American 127,779 8.70%
American Indian or Alaska.. 20,645 1.41%
Asian 15,281 1.04%
Native Hawaiian or Other .. 1,894 0.13%
Ethnicity
Count % of Total
Not Hispanic or Latino 681,386 46.40%
Unknown or Not Provided 669,453 45.62%
Hispanic or Latino 118,725 8.08%
DISCLAIMER: This COVID-19 Aggregated Population Health Dashboard is intended for demonstration purposes only and should only be viewed by authorized public health authority personnel. The aggregated information contained herein was generated based on information reported by participating health information exchanges and should not be relied upon or used for any diagnostic, epidemiological or other related public health decision. Participating HIEs make no representation or warranties of any kind, express or implied, about the completeness, accuracy, or reliability of the information contained herein.
CORHIO
CRISP
healthcurrent
Manifest MEDEX
nehii

COVID–19 tests normally just have the patient's name and the result. Here is an example of the virtual pool across six states combining information on 1.5 million COVID patients tested, where they displayed the results, but also the distribution of patients by age, gender, race, and ethnicity. This is all because there is enrichment due to the virtual pool of information that has added the patient's name and result.

Sam, you can take that picture down now.

For patients with chronic diseases like diabetes, high blood pressure, heart and lung disease, COVID has made them sicker and die more frequently. Patients with chronic diseases also use the largest part of our healthcare expenditures.

We can connect with these patients in places they visit frequently. There are self-service smart health stations with free blood pressure, weight, BMI, and health assessments in pharmacies, grocery stores, and for hard-to-reach population, food banks and unemployment offices. Funding investment can connect them to the virtual information pool so public health tools can be employed.

One network has 10,000 stations nationwide and has taken over 350 million measurements in the last eight years. These could identify hotspots of prediabetes, high blood pressure, obesity, and cardiovascular disease, targeted for prevention and precautions during pandemic exposure and connect the patients to virtual and in-person care.

COVID–19 has also highlighted the need to increase funding for supply chain technology and management in conjunction with our Strategic National Stockpile. As we send doctors and healthcare workers into battle every day, we must arm them with medications, equipment, eventual vaccines, and personal protection equipment, PPE, to effectively fight the war against the pandemic.

I hope we will have time later to talk about using clinical data outside healthcare, like back to work and travel, as well as cybersecurity.

These are complex issues. Health is vital and personal to all of our citizens, and costs make up a large part of the GDP. Government must use all available levers—policy, regulations, legislation, as well as financial—to improve the health of the nation. Investment in health IT has a high impact on the health of our citizens and a higher return on investment. We must continue investments in Wave 2 and 3 in coordination with the ONC. Funding for the issues above will improve the health of our citizens during this fight against the COVID–19 pandemic and future health threats.

Thank you for the opportunity to be here today. I look forward to your questions. Thank you very much.

[The prepared statement of Robert Wah follows:]

**STATEMENT**

**of**

**Robert Wah, MD**
**Physician Leader in Healthcare and Technology**

**before the**

**House Budget Committee**

**RE: COVID-19 Exposes Need for Federal Investments in Technology**

**July 15, 2020**

**Statement of**

**Robert Wah, MD**

**before the**

**House Budget Committee**

**RE: COVID-19 Exposes Need for Federal Investments in Technology**

**July 15, 2020**

I am pleased to have the opportunity to provide the House Budget Committee with my views on Investments in Health Information Technology (IT).

Health IT is a tool that improves the care, health and well being of our citizens. It has progressed in 3 major waves. First, transition from paper records to digital information; next digital information is networked together. The third wave is using this virtual pool of networked, digital information for analytics, machine learning, research and population health improvement. The first wave is nearly completed and the second and third waves are currently areas of focus. Everyone in the healthcare ecosystem: Patients, Doctors and providers, Hospitals, Pharmacies, Payers, Government, Researchers all contribute data to and use data from this virtual pool of interoperable health information.

I have been involved in Health IT for over 25 years. I was the Associate Chief Information Officer for the Military Health System (MHS) at the Department of Defense (DOD) and then the first Deputy National Coordinator for Health IT at HHS helping to set up the Office of the National Coordinator for Health IT (ONC). I then worked in the private sector at a large IT services and system integrator.

The Office of the National Coordinator for Health Information Technology (ONC) is a staff division within the U.S. Department of Health and Human Services (HHS). ONC is charged with formulating the Federal Government's health information technology (IT) strategy and leading and promoting effective policies, programs, and administrative efforts to advance progress on national goals for better and safer health care through a nationwide interoperable health IT infrastructure.

Per the ONC, for the past decade, national leaders have pursued an agenda that promotes innovation in health care built on widespread, *interoperable health information* (the second wave above). Interoperable health information will improve health and health care by increasing market efficiency, and empowering patients and their providers with access to valuable health information from different sources. Improvements in interoperability and the evolution of health IT tools that put health information in practice will ensure patients can access and control their electronic health information, facilitate value-based

transformation of the health care delivery system, increase market competition in health care, and improve the nation's preparedness for and responsiveness to public health crises, such as hurricanes, disease outbreaks, and epidemics (e.g., influenza, opioids).

When the ONC was formed in 2004, the initial goals were:
INFORM CLINICAL PRACTICE
- Incentivize EHR adoption
- Reduce risk of EHR investment
- Promote EHR diffusion in rural and underserved areas

INTERCONNECT CLINICIANS
- Foster regional collaborations
- Develop a national health information network
- Coordinate federal health information systems

PERSONALIZE CARE
- Encourage use of PHRs
- Enhance informed consumer choice
- Promote use of telehealth systems

IMPROVE POPULATION HEALTH
- Unify public health surveillance architectures
- Streamline quality and health status monitoring
- Accelerate research and dissemination of evidence

The recently released ONC Strategic Plan for 2020-2025 is:
Goal 1 Promote Health and Wellness
Goal 2 Enhance the Delivery and Experience of Care
Goal 3 Build a Secure, Data-Driven Ecosystem to Accelerate Research and Innovation
Goal 4 Connect Healthcare and Health Data through an Interoperable Health IT Infrastructure

Working with ONC since 2018, is the Health IT Advisory Committee (HITAC), the Federal Advisory committee with 32 citizens and federal members. The HITAC has convened over 155 public meetings; stood up Task Forces on Information Blocking, Conditions and Maintenance of Certification, Health IT for the Care Continuum, U.S. Core Data for Interoperability, Trusted Exchange Framework and Common Agreement and transmitted nearly 250 recommendations to ONC. HITAC devoted 2 full committee meetings to COVID-19 and Health IT.(https://www.healthit.gov/hitac/committees/health-information-technology-advisory-committee-hitac) I serve as HITAC CoChair and I would like to recognize and thank the citizen and federal members of the committee for their dedication, time and talent to improve Health IT and Healthcare across the United States.

The ONC and the federal advisory committees have nearly completed Wave 1-the conversion from paper health records to digital. They lead the way on advancing Wave 2-networking interoperable digital information and Wave 3-using the interoperable digital health information to improve health and well being of our citizens. This work must be continued, supported and funded.

COVID-19 has exposed many needs and opportunities for Federal Health IT funding beyond continued work on Waves 2 and 3. Some of these are:

- Telemedicine
- Public Health Surveillance and Research Innovation
- Chronic Disease Identification and Prevention
- Supply Chain Technology
- Clinical Data uses outside of healthcare
- Cybersecurity

**Telemedicine:** COVID-19 has highlighted the value of virtual, remote healthcare as effective, efficient and well accepted. This mode of care needs to be linked into the full continuum of care. With each visit, data are used from and added to the pool of interoperable digital health information just as in person visits. Follow ups, referrals, labs from these virtual sessions must flow similar to in person visits

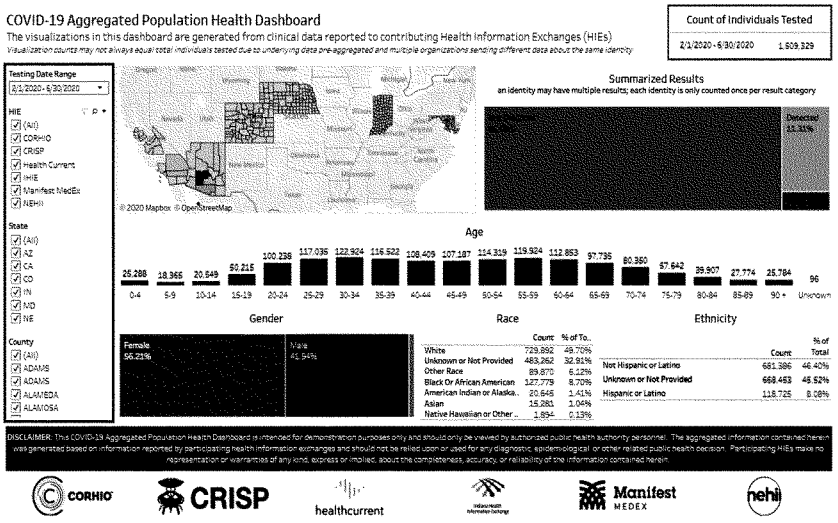
**Public Health Surveillance and Research Innovation:** The Health Information Exchanges formed in wave 2 are uniquely positioned to support public health in new ways. Historically public health have been forced to rely on one-way reporting data. Public health agencies, using mandated reporting, ask specific predefined questions to address specific threats or issues. Today exchanges fueled by EHRs and network connectivity allow move to multi-directional operational data

Exchange data can answer more questions

- Course of infection and immunity data - trajectories
- Longitudinal (not de-identified) data required for many key issues
- Comorbidities, race, ethnicity, vaccine performance
- Comprehensive clinical data for context

- Operational data generated as part of care and course of business
  - Supports three audiences – Federal teams, Public Health Agencies, Clinicians
  - Accurate, comprehensive, inexpensive and reusable
  - Answers not just current questions but those that come up in future as more is learned about COVID or other illnesses
  - Can link to siloed immunization registries
- Massive secondary benefits when we use State and Local HIEs
  - Can analyze with "big data" machine learning and deep learning tools
  - In sync with state level privacy and consent laws
  - Community-wide – nursing homes, eventually group homes, shelters, schools
  - Social determinants – community information exchanges
  - Pro-competitive, not locked in by proprietary entities
- Research Innovation
  - Accessing the virtual pool of interoperable health information will accelerate innovation in Clinical Trials and use of Real World Evidence
  - These data and innovations are vital as we work at Warp Speed to find new treatments and vaccines for COVID-19 and other new disease threats

Here is an example of HIEs from 6 states combining information on 1.5 Million Covid-19 tests where they display the distribution of patients by age, gender, race and ethnicity




**Chronic Disease Identification and Prevention:** COVID-19 has much greater lethality and morbidity in patients with chronic diseases. Patients with chronic diseases also use the largest part of healthcare resources/expenditures. There is a way to connect with citizens in non traditional ways but in places where they frequent weekly. Using self service smart health stations with free BP, weight, BMI and risk and health assessments in pharmacies, other retail sites like groceries, and for hard to reach populations-food banks, unemployment offices, etc. Public health and population health tools can be employed for identification and prevention of chronic diseases. One network with 10,000 stations nationwide has taken over 350,000,000 measurements in last 8 years. These could identify "hot spots" of pre-diabetes, hypertension, obesity, and cardiovascular disease. These "hot spots" could be addressed for prevention and for precautions during pandemic exposure with the ability to connect individuals with virtual and physical care.

**Supply Chain Technology:** COVID-19 has highlighted the need to improve Supply Chain Technology and management in conjunction with the Strategic National Stockpile to make sure there is available medications, equipment, eventual vaccines, and Personal Protection Equipment (PPE) to effectively fight the war against the pandemic.

**Clinical Data uses outside of healthcare:** COVID-19 has brought new uses of clinical data such as lab results (antigen and antibody levels) and vaccination status that are outside of healthcare. New technologies are needed to provide status of individuals but

not the actual clinical information that confirms that status. We cannot have citizens providing their clinical information at airline check in, theatre and stadium entrances, or border crossings. Along with this will be need for certification/verification of clinical information. With the importance of vaccination/immunity status, technologies must be developed to securely verify that the citizen actually was vaccinated or is immune.

**Cybersecurity:** Healthcare systems and data have 3 major cybersecurity vulnerabilities:

- Data breaches for fraudulent uses. Due to the rich personal information in health records, they are valuable to establish fraudulent identities. In the criminal markets stolen health records are sold for 50 to 100 times more than stolen credit cards. Credit cards can be cancelled and "turned off"; it is not possible to "turn off " personal information in health records and the fraudulent identities created are more durable and lucrative than a credit card.
- Data breaches where health status is exposed. Patients are concerned with digital records because status exposure is not reversible. If one's credit card is leaked to the internet, it is a recoverable problem. If one's diagnosis of HIV, diabetes, psychiatric disease, or reproductive history is leaked onto the internet, this cannot be reversed.
- Ransomware and operational shutdown. Healthcare operations like clinics and hospitals are vulnerable to being shutdown by ransomware hackers just like in other industries.

Healthcare is lagging behind other industries in cybersecurity protections. Our citizens give personal, intimate information to the healthcare providers because they know it will help get them the best, most appropriate care. They also expect that information to be kept confidential and protected. Healthcare needs to catch up with other industries on cybersecurity and meeting the promise to keep patient data protected and confidential.

These are complex issues. Health and healthcare are vital and personal for all citizens and costs make up a large part of the GDP. Government must use all available levers: Policy, Regulations, Legislation as well as Financial to improve the health of the nation.

Investment in Health IT listed above has a high impact on the health of our citizens and high Return on Investment. We must continue investments in Waves 2 and 3 in coordination with ONC and HITAC. Funding for the issues above will improve the health of our citizens during this fight against the COVID-19 pandemic and against ongoing and future health threats.

I appreciate the opportunity to present this information to the committee and am grateful to Chairman Yarmuth and Ranking Member Womack for calling this important hearing and inviting me today.

Chairman YARMUTH. Thank you, Dr. Wah, for your testimony.

And, once again, thanks to all the witnesses for their testimony.

We will now begin our question and answer session. As a reminder, Members may submit additional questions to be answered later in writing. Those questions and answers to the witnesses will be made part of the formal hearing record. Any Members who wish to submit questions for the record may do so by sending them to the clerk electronically within seven days.

As I usually do, I will defer my questions until the end, so I now recognize the Vice Chairman of the Committee, the gentleman from Massachusetts, Mr. Moulton, for five minutes.

Mr. MOULTON. Good afternoon. Thank you, Mr. Chairman. And I want to thank all the witnesses for making the time to testify.

And I would like to offer a special thanks to Ms. Pahlka. My team worked closely with Code for America's Boston Brigade to develop an app to educate current and retired public servants about the Social Security windfall elimination provision and allow them to accurately calculate their likely web production. This app is now hosted by Mass Retirees, an organization of retired public employees in The Bay State, and I am extremely grateful for your leadership and vision that helped make this project possible.

Sir Winston Churchill is credited with first saying, "Never let a good crisis go to waste." He said that in the mid–1940's as we were approaching the end of World War II. We must take the opportunity to learn from our crisis today to prepare better for the future and to create a more capable government and a stronger, better country for our children and grandchildren.

Per a recent GAO report, the federal government invested over $90 billion in IT in Fiscal Year 2019, but 80 percent of this, a staggering $72 billion, went toward operating and maintaining existing aging IT investments.

I mean, can you imagine if you spent 80 percent of your household budget in the next five years not on buying new devices—upgrading your TV or phone or buying a new computer when yours becomes obsolete—but simply maintaining the devices that you have? Think about that; investing almost the entirety of your family IT budget in repairing your 1950's TV set to keep it working every year, which only becomes more expensive over time as the technology becomes more obsolete, rather than ever buying a flat screen.

Now, speaking of 80 percent, I agree with 80 percent or more of the Vice Ranking Member's opening statement. We need to modernize our IT, we need to ensure that our systems are secure, and we need to win the competition with China that, frankly, we are starting to lose.

But I also want to point out two important places where I disagree. Mr. Johnson spoke about investing in proven solutions, and I completely agree with him when it comes to the willingness of government to take commercially available off-the-shelf solutions and put them to work for all of us.

In fact, my very first piece of legislation I passed as a Member of Congress was a bill to get the VA to use commercially available scheduling apps to enable veterans to schedule their own appointments electronically when the VA wanted to instead spend tens of

millions and much more time developing a proprietary solution on their own.

But speaking more broadly about government investment in tech, if we only invest in proven solutions, we are guaranteed to lose the race to China, because China is investing their federal dollars in next-generation technology, from biotech to quantum computing and pushing the frontier forward, not in buying tech that exists, but in developing technology that does not.

In fact, the Republican witness at our previous hearing specifically pointed out that federal investment should be focused on technology that is unproven, specifically because taking these investment risks is necessary for progress, but often unbearable by the private sector.

The other point is no regulation of tech. I hate excessive regulation as much as any American. The complete and total lack of any regulation in tech is why we have foreign influence in our elections, unbridled monopolistic power in big tech, and we rely not on elected representatives of the people to establish laws for weighty issues like which Facebook or Twitter post to delete, but, rather, rely on 20-something kids in black boxes to make those decisions on their own, with no accountability whatsoever to elected officials or the American people. There is a place for regulation in tech, and there is much more that we need to do.

My last engagement before this hearing was a visit to North Shore Medical Center, our local hospital, to thank the heroes on the front lines who have been fighting this pandemic, and doing so quite successfully here in Massachusetts, I might add, where we take our science seriously and our case numbers continue to go down. Of course, we are preparing for that to change given what is happening in the rest of the country.

There, I heard from doctors and nurses who want to make sure we heed Churchill's advice and ensure that we don't just keep doing the things the same way after this crisis.

One great example was how the psychiatry department has had greater success with telehealth appointments than in-person visits, enabling people to keep appointments despite other medical conditions or family conflicts.

Of course, modernization should happen in Congress as well. One of my team members, Ananda Bhatia, founded the Modernization Staff Association, a bipartisan group that focuses on internal reform issues that primarily affect junior Hill staffers. We have a lot of work to do in that department as well, looking ourselves in the mirror.

With that, Mr. Chairman, I yield back.

Chairman YARMUTH. Your time has expired.

I now recognize the gentleman from Ohio, Mr. Johnson, for five minutes.

Mr. Johnson is not responding.

Can you unmute, Mr. Johnson? Are you there?

Well, in that case, I will yield five minutes to the gentleman from Texas, Mr. Crenshaw. We will come back to Mr. Johnson.

Mr. Crenshaw on? Mr. Crenshaw? No.

How about Mr. Burchett?

Oh, Mr. Flores? How about Mr. Flores from Texas? I know he is here. I yield five minutes to Mr. Flores from Texas.

Mr. FLORES. And so I am here, and thank you, Mr. Chairman. Anyway, I appreciate the witnesses for joining us today.

Dr. Wah, I have a few questions for you. Let me give you the preamble to the first set. In 2011, the VA and DoD began an electronic health record modernization initiative to replace two separate electronic health record systems that were used by the two departments to combine them into a single shared system. And in 2013, after spending more than a billion dollars on the program, the secretaries of VA and DoD announced that they would not continue their joint development of a single EHR. Instead, the VA would buy and convert to the DoD her system.

I remember being on the VA Committee at the time and was pretty frustrated about that, because Congress had ordered the DoD and the VA over a decade earlier to combine their systems.

So the first question is: What were the problems that were encountered that led to the abandonment of this project? Dr. Wah?

Dr. WAH. Yes. I had to unmute real quick.

Mr. FLORES. OK.

Dr. WAH. Thank you, Congressman. First and foremost, I would say that I left the DoD in 2006, so these events that you are describing happened after my departure, so I certainly don't have firsthand knowledge or inside view on circumstances that you discussed.

It is a complex problem in dealing with two health systems that take care of nearly 20 million patients around the world. From my point of view, part of it is I think that the important thing to remember is that there are different requirements for the two organizations. The VA, while they are both healthcare systems taking care of patients, the location and the manner in which they take care of those patients are vastly different.

So I basically came from the Department of Defense, where we have brick-and-mortar hospitals in the continental U.S., but also hospitals in Landstuhl, Germany; Japan; and things like that. But on top of that, we have a readiness and a battlefield commitment to caring for our beneficiaries as well, and so we have got to have a system that can meet those requirements that are very unique in the battlefield, in the deployed environment; that the VA is more about brick-and-mortar systems that we are accustomed to here in the continental U.S.

So I just point that out that, you know, the requirements are quite different between the two organizations, and so finding a solution that meets all of those requirements is an extensive challenge.

The other thing I would say is that the DoD and the VA also had really pursued slightly different strategies about government-built software versus commercially off-the-shelf software, and so, again, merging those two issues is another big challenge.

And so, again, I wasn't there when these decisions were made, so I can't give you direct insight into your question, but these are some of the issues that I have seen that have come up in trying to deploy these vast systems for organizations that have different requirements.

Mr. FLORES. Thank you. I appreciate that. By the way, I wasn't totally trying to hold you culpable for those issues, so—let me—I have a couple of other questions for the record on that, which we will submit and ask you to submit in writing, but you brought up something. You did a lot of work in the past on modernizing the DoD IT system. Can you describe for us the lessons learned from your experience with the DoD IT system? What were your biggest successes, biggest challenges? And how can we take the lessons learned from both the successes and challenges and apply them to future IT implementation?

Dr. WAH. Thank you for that. I think one of the things I would say that I found particularly useful that I have reused in all my other IT work is that it is very important to have, in particular in healthcare IT, clinical input at the outset, at the design and development of the system, as well as in the deployment of the system.

And I am biased obviously because I am a physician, but I believe that having that clinical perspective early on makes sure that the technology works in the business process and workflow and environment in which it is going to be used.

Left without that, the technical architects and programmers may build something that is technically correct but doesn't fit the workflow and business process of healthcare. So there is just something important to that that I think that adds to the mix.

The second thing I would say, some of the biggest successes I always cite is that—one example I give is that in the last 30 years, I haven't written a prescription on a piece of paper in a military facility. That is a remarkable data point, I think. We are all used to electronic prescribing today, but it hasn't been around for 30 years in very many environments. And what that did was not only the legibility issue about doctors' handwriting, but it also allowed us to build a real-time data set of 10 million beneficiaries' pharmacy history.

So now, when I write a prescription at Bethesda Walter Reed and hit enter, it goes against this data base and immediately comes back to me and tells me that the prescription I just wrote is going to conflict with an allergy the patient has, a medication they are already on, or that duplicates one they have already picked up. And this real-time data base covers whether they picked up their medication at the Bethesda pharmacy, 66,000 civilian pharmacies, or got it through the mail order system. And we have prevented hundreds of thousands, millions of medication errors just because of that simple change, going from paper prescriptions to digital.

So I think there are some major advantages that we can cite throughout the time of military health system. There are challenges, as you have already cited, and I won't go into all those, but, you know, it is very challenging for a large organization with that diverse set of responsibilities in patient care to not have problems——

Mr. FLORES. Well, thank you for your service. Thank you for being here today.

I yield back.

Chairman YARMUTH. The gentleman's time has expired.

I now recognize the gentleman from New York, Mr. Higgins, for five minutes.

Mr. HIGGINS. Thank you, Mr. Chairman. I find it ironic that we are experiencing technical difficulty on a hearing regarding federal investment in technology.

A lot of this, you know, has to do with the current pandemic, but I think all of us have experienced, in the past 5–1/2 months, that COVID–19 has exposed the fragility of the American economy and American society. There is no treatment for this. There is no vaccine, despite the fact that the coronavirus has been with us for 20 years.

Unemployment, you know, designed to give people $600 a week was an unmitigated disaster due to the old and broken technology unable to efficiently administer those checks to get people what they needed, money, and to get them what we needed them to do, and that is spend money, creating demand in the economy.

The good doctor had mentioned the issue of telemedicine. It certainly was accelerated, the use of it, and a new appreciation for it during this pandemic. But it was limited because of the lack of infrastructure technology; very, very important.

You know, the U.S.-China relationship is critical as it relates to technology and who is going to win this race. The U.S.-China trade relationship is no longer about T-shirts, toys, and sneakers. It is about technology.

China, in the last two years, has invested a trillion dollars connecting China physically, but also through technology to Europe and the Middle East. The United states spent $350 billion, the last major infrastructure investment, 15 years ago; 15 years ago. Not good enough.

5G, fifth generation, the super fast cellular networks that are used as a foundation for both today and tomorrow's technologies, China is beating us. China has outpaced the United States in patent production, artificial intelligence, quantum computing, patents in semiconductors.

So, Dr. Wah, I just wanted to ask you, sir: On the healthcare piece of this, if we had better technology in the United States, if we were more advanced in fifth generation, super fast cellular networks, would that speed up development of a vaccine and/or an effective treatment for COVID–19?

Dr. WAH. I thank the Congressman for that question. I think what I am hearing you ask is, if we had—you mentioned things like 5G, which to me is infrastructure.

Mr. HIGGINS. Right.

Dr. WAH. And so I think infrastructure is always important in the digital world, because we need to move information faster. But, for me, healthcare IT is all about better information for better decisions, and it is the role of the technology to deliver that better information so everybody makes a better decision. The speed in which that information is delivered and the ability to scale is important. So to that degree, I think infrastructure would help.

But there are many other components that are needed to be successful, particularly in developing a vaccine, and that is why I cite the virtual pool of information that we are talking about. The richer that pool is, the more people contributing to and taking out of that pool, I think is what is really going to accelerate our ability to make major breakthroughs, not just in COVID, but in other dis-

eases. And, as I said before, imagine that we could use that pool to recognize patterns of disease that we don't even know what the disease is yet; we just know there is a cluster of problems somewhere, and then we can employ machine learning and augmented intelligence to sort that out.

So I think, yes, I would support better infrastructure, but it is really what that infrastructure supports, which is this grander pool of information.

Mr. HIGGINS. Final question, Doctor. Vaccine development traditionally is a process that takes about 10 to 15 years. The fastest vaccine that was developed was developed for Ebola, and that took five years and manufactured later by Merck. I am concerned that the hope for a vaccine in the first quarter of next year and the reality, I am concerned they cannot be reconciled. Do you have any thoughts on that?

Dr. WAH. Yes. Vaccines are not my area of expertise. I am an OB/GYN and infertility specialist with microsurgery, so I just want to put that as a caveat. But, yes, I think we are all very optimistic about the ability of our scientists to develop a vaccine that is effective and safe in a very short period of time.

The things that encourage us are there are new technologies that were not present previously in terms of understanding genetic structure and protein structure, and so that, I believe, will, in fact, accelerate our ability to develop an effective vaccine. And also——

Mr. HIGGINS. Thank you, sir.

Dr. WAH.——going back to what I said about real-world evidence, we have a way of monitoring that that we don't previously use. Clinical trials usually enroll patients. Now we can look at the real-world behavior of many millions of patients either using the treatment or a vaccine. So I am encouraged by that as well.

Mr. HIGGINS. Thank you, sir. I yield back.

Chairman YARMUTH. The gentleman's time has expired.

I now recognize the gentleman from Tennessee, Mr. Burchett, for five minutes.

Mr. BURCHETT. Can you hear me now? Good deal. I have got to get on another call real quick, but, quickly, I have got one question to just ask the entire committee—the group.

What are the federal barriers to you all's progress? And are there any federal regulations that serve as barriers to the successful IT implementation?

Ms. GERTON. Congressman, perhaps I can take a first cut at that. From the federal level, there are a number of procurement flexibilities that could potentially allow organizations to make intentional investments in IT modernization, including working capital funds, EMF, and revolving funds.

But one of the critical issues, or maybe two of the critical issues are, while Congress has passed flexibilities in procurement, we remained constrained by a couple of key features. One is the CBO scoring rules, which require the full cost of an IT investment to be recognized in the first year and don't allow the consideration of offsets of future savings to be applied as a discount. So IT investment looks extraordinarily large and must be fully accommodated in the very first year for which it is planned.

The second is the audit rules, the GAO audit rules, which mitigate against flexibility, I would say probably rightly so, but their strong perception that the old ways of buying either supplies or services are what remain acceptable even in the face of congressional flexibility and procurement authorities.

So as Congress is thinking about alternative tools and flexibilities, I think one of the key features would be engaging with CBO and GAO to encourage their flexibility in terms of how they score and how they audit those procurement decisions.

Mr. BURCHETT. Thank you.

Ms. Pahlka, do you want to take a shot at that?

Ms. PAHLKA. I would love to. Thank you. I would agree with everything Ms. Gerton said. Would add, I think some of what needs to change, as I mentioned and as outlined in the written testimony, is practice overregulation. But practices don't change because people are worried about being called in front of Congress, and I think if this body can demonstrate that they will support those who take innovative approaches, that will change over time.

As one example, most procurement officers, you know, will insist on putting something in a procurement that says only a company who has done a project of this size in the past—and there is a lot of restrictions around this and many caveats—you know, can successfully bid on this. Well, that is very anticompetitive, and it really means that that project will only then be able to go to probably two companies.

We know exactly how that project will end up, and that is one of the hallmarks of this sort of death march toward a mega project that will fail that we see. And I think—I don't know—and maybe Ms. Gerton can help me understand—if that is a regulation that needs to be removed, but I think it is a decision that contractors make—contracting officers will make that, if they can be supported, to feel that that is not unnecessary—many contracting officers are happy not to include it, but that they won't be punished for not including a requirement like that that is, one, environmental—it is sort of the environment that can change.

I think, particular to unemployment insurance, because it is the topic—you know, one of the major topics here and obviously such a crisis in our country right now, there is no safe harbor for departments of labor at the state level and workers there to be able to say, I have done my best to make an eligibility determination about this individual who is applying for this benefit, and I am now going to award that benefit without any fear of being told later that my decision was wrong.

We need to meet much clearer guidance and probably much more specific and useful tools that every state can use where, much like E-Verify, which, you know, you can use to say, I have checked this person. They are eligible for employment, and now I have safe harbor to make this decision. We need sort of a set of tools that we can give every state—this would be a federal investment—that could say, I have run this person through this particular tool. I know that they are eligible, that we have checked their income, that they have not applied in another state, and there is no fraud happening here, and that will significantly increase the speed of determination and the delivery of unemployment benefits, and that

is an important thing that I think we should consider at a federal level.

Mr. BURCHETT. Thank you so much.

Mr. Chairman, I yield none of my time to Jimmy Panetta and Dan Kildee. Thank you, sir.

Chairman YARMUTH. I thank the gentleman.

The gentleman's time has expired.

I now recognize the gentlewoman from Illinois, Ms. Schakowsky, for five minutes.

Ms. SCHAKOWSKY. Thank you, Mr. Chairman.

Ms. Dixon, I want to see if you can help me with this.

At the end of April, we saw that the Department of Labor reauthorized its IT modernization checklist in the face of the skyrocketing unemployment numbers, the service disruptions, massive processing backlog.

The checklist is originally from 2017 for states to ensure that all necessary systems functions are available before the launch of new unemployment benefit programs. But it is my understanding that DOL does not keep track or monitor the progress of states' UI modernization initiatives and it does not have any enforcement mechanism that specifically targets current systems failures, and is that correct?

Ms. DIXON. Yes, that is correct. We know that this checklist is there, but it is really just a list of tasks, and it doesn't really tell the states how to accomplish what they need to accomplish. You could actually write a manual about each business process that is on the checklist, so it is insufficient. And it is true that DOL——

Ms. SCHAKOWSKY. So that was really my next question, then. You would say—my question was, is this checklist enough to ensure that states make sufficient progress, and your answer is clearly "no" to that.

So what else does the Department of Labor and the administration have to do to ensure the unemployment system is up and running before new benefits are rolled out?

Ms. DIXON. The DOL really needs to create a specialized unit for IT and phone inside the agency. So they need to have infrastructure in the agency to provide states with more guidance, to help states find economies of scale as they do these modernization projects.

So it needs to take a much more active role and to create standards. There are actually very few standards around customer service for UI. There is not a standard that says, "All calls must be answered in 90 minutes," or anything. So we manage what we measure, so having more measurement is really important.

Ms. SCHAKOWSKY. So the CARES Act provided a temporary expansion of unemployment compensation to help the millions of workers who are furloughed, laid off, without work due to no fault of their own because of the COVID–19 pandemic. This expansion is set to expire on July 31, coming right up. I have seen reports that it will take weeks to restart this program if it lapses, even in states with modernized technology.

Will it be a technological problem if the $600 pandemic unemployment compensation runs out and is not extended before the deadline?

Ms. DIXON. You are absolutely correct. What we are hearing is that it would take states two to three weeks to get back up and reprogram. So that would lead to a delay, an unnecessary delay, for folks who are depending on these benefits as a lifeline.

Ms. SCHAKOWSKY. So is this really a technological problem that we are facing, or is it just a decision about extending the benefit?

Ms. DIXON. I think that the two are intertwined. We definitely do need to make a decision and make a people-centered decision about supporting workers who have lost their jobs in this pandemic. And it is not just technology but also the decisions that are behind the choices we make in technology.

And so putting people first, developing customer-centered systems, instead of more efficient systems, is important.

Ms. SCHAKOWSKY. Yes. Thank you.

My time is almost up, and I will yield back at this point—oh, did someone want to answer?

OK. Thank you very much. I yield back.

Chairman YARMUTH. The gentlewoman yields back.

I now recognize Mr. Kildee from Michigan for five minutes.

Mr. KILDEE. Thank you, Mr. Chairman.

And I will pick right up where Ms. Schakowsky left off, because I think this really is fundamentally a question that we are all facing right now.

What we are seeing right now in the unemployment issue is both a policy question and a technology question. We have control of the policy choices, "we" meaning Congress. We could make the decision before these unemployment benefits lapse, and I hope we do.

But there is a lot of, sort of, hang-wringing around the issue. There is a lot of discussion about whether the $600 supplemental benefit was correct. It was done for its simplicity, in part. That added with state benefits was intended to equate somewhat roughly to replacement-rate wages for the broad spectrum of people who lost their jobs.

But I would really be concerned, given the technological problems that we have seen just in implementing the $600 uniform benefit, I would really be concerned with challenging states to somehow implement a replacement-wage system when we are talking about tens and tens of millions of people who are struggling with this problem.

And I reject out of hand the idea that the $600 is what is keeping people from going back to work. What is, for the most part, keeping people from going back to work is either there is no work to go back to or they are afraid, naturally, to go back into the workplace when they are at risk of contracting this really dangerous and deadly disease.

So I guess I would be interested in what you all see, maybe starting with you, Ms. Dixon, because you did rightfully point out that, in Michigan, while we made improvements, we made improvements from a horrible system that, at one point in time, under the previous administration, essentially charged 20,000 people with unemployment fraud because they had a lousy system. And we have had to make up for that, and the current Governor has been attempting to do that.

But can you talk about the challenges that the states would have to go through in order to calculate and come up with a replacement-rate basis for this federal supplement as opposed to using a more simple formula that we adopted in the CARES Act?

And starting with Ms. Dixon, but then I would open it up to others to comment.

Ms. DIXON. Absolutely.

So each state has its own specific UI program and its own specific UI formula for how they calculate benefits. And so, that being the case, it is horribly complex for each state to then have to rework their benefit formula to reach that target replacement rate.

So it is actually a lot of work to get that done, particularly, I think, in the case where the $600 is obviously bolstering the economy in a very, you know, tragic crisis situation.

Mr. KILDEE. Other members of the panel?

Yes?

Ms. PAHLKA. I think you should be very concerned. I think any changes now are going to cause some chaos.

We, through the United States Digital Response, have had volunteer teams working with six states on their unemployment delivery. And the public servants that they are partnered with are not incompetent. They are very dedicated. They are working as hard as they can, given the constraints that they are under. But the system itself is pushed to its limits. And I think you should take them at their word when they say that there will be a disruption.

I think the one thing we have really learned in this technology transformation world over the past 10 years is that policy and technology have to go together, they do go together, and we need to make policy with the implementation in mind. Understanding how it will be implemented is the only way to get the results that your policy intends.

Mr. KILDEE. I think that is a really important point. In order to create public value, we have to have operational capacity. And I think sometimes we just assume, well, we just pass a law, and, you know, by magic, it all just sort of gets implemented. The case here is to get help to Americans.

And I think, finally, I will say this. It is a technical question, but it is a technical question that we ought to consider when we adopt these policies. And if we don't believe that we have invested in the technology sufficient to allow a more detailed solution, then we ought to just keep it simple.

And what I say is, before the end of this month, let's give states ample time to continue to administer this process and then make sure that we are making the investments in far better technology and get ahead of this, the way we want to plant a tree 20 years ago. We ought to get ahead of it. We ought not let the perfect be the enemy of the good. We ought to get it done before the end of this month. It stimulates the economy, and it helps Americans survive this.

I thank the panel.

And thank you, Mr. Chairman, for holding this very important hearing.

Chairman YARMUTH. Absolutely.

The gentleman's time has expired.

I now recognize the gentleman from California, Mr. Panetta, for five minutes.

Mr. PANETTA. Thank you, Mr. Chairman. I appreciate that opportunity.

I think, you know, Mr. Kildee, it goes down to what that person on that portrait says in our Budget hearing room. It is about governing through leadership rather than governing through crisis. And, unfortunately, when we don't make these types of investments, we are left with governing by crisis, as we have seen through this pandemic.

Now, look, I think this pandemic obviously required a very, very bold response from Congress, and I think we gave them that. We gave the people that, with how we rose to the occasion with the number of the relief bills that we have passed, obviously the CARES Act being a great example of that.

But this pandemic has also, as we have seen and is being highlighted by this hearing, Mr. Chairman, which I appreciate you putting on—it demonstrates that ignoring these types of delivery systems for these benefits can come with real costs. And the attempts to save federal dollars in the short term obviously have big costs in the long term.

And, yes, we have been warned by the GAO and the inspectors general, but in choosing not to make these necessary upgrades to our federal IT systems, we have really undermined a significant aspect of our response in this pandemic and in this crisis.

So it is important to have this hearing. It is important to learn from our mistakes. But it is also necessary that we do make the investments, the proper investments, going forward so that the next crisis we can be better prepared.

Now, the coronavirus pandemic is, as we are seeing, not just a health crisis. It is not just an unemployment crisis. As I heard today on my local news, it is a hunger crisis. Since the onset of the pandemic, 34 percent of households with children have reported food insecurity in their household. The demand at U.S. food banks, as I have seen as I go out there and volunteer every week at food banks, has gone up by an average of 70 percent compared to the same time last year. And nearly—this is what is interesting—40 percent of those waiting in line at the food banks are new customers, have never, ever been to a food bank before. Forty percent.

Now, obviously, the Supplemental Nutrition Assistance Program has helped address this crisis, but the technology to deliver this program does need to be better, and it needs to be more efficient. And I think the obvious way do that is most likely with mobile phones, considering how many people have them.

So, Ms. Dixon, I am going to pick on you for a little bit, and I want to see if you can tell us about the benefits and potential challenges that come with updating our technology delivery systems so beneficiaries can use smartphone technology that is so prevalent to access the federal nutrition assistance programs.

Ms. DIXON. We know that, in particular, workers of color, so Black and Latinx families, are the least likely to have broadband or a computer in the home. Most of us have or have access to a smartphone. And so it just makes good sense to optimize all of these sites so that they will work with a smartphone.

Mr. PANETTA. Right.

Now, in California, through our CalFresh Program but also with help from a USDA pilot program, we have been able to take steps so beneficiaries can use their SNAP dollars to purchase food online—if they can't go through a phone, at least they can do it online—for delivery through certain retailers.

Ms. Dixon, can you speak to the value of that pilot program, if you are familiar with it, and the challenges we should be prepared for in expanding that program nationwide?

Ms. DIXON. So I can't speak specifically to that program, but I can speak to the fact that, if we don't actually target the program, if we don't actually look at what the needs are for the most vulnerable, we create a program that is not accessible to them.

So we have to actually start in the center with the most vulnerable and their needs, and then it is a concentric circle to help everyone else. But if we don't actually figure out what they need, they are not going to be served.

Mr. PANETTA. Are there any particular federal investments that we should be prioritizing to support that type of expansion on that program?

Ms. DIXON. I think that making sure that we review the evidence from the pilot to find out what are the bright spots and how do we replicate what is working.

Mr. PANETTA. Great. Great. Ms. Dixon, thank you very much.

Mr. Chairman, I yield back my time, unless, Ms. Pahlka, did you have your hand up?

Ms. PAHLKA. I would love to share that——

Chairman YARMUTH. Ms. Pahlka wanted to add something.

Mr. PANETTA. Yes. Thank you, Mr. Chairman.

Chairman YARMUTH. Go ahead, Ms. Pahlka.

Ms. PAHLKA. I worked significantly in SNAP over the past 10 years through my role at Code for America, which I stepped down from in January.

We, in fact, did create a mobile-first application for SNAP in California, starting with a couple of counties, and the state actually adopted it and required all counties to use. And prior to this application, you would need to be on a landline—you know, on a computer with broadband, since you could not do it on mobile.

But not only was it an issue of mobile access, the legacy application had over 212 questions, you couldn't save your work, and it took up to an hour. And so we made something that you could apply for SNAP in California on the mobile phone in about seven minutes, including using the camera on your mobile phone to take a photo of your driver's license, your paycheck, et cetera.

And you asked about the benefits. Well, there have been many benefits. The cost of administration goes down. But, really importantly, we started to close the significant participation gap that existed in SNAP in California. The numbers were quite low, and it is going up as the state has adopted that.

I just also wanted—and I think this is seen everywhere you put in a simple, beautiful, easy-to-use application. I also just really wanted to lift up what Ms. Dixon said. Design for the most marginalized will work for everyone else.

A last brief comment about SNAP payments. There is a desperate need, I think, to modernize the marketplace for payments in the SNAP program. Those regulations were written, I believe, before the internet existed, and it means that you are not able to take advantage of the wonderful, robust, diverse marketplace of payment vendors.

And while I am proud that we were able to get the ability for end users to use their benefits online, there remain significant problems with that program, including that it is limited in most states to just a few vendors, Amazon and Walmart, which hurts local businesses; the fact that you can use it for the groceries, but you can't use your SNAP payment for the delivery fees, which is a significant barrier; and a whole host of other problems which would be solved by simply modernizing the federal regulations that govern SNAP payments and creating a much more robust and modern marketplace.

Chairman YARMUTH. Thank you very much.

The gentleman's time has expired.

I now recognize the gentleman from New York, Mr. Morelle, for five minutes.

Mr. MORELLE. Thank you so much, Mr. Chairman, and to the witnesses. This is really, really, I think, an important topic. I appreciate all the testimony. And I had written comments which I am going to, for the most part, pass on, because so many things have been said here.

Clearly, you know, in a typical year, we would struggle with technology, I think, if you look at the investments we have not made at the state and federal government. This is hardly a typical year. So what we are facing is enormous dislocation in public health and economic—in our economy. And to have the systems we have, which are, I think, still largely legacy systems, is almost criminal, considering the challenge we are going to face.

A couple things that people said, though, I did want to just maybe get some additional feedback.

I was interested, Dr. Wah talked about telehealth and telemedicine. I see a day—and I think about just the technology I have on my wrist which keeps track of steps and heartbeat, et cetera. I envision a world, if we can get there, where you could almost do predictive analytics, that you have real-time data on an ongoing basis going to primary-care providers, or if you have chronic illness. The kinds of things you could do would enormously enhance the ability for people to even detect illnesses or things in their body chemistry before you even feel symptoms. But we are just not in a position, I think, at the healthcare side and given the challenges they face.

So I am going to ask you to comment on that in just a second, Dr. Wah.

I was also—Ms. Pahlka talked about useful tools, benefit eligibility. For three years, I have led a project in Rochester, New York, where I serve, where we are trying to break down the barriers between health, education, and social services and have a truly integrated delivery model literally be run by people in poverty and crisis. So they have single eligibility, that they log onto their smartphones, that they keep track of their data privacy and they control it.

And people do want to focus entirely on the IT, and I think that is what we are working on a lot, how to bridge these things, how to have data sources talk to one another, how to create a data, you know, environment where the transfer of data is important, but it is also: How does it help workflows? I mean, the technology is interesting, but if people aren't working together and if we are not getting better outcomes and lower costs—the challenge is that there is so little investment. So I appreciate that.

And, finally, Ms. Dixon, you said something about human-centered design. This project that we are doing with people in crisis, people in poverty is all using human-centered design. Because you could have the best technology in the world; if people aren't comfortable with it, if they don't trust it, if it is not an environment that they feel they can use easily, it ends up being for naught. So human-centered design is a big part of what we are doing.

And I would like to, offline, actually talk to each of you, because all the things you have said today and what we are doing Rochester—we want to be the first city in America that has completely integrated health, education, and social services. And we have been, as I said, working for three years on it. The state of New York has given us $15 million to invest in the technology and in the people who will work, so nurse practitioners, pediatricians, social-service people, people in housing, food insecurity.

I also sponsored a bill called the HOPE Act, which would create innovation grants for people in the space around hunger and giving nutrition to people.

So maybe you could each, sort of, comment on the challenges, I guess, first and foremost, about: What would be the plan? How would the federal government start? What are the first things we ought to be doing as a Congress, policy-wise, to try to address some of these things?

And I did like what you said, Ms. Pahlka, that, you know, a 10-year technology—you know, 10 years is a long timeframe. You are not going to have the newest technology if you wait 10 years to get it done.

So I am not sure who I am asking this of. If any of you could just comment on what we should be doing in the immediate steps, and then maybe just make some observations about the jumble of things I just said, which probably make virtually no sense.

Dr. WAH. Congressman, I will jump out only because you started with my area of interest in healthcare. But I would say, what government needs to do is continue this investment that they have already made in what I call waves 2 and 3 in this virtual pool of information. As you stated, devices are coming up every day that are contributing to that pool. And that richer pool allows us the power of analytics to be applied to that and make many new discoveries.

The other thing I would point out is what I talked about before, is the nonclinical use of healthcare information. As we talk about COVID and trying to go back to work and back to school, there is going to come a time when we are going to need to show status, whether you have already had the antibody or you have already had the vaccine, that is going to allow us to enter stadiums, movie theaters, transfer to another country, or an airplane.

We need to figure out what is the technology that is going to allow that to happen, because we have never before put that kind of importance on your vaccine status. Your vaccine status used to just let your kids go to camp. But now we are going to have to figure out a verifiable way to say that you got the vaccine, you are immune, and you are safe to travel or go into a stadium or go into another country.

Mr. MORELLE. Yes.

Well, look, if I could maybe take the prerogative of reaching out to each of you individually offline in my offices, because I think each of you had a great deal to contribute here.

And, Mr. Chairman, this is a great—this is one of the few times I wish my five minutes were 10 minutes. But I do appreciate very much you hosting the hearing. I think this is really important for us to all consider.

I yield back.

Chairman YARMUTH. Thank you.

The gentleman's time has expired.

I now recognize the gentlewoman from Texas, Ms. Jackson Lee, for five minutes.

Ms. JACKSON LEE. Mr. Chairman, thank you so very much—I am unmuted, I believe—and thank you to the Ranking Member.

I am going to be a living witness of how important this particular hearing is. Why I am so delighted to serve on the Budget Committee, because it digs deep into some of our most difficult issues.

But let me, before I start my questioning to very quickly for the witnesses, remind everyone that COVID–19 in this arena of needs, because people are not in their normal places of work and interaction, technology has become—I hate to say the terminology—king in terms of working to save lives.

Confirmed cases in the United States, 3.48 million, a 61,000 increase in the last 24 hours; 138,000 deaths, a 787 increase. In the state where I am, the epicenter, one of them, 281,000 cases confirmed, a 10,745 increase; 3,378 deaths, an 87 increase overnight. In my own community, 70,000 cases in Houston, 2,000 cases in the last 24 hours; 653; 676 deaths and 18 deaths over the last 24 hours.

We are in the most desperate moments of our tenure, or our time, as a city and as a region. And we feel, to a certain extent, lost because of the inadequacies of some of the policies that we are facing.

Let me particularly focus on the backlog-of-veterans'-benefits-claims spike during the last few months. According to the data released in May, the backlog of claims for veterans' benefits, those that have yet to be addressed for 125 days or longer, has crept up to over 100,000, which is unacceptable.

So I would ask my first question—and I listened, and I do agree that these are hardworking public servants in our state and our federal government, but the system just doesn't help us. They are a federal agency, besides veterans, where citizens cannot even access to help them do simple things like file my taxes, get tax transcripts, because the individuals cannot access their system.

So my question is to Teresa Gerton, because, what do we do when it comes to public services? What is your answer as it relates to the veterans crisis that we are having?

Jennifer, if you would add to that as well.

And then to Ms. Dixon and Mr. Wah: People are feeling the pain of unemployment. I know that our state has said, Texas has said, if we don't extend unemployment, there will be a disruption. And so I am interested in your response, again, on how devastating that impact would be, inasmuch as people are so desperate for the unemployment, the $600.

And, Dr. Wah, you made a very important point about vaccines technology. There is a company that is U.S.-and Texas-based, Greffen. What is the importance of technology in moving the vaccine research along, Dr. Wah, and doing it where we can focus on companies that are, in fact, U.S.-based? Not to the exclusion, but these companies are struggling to be a part of this. They are small companies. I think technology would be very helpful.

Veterans question, employment question, and COVID–19 question on vaccines.

Could you start out, Ms. Gerton, very quickly?

Ms. GERTON. Congresswoman, I am happy to do that. As a veteran myself, I appreciate your question about how well the VA is addressing veterans' benefits claims.

I would circle back to one of the earlier questions about the electronic health record. The VA has made tremendous progress through VA.gov in addressing and being a more customer-centered delivery mechanism. But they are still governed by extraordinarily arcane regulations about eligibility, about processing. And, in many cases, we still require a human in the loop.

The Academy did a study with the Veterans Benefits Administration about three years ago on the backlog of veterans' claims and how they could reduce them, suggesting, amongst other things, that they create, for example, a robotic process automation tool that would categorize those claims into ones that are very straightforward and could be dealt with quickly and in a totally automated way and ones that are more complicated that require more in-depth human interaction.

We certainly want to make sure that every veteran receives the benefits to which they are entitled and that we do it in a way that is responsive. And so, as the VA considers these alternatives, I think there is a tremendous opportunity to automate some of those——

Ms. JACKSON LEE. Can I get the others to answer, Ms. Gerton? Thank you so very much.

Ms. GERTON. Sure. Thank you.

Ms. JACKSON LEE. Jennifer, can you very quickly—because I noted that they are backlogged. They are not being helpful at this point, I think, because of technology.

Then Ms. Dixon and Dr. Wah.

Can you do that very quickly?

Thank you.

Ms. PAHLKA. Sorry. Did you want me to go now or Dr. Wah?

Ms. JACKSON LEE. No. Very quickly, if you can. I am trying to get you and Dixon in, while they have two separate questions.

Ms. PAHLKA. On the VA, I am not current on that.

But I would point to the fact that the progress with VA.gov, which Ms. Gerton spoke to, is the result of this new model that I keep speaking about that does work. It was done originally by the USDS that sort of became part of the VA under CTO Charles Worthington, who is excellent at this. And I think the VA should continue to leverage that group in particular to make the progress that they need to make to clear that benefits backlog.

Ms. JACKSON LEE. OK.

They are having problems, but I will continue on. Ms. Dixon? Dr. Wah?

Ms. DIXON. So, in terms of the $600, if it goes away, we are talking about getting rid of 50 to two-thirds of the income of folks at the end of month, so right before rent is due, and that is crashing into the fact that we are having upticks, as you mentioned, in the states in COVID cases. So some folks who were off might need to go back on.

And then add to that the expiration of rent moratoriums and mortgage assistance in certain states. It is just a really horrible time to add on top of that two to three weeks' delay to change the program because we want to reduce the amount.

Dr. WAH. And if there is time, I will just very quickly talk about vaccines and——

Ms. JACKSON LEE. Dr. Wah, quickly, thank you. Dr. Wah, quickly, as it relates to vaccines and companies.

Dr. WAH. Yes. So, just as it relates to vaccines, I will go back to my original comment about waves 2 and 3. These virtual pools of information that we have on our patients are going to be very helpful in accelerating our development and finalizing vaccines. And the U.S. companies will have access to this primarily.

So, once it is out there, we will be able to monitor those patients through this virtual pool of information, in a way we previously could not through classic clinical trials.

Ms. JACKSON LEE. Great.

Mr. Chairman, I thank you for your indulgence.

I just want to put on the record my question about the Veterans Administration because I don't think I was—they are backlogged, and I will write a letter about that.

Thank you, Mr. Chairman.

Chairman YARMUTH. Absolutely. Absolutely.

The gentlewoman's time has expired.

I now recognize the gentleman from Nevada, Mr. Horsford, for five minutes.

Mr. HORSFORD. Thank you, Mr. Chairman.

Since February of this year, more than one in four Nevada workers have lost their jobs statewide, pushing the state's unemployment rate to 30.1 percent. That is the highest level ever reported by any state in modern history and generating an unemployment insurance caseload orders of magnitude higher than anything the state has witnessed previously.

I have heard directly from my constituents during regular telephone townhalls during this pandemic, in which so many of them have expressed their frustrations about how difficult it has been to navigate the unemployment system, from website crashes, to wait-

ing several hours on the phone before getting a response, to having trouble resetting their passwords.

Now, the Families First Coronavirus Response Act, which we passed in law back in March, included a provision from my bill, H.R. 6199, the Emergency Unemployment Insurance Stabilization and Access Act, which provided a billion dollars in grants to state unemployment offices.

Nevada received a little over $10 million. Those grants have been used to increase staffing, update information technology systems, and process the onslaught of unemployment insurance claims that have been coming in.

We have provided a billion dollars to states. I do not think we realized how difficult it would be for state UI offices to produce on such an outdated technology system. And I have had many calls with Nevada's State unemployment office about the issues, and I know that Nevada is not alone.

So, Ms. Gerton, Ms. Pahlka, and Ms. Dixon, can any of you explain why states have struggled to update their unemployment forms and payment systems under the Federal Pandemic Unemployment Compensation Program?

I am particularly interested to know the various steps unemployment offices had to take in order to even upgrade their systems with the Department of Labor.

Ms. Pahlka?

Ms. PAHLKA. I think I spoke over my colleague Ms. Dixon earlier, so let me let her take the lead this time.

Ms. DIXON. One of the important things is making sure that—I am sorry. I lost my train of thought when you were speaking.

Mr. HORSFORD. Well, your testimony pointed out that the national administrative funding for UI systems is essentially unchanged from almost 20 years ago.

Ms. DIXON. Right.

Mr. HORSFORD. And so my question is, what could the states have been able to do without the support from the Department of Labor to set those standards and even to recommend the type of systems that should have been put in place?

Ms. DIXON. We have the system that we have invested in. So we haven't invested in it. And we know, as the Chairman mentioned at the top, that the same funding from 2001, in terms of administrative funding—there is no dedicated funding for IT in particular, so states are having to try to squeeze that out of what they do get.

So we do need to actually take this seriously and have dedicated funding and a plan to get all the systems modernized, including those standards. So doing it in a way where we are putting people first and we want to know: How are they interacting with the system? Do we need to simplify the questions? There are lots of things that we can do to marry the policy with the funding.

Mr. HORSFORD. Ms. Pahlka?

Ms. PAHLKA. To your specific question of what does it take to update these systems, I think I would just provide a little bit of detail.

You have these systems that have really accrued over decades. We think of them as archeological layers, where people have made tweaks to an original system from many, many years ago over and

over and over again. And so, when you are asking them to update, it is not simple.

In fact, in many cases, you have either just one employee left who remembers how this script was written or that script was written and how to actually do something and make this change. And, in some places, you have, sort of, nobody left who knows how to do it, or they are relying on a vendor that—again, that speaks to the cost of maintenance of these systems that has come up earlier in these hearings.

But the complexity of these changes really cannot be overstated.

Mr. HORSFORD. Yes. It is extremely frustrating, especially for the gig workers, the independent contractors. The employers or the companies that they work for can't even submit verification.

And I loved your idea about establishing a nationwide verification system, something like E-Verify for companies that are national or multinational, in order to verify the wages that were paid to those employees.

That is the biggest issue that we are facing here in Nevada. There has been no guidance provided by the Department of Labor, or little guidance. There is no recommendation for the types of systems that would actually work. And so we have a piecemeal approach in 50 different states. And it is all outdated, it is all antiquated. And yet Congress appropriated a billion dollars.

So we need to move this forward and create solutions now while we address the longer-term, kind of, systemic issues.

So I know my time is up. I did want to just raise one point, Mr. Chairman, and I will submit it for the record. But, under Department of Agriculture, children and families that are eligible for SNAP or free and reduced meals based on their income eligibility, that information is not shared with the Department of Education in order for them to get free internet service. And that is contributing to the digital divide.

And, again, it is something that Congress can fix. It is something that, through guidance from our federal agencies, we can address. And I hope that my colleagues would work with us to improve that for our children and families in this country right now during this pandemic.

Thank you, and I yield back.

Chairman YARMUTH. OK.

The gentleman's time has expired.

I now recognize the—I guess he is the Acting Ranking Member now, the gentleman from Georgia, Mr. Woodall, for 10 minutes.

Mr. Woodall, we are not getting your audio. If you want the staff to unmute you, just nod.

Mr. WOODALL. Can you hear me, Mr. Chairman?

Chairman YARMUTH. There we go. Yes, we hear you, Mr. Woodall.

Mr. Woodall, we hear you. We did.

Mr. WOODALL. Thank you very much——

Chairman YARMUTH. There you go.

Mr. WOODALL [continuing]. Mr. Chairman. I appreciate the indulgence. It is easier to do this from my living room than it is from your committee room, and I don't blame you for that. I credit the living-room environment that we have all gotten used to.

Dr. Wah, I wanted to start with you. I think about all the crises and the responses that have been talked about today, and then I think about what HHS did in response to that crisis. We are going to promote telemedicine. We are going to allow telemedicine to be used in ways we didn't allow before. But we are only going to do that through the end of the crisis.

Tell me about some of the problems that we have seen in the expansion of telehealth within the Medicare system over the past three months that would lead us to want to pull that system back instead of make that expansion permanent.

Dr. WAH. Thank you, Congressman.

I think first and foremost is what I said before, is that we need to make sure that the telemedicine visits are the same as in-person visits and that they are connected to our virtual pool of information that I talked about.

So one thing is, we don't want them to be isolated so that they are not getting information out of the pool to help the telemedicine appointment be richer and better. And when the appointment is finished, they need to put information back into the pool. So that would be consistent with my waves 2 and 3.

But the other thing that people have been concerned about with telemedicine, and I think it is imminently solvable, is this issue of whether or not it is going to open the door to fraud and abuse. I think overuse of telemedicine is very unlikely. It is no more likely that we are going to overuse telemedicine than we are going to overuse in-patient, in-person use of healthcare. Very rarely do people wake up and say, "I feel like calling my doctor six times this week." So I don't think it is going to be overused. But that is a concern, and I think there are ways to put constraints on that and put guardrails on it so it doesn't become a problem.

But I think it is recognized that it is safe, it is effective. And it is very well-accepted to use telemedicine. It has been around for over 20 years, but it is really come to be highly useful in this environment when face-to-face interaction is so much more challenging.

Mr. WOODALL. I have concerns about our desire to make sure things are qualitatively the same. We have opportunities to expand access. And I don't expect my telemedicine visit to be qualitatively the same. I used to have to get in the car, drive four and a half hours, sit in the waiting room for an hour, and get back in the car and drive four and a half hours back home. I would be willing to accept something that is slightly different as long as my family decides that it is a superior value, my constituents' families decide it is a superior value.

As Ms. Dixon said earlier, we have the systems in place that we have paid for. We have created a set of expectations around the in-person healthcare visits that we are trying to replicate.

As we think about what we are doing this year, next year, 10 years from now, how important is it that we stay tethered to that "I want it to be qualitatively the same" as opposed to "I want to utilize it for what it is, and then I want to utilize something else for what it isn't"?

Dr. WAH. Yes, I would love to use this as a comment. One of the things that I think would solve a number of things is, we have

talked a lot about the historic fee-for-service system of medicine where we pay for everything we use and as we use it.

But if we move, as we are trying to, to value-based care, where it is—as you said, the outcome for you and your family is the prize. It is not how many times you have visited or how many issues you have had. It is, are you and your family getting healthy and staying healthy? That is what we pay for, and that is what we incentivize. Then the private sector will find ways to achieve that goal. And it will be a mix of in-person care and virtual care, but it will get to the end goal of you and your family being healthier and better.

And, if we do that, all of these things that we are talking about will be driven by competition, to make sure that the marketplace meets that need to deliver the best product to you and your family so you are healthier and better because of it.

Mr. WOODALL. Well, Ms. Pahlka was right when she described the archeological dig that is our computer systems today. I am going to use that again.

We can't change things without being intentional. The Bush Administration tried. The Obama Administration tried. If you would have asked me a decade ago if our EHR mandate was going to have me in 2020 without the ability to walk into any physician's office anywhere in the nation and have my records transferred in in real-time, I would have said, no, of course, we are going to have that kind of functionality. We were intentional. We provided incentives. We provided penalties. We gave a five-year lead time. And here we are without the functionality that we desired.

Now, tell me where the failure was. You just lauded the private sector and its ability to solve problems. We have all talked about the government's need to be intentional in this space. I thought that we combined those two in the EHR mandate, but we have not met my expectations. Tell me a little bit about where we went wrong and what we should be doing differently going forward.

Dr. WAH. I am sorry. Were you addressing that to Ms. Pahlka or myself?

Mr. WOODALL. Dr. Wah, I was directing it to you. But, Ms. Pahlka has identified the flaw——

Dr. WAH. Oh, OK.

Mr. WOODALL [continuing]. but, in the case of EHR, we started from scratch. We didn't have the archeological-dig problem. We said, we are going to walk in on day one, we want everybody to go out and buy a brand-new system, and we are going to create a real, tangible benefit in terms of quality and cost for the American healthcare public.

Dr. WAH. Yes, so I think we did accomplish what I call wave 1, which was to get off of the paper-records system, which we sometimes forget how bad that was. When you want to talk about archeological digs, we used to have patients come in with shopping bags of paper. That has passed away, fortunately. So going to digital has helped, and that was a significant achievement of that effort that you talked about.

The interoperability is still a challenge, and creating that virtual pool of interoperable information is an ongoing process that we are still doing. And I would submit, some of those reasons are not tech-

nology but business reasons. So sometimes there were business reasons why people didn't want to share information. We just passed, in the 21st Century Cures law, information-blocking rules to prevent those business things that are preventing interoperability.

So it is not solely a technology problem; it is a regulatory, legislative, and statutory problem that we have to continue to address.

Mr. WOODALL. Well, it is not lost on me that, in order to provide the kind of care that we all know our senior citizens need in this time of the pandemic, that HHS had to waive some HIPAA privacy rules and direct the Office of Civil Rights not to enforce some of those rules so that we could use those modern technologies that we are all accustomed to using to achieve those goals.

Ms. Pahlka, tell me about this from a practitioner's standpoint. We did say "start from scratch" with your electronic health records systems. Physicians did go out and buy these for the very first time. And here we are a decade later, and we don't have the interoperability.

I couldn't have possibly predicted the state of technology in 2020 back when the American Recovery and Reinvestment Act was passed a decade ago. So what would you advise us to do as legislators to mandate enough on the front end to achieve our goals but not mandate so much that we miss the opportunity for innovation?

Ms. PAHLKA. It is an excellent question. I am not going to be as expert or useful on the EHR issue as Dr. Wah will be. It is a specific, sort of, mega-project in government that has, you know, plagued many, many administrations. It has gone back a long time. And I don't pretend to know what to do about it now.

The pattern I see is that, when we are successful with implementations like this, it is because we start small and learn as we go. And it was very hard to do that in the EHR context. But we can do that in other contexts. And we have successfully done it in other contexts. But I think that is not how EHRj started. It started as a very heavy requirements-driven, extremely well-funded effort that had all the hallmarks of a failed mega-project.

I am sorry I can't be more helpful.

Mr. WOODALL. I hear that, "start small and go big." And I want to cast that against the concerns I have heard so many folks express about the different unemployment systems we have, of course, where we have 50 different systems in 50 different states. That is going to be a constant tug.

And, Mr. Chairman, I know that you have called this hearing because you want us to be intentional in this way.

I hope that our efforts to solve 50 separate problems that we have heard so often and that we are all committed to solving don't trample that good advice that Ms. Pahlka has given, that some of our most successful efforts in this area have started small, proven the concept, and then we grew them out to the 50 states, as opposed to that single mandate from on high.

So thank you, all the witnesses, for being here.

And thank you, Mr. Chairman.

Chairman YARMUTH. I thank the gentleman.

His time has expired.

I now yield myself 10 minutes.

And let me begin by thanking all the witnesses, not just for your testimony in this live portion but for your written testimony as well. I was actually kind of stunned in reading testimony about what is a fairly wonky subject, how accessible and how logical it was. I was very impressed with all of you. As somebody who is not as attuned to IT as many, many others, I really got it.

And there was a revelation there, particularly with Ms. Pahlka and Ms. Gerton's testimony, that one of the issues that we seem to have is an issue of perspective.

And when we are talking about medical health records, I remember, I was here when we drafted the ACA and we were working on those provisions, and the idea was, how do we gather all this information? It was not, what is the purpose of gathering the information? It was, how do we gather it, and how do we incentivize the doctors to do it, as opposed to actually thinking about the end product and the people we were going to engage and what it was going to mean to them.

And I think for the first time I have actually started to think, reading the testimony—and I think, Ms. Pahlka, you specifically said this, I thought of the government as a "-customer service organization." And I don't think we do that nearly as much. And so that was kind of a revelation I thank you for.

The other thing why a lot of the testimony resonated very deeply with me is, one of my standard lines when I am out talking and talking about Congress is I say, you know, "We have a dilemma, and that is that Congress, at its optimum efficiency, moves at 10 miles an hour,—right now, we are at two or three miles an hour—meanwhile, the world is moving at 100 miles an hour." And how—can we possibly make policy that anticipates where the world is going?"——

You know, we generally legislate, it has been my experience, as if we are target shooting instead of skeet shooting. We need to be shooting where the target is going to be, not where it is now. And that is certainly part of the issue here.

And when we think differently, when we stop thinking about equipment and investment in equipment, and thinking about functionality and purpose, it seems like that is absolutely the right way to approach this issue, but I am not sure that Congress is equipped to do it.

So I would start by asking Ms. Pahlka if—I am not aware of any concerted congressional effort to deal with this problem. And certainly in different areas of jurisdiction it has come up, and we have discussed it, kind of, on an ad-hoc basis. One of the things that I always think about is, we don't spend nearly enough time in Congress thinking about and discussing how to make the government work better. And that should be a primary function of ours.

And I know, Mr. Woodall, we have had conversations like this, that I am one of these Democrats who does not believe that every regulation is a meaningful, helpful, beneficial regulation. And we ought to be spending a lot more time thinking about what we are doing that makes a difference in the way government functions and in people's lives, and not about a lot of the things we think about.

So, I mean, if you were in our position—and I will start with Ms. Pahlka—and you want to create a congressional effort, what would be the first place you would go?

Ms. PAHLKA. What an excellent question, and a difficult one.

I think that all efforts work when they have concrete successes behind them that start to actually show the American public that things can be different. So I would actually champion a couple of very specific projects that I think Congress could move along more quickly.

And Congress, obviously, wouldn't be implementing them. You would need USDS——

Chairman YARMUTH. Right.

Ms. PAHLKA [continuing]. or one of these places to do something, like speed the delivery of UI benefits. And, frankly, the thing that I have spoken about here where you could potentially speed eligibility determinations and reduce the wait times is relevant.

My thing is, always start small. You would start with one state; you would expand it. But you could also start with one benefit, like UI, and then expand it to other benefits. Eligibility rules are different across different benefits.

One of the members spoke about SNAP, which is critical at this time and also facing challenges, as it has had the same, sort of, expansion of both benefits and programs. But eventually you could create centralized service that sped the determination of eligibility across a number of benefits.

And I think what is really important is not just that we speed government for its own sake but that the people who are waiting on those benefits start to see a difference.

So I would just do something very concrete, get behind it, and figure out along the way all of the attacks that come on it, all of the barriers to it, and just start, one by one, use your power to remove those barriers and get the job done.

Chairman YARMUTH. Thank you.

And, Ms. Gerton, I want you to answer that as well, but I also want to throw in that both of you mentioned the notion of agility. And I understand the word; I am not sure I understand how it applies here. So, if you could kind of elaborate on that, Ms. Gerton, as well as where you would go if you were directing Congress right now.

Ms. GERTON. Thanks, Congressman. I think I would offer two suggestions.

We talked already today about the importance of SNAP and the importance of UI benefits to deliver crisis services. One of the things that we have been working on is the idea of providing more flexibility to the grant-writers at the federal level to allow the recipients of those grants to integrate their systems.

And if I can give you a quick example. When I was at the Department of Labor, I was responsible for overseeing the Homeless Veterans Reintegration Program. It was a fairly small grant that provided training opportunities for homeless veterans to return into the work force.

Interestingly, the grantees who received our grants also received grants from the VA, received grants from HUD, and they received a variety of grants. Because of the way the grants were structured,

they had separate IT systems to report on the compliance for every one of those grants, which placed an extraordinary administrative cost on them, which kept them from integrating those funds in a way that could better deliver outcomes for homeless veterans.

So one of the things, as Ms. Pahlka just mentioned, if you focused on UI, for example, or SNAP, thinking about all of the grants that those grantees are receiving and making it easier for them to combine them, in a way that still provides the accountability that Congress needs, but that helps them optimize the delivery of services for their constituents, would be a huge first step. It is not removing regulations, but it is providing flexibility.

The second place I would suggest is sort of a back-office approach, right? At the federal level, we understand that hot systems, for example, could deliver better finance and accounting than our customized systems, could deliver better H.R. services. But those are sold, sort of, as software-as-a-service. We don't need a big requirements process to tell us how to do best HR.

So allowing the flexibility for shared services, allowing people to buy them as a service, where that service is maintained in the cloud, where it is kept constantly updated, where the cybersecurity is much tighter than, for example, any agency who hasn't had the time invest and is running on vulnerable software.

You could add flexibility in the shared services space and simplify back office, which would free up additional administrative costs. And you could allow flexibility on the front-office side in service delivery so that grantees could better mix their funds to deliver outcomes for their clients.

Chairman YARMUTH. OK. Well, thank you very much.

My time is running down, and even though I have the gavel, I am not going to abuse that, even though Rob wouldn't mind.

I am so glad that you mentioned artificial intelligence in your testimony, Ms. Gerton. And one of the things,—when I am out speaking, I say, there are three things that we absolutely have to focus on now if we are going to have a viable future, and one of them is climate change, and one of them is early childhood education, and the third one is how we are going to deal with artificial intelligence. I think it is that critical.

And we, at some point, are going to have a hearing on artificial intelligence and what it might mean for the budget going forward, because, clearly, there are dangers with artificial intelligence and enormous opportunities.

So I am glad that you mentioned that, because that is going to have to be a part of our technological future, and we need to start thinking and talking about that right now as to how we are going to integrate it in a way that does serve our customers. And so you have given me a new mantra that I am going to talk about a lot, "sometimes citizens, sometimes taxpayers, but always customers of the government."——

But, anyway, with that, I will, once again, thank all of the witnesses. It has been an extremely valuable discussion. And, again, I think the record of our live hearing and also the written testimony is going to be a substantial record that we can rely on and Members of Congress can rely on as we start thinking about how we deal with some of these issues.

So, with that, thanks again for your participation. Thanks to Mr. Woodall for staying with us till the end.

And if there is no further business before the Committee, this hearing is adjourned.

Thank you.

[Whereupon, at 4:07 p.m., the Committee was adjourned.]


**RANKING MEMBER STEVE WOMACK'S (R-AR-3) OPENING REMARKS**

Hearing: *"Software Update Required: COVID-19 Exposes Need for Federal Investments in Technology"*

July 15, 2020

*(As Submitted for the Record)*

Thank you, Chairman Yarmuth, for holding this hearing, and thank you to our witnesses for joining us today.

Federal information technology (IT) systems are critical to providing Americans with a wide range of government services and information. In the 21st century, it's no secret that IT is fundamental to many different operations. These systems are aimed at improving program delivery, maximizing effectiveness and efficiency, and ensuring data security. If we cannot maintain and optimize this critical infrastructure, the federal government will be unable to execute one of its essential functions: providing crucial resources and services to the American people. We should never allow the delivery of veteran health care, social security benefits, or defense initiatives to fail because of outdated and faulty IT systems.

Unfortunately, current federal IT upgrade efforts are faltering due to missed deadlines, cost overruns, and inadequate outcomes, including operability failure and data breaches. While COVID-19 exposed additional deficiencies of federal IT systems, these shortages existed long before the current pandemic.

For example, in 2011, the Department of Veterans Affairs (VA) and the Department of Defense (DOD) began an electronic health record (EHR) modernization initiative to create a single, shared system between the two departments. In 2013, and after spending more than $1 billion on the program, the VA and DOD announced they were abandoning the project with nothing to show for the money spent other than a painful lesson learned. This is not only a waste of taxpayer dollars, but, more disconcerting, it hurts our nation's service members and veterans who depend on these health care services. This is the more upsetting part for me. Program indecision and mismanagement have resulted in us failing those who've served this country.

Where is this EHR effort at the VA today? The VA and DOD are trying this again with a new government contract from Cerner. This initiative is already nearly one year behind schedule and has yet to go live in even one medical center. I truly hope this story ends better than past VA efforts in the IT space.

And I'm not just picking on the VA's challenges. There are other examples of how we have fallen short:

- In 2014, the Office of Personnel Management's data was breached, which resulted in approximately 21.5 million compromised records.
- The HITECH Act, which was part of the 2009 stimulus package, allocated billions of dollars for the Department of Health and Human Services (HHS) for IT development. To date, HHS still does not have an interoperable system and continues to struggle with siloed and fragmented data due to the different electronic health records vendors.

So, the question is, how do we make sure, going forward, all federal investments in IT modernization efforts result in the timely deployment of up-to-date, secure, and properly functioning systems?

Strong vetting and planning for proper IT implementation is key. It is imperative that these investments are met with rigorous oversight—yes, that is our job here in Congress—and agency accountability to ensure that the public is getting the best services available and taxpayer dollars are not wasted.

But, as I mentioned last week, there is another threat to federal investments in vital government programs such as IT modernization. **That is our out-of-control deficit and debt**. If we don't confront the autopilot mandatory spending that is hurtling us towards a fiscal cliff, there won't be any money left to fund a range of prerogatives.

Time is running out, and it's essential that Congress directly address this problem. The Budget Committee must meet its duty and put together a budget to chart a new way forward. We need to get back to making the tough choices that will determine a brighter future. We have an obligation to current and future generations to ensure that critical programs don't cease to exist.

With that, I look forward to hearing from our witnesses today, and I look forward to today's discussion. Thank you, Mr. Chairman. I yield back.

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# CONGRESSWOMAN SHEILA JACKSON LEE OF TEXAS

## HEARING STATEMENT:

## "SOFTWARE UPDATE REQUIRED: COVID-19 EXPOSES NEED FOR FEDERAL INVESTMENTS IN TECHNOLOGY"

**COMMITTEE ON THE BUDGET**
**WEBEX**
**JULY 15, 2020**
**2:00 P.M.**

- Thank you Chairman Yarmuth and Ranking Member Womack for convening this important hearing on the subject of investing in and upgrading modern technologies, so that critical programs and services can be effective at the exact moment they are needed.

- Let me welcome our witnesses:
  - Teresa Gerton
    President and CEO of the National Academy of Public Administration

- Jennifer Pahlka
  Founder of Code for America
  And Co-Founder of the U.S. Digital Response

- Rebecca Dixon
  Executive Director at the National Employment Law Project

- Dr. Robert Wah, M.D.
  Physician Leader in Healthcare and Technology
  And co-chair of the Health Information Technology Advisory Committee

- Mr. Chairman, investing in technology modernization should not be a partisan issue.

- As a result of the COVID-19 pandemic, we have all been made acutely aware of the failings and inadequacies in our current information technology (IT) infrastructure.

- We have not been nearly as flexible nor as fast as we should have been in terms of updating applications and distributing resources pursuant to the emergency programs, which Congress established to provide the American people economic relief and other resources in response to the COVID-19 epidemic.

- Instead of providing relief swiftly and efficiently, we saw glitches and delays while identifying and dispersing economic impact payments, an overwhelmed application system for the paycheck protection program that was plagued with time-outs and delays, and millions of Americans wait hours on end to file for unemployment compensation.

- These inefficiencies have created additional challenges for families who can no longer make ends meet, and it has prevented our

already struggling economy from receiving a desperately needed boost from consumer spending.

- It is important that we use this opportunity to upgrade our outdated systems with a more secure, agile, and cost-effective infrastructure.

- In 2019, the federal government spent more than $90 billion on unclassified IT, with about 80% of the funding being dedicated to the operations and maintenance of existing systems.

- Maintaining these legacy systems has only become increasingly expensive as time has passed since they most often use outdated software languages and require hardware parts that are unsupported.

- In fact, between 2010 and 2017, as the operations and maintenance spending increased, the spending on development, enhancements, and modernization decreased by $7.3 billion.

- Aging systems are not only more expensive to maintain but they also develop security vulnerabilities over time.

- For example, in June 2015, the Office of Personnel Management (OPM) discovered a set of data breaches that compromised the personal records and background investigation data of 21.5 million federal employees, dependents, and contractors.

- At that time, OPM was using a legacy system that did not use up-to-date security infrastructure like adequate firewalls, data encryption, or increased authentication requirements for remote access.

- For years, America has led the world in innovation and technological progress.

- We must revive and continue that spirit of invention and creation by investing in the next wave of modernization initiatives, such as moving applications and services to a cloud delivery model, sharing services within and across departments, as well as consolidating department and agency data centers.

- Today, as COVID-19 cases continue to soar across the nation, we must recognize the essential role technology plays in telehealth, distance-learning, and remote work but that we also seek to improve and expand these technological capabilities.

- In the United States alone, we have nearly 3.5 million confirmed cases of the virus and over 138,000 related deaths.

- The state of Texas has quickly become a hotspot zone, claiming over 275,000 cases and over 3,300 deaths total.

- Just yesterday, Tuesday, July 14, 2020, Texas, once again, set a new record for single-day increases, reporting 10,745 new coronavirus cases.

- Furthermore, Harris County alone has over 47,000 cases and approximately 466 deaths.

- This pandemic has irrevocably changed the world as we know it.

- It has also exposed and exacerbated racial and geographic disparities with respect to the accessibility of critical services.

- People are angry, people are confused, and people are scared.

- By continuing to fund modernization initiatives as we did with the *Families First Coronavirus Response Act*, the *Heroes Act*, and, most recently, the *Moving Forward Act*, we are making strides to address these disparities by investing in technological solutions.

- As a long-time advocate for marginalized communities, I am proud to have supported H.R. 2, *the Moving Forward Act*, which seeks to address these glaring disparities by investing $100 billion in broadband funding to extend high speed internet to underserved and hard to reach communities.

- However, this is not enough.

- We should also seek to eliminate the funding uncertainty that constrains discretionary funding and inhibits ongoing federal IT projects like easy-to-navigate websites for Social Security recipients, electronic health records, telehealth services, one-stop benefit management systems for veterans, and online applications, forms, and status updates instead of paper-based immigration systems.

- As Members of Congress, it is our responsibility to invest in new, modern technology solutions that will help citizens better access services, allow agencies to complete their missions, help state and local governments administer federally financed programs, and reduce the total cost to taxpayers.

- I look forward to hearing from our witnesses.

- Thank you, Mr. Chairman, for convening this important hearing.

**Questions for the Record**
**Congressman Bill Flores (TX-17)**
**"Software Update Required: COVID-19 Exposes Need for Federal Investments in Technology"**
**July 15, 2020**

**Questions for Dr. Robert Wah:**

In 2011, the VA and DOD began an electronic health record modernization initiative to replace the two separate EHR systems used by the two departments with a single, shared system. In 2013, and after spending more than $1 billion on the program, the Secretaries of VA and DOD announced they would not continue with their joint development of a single EHR system, instead the VA would buy and convert to the DOD EHR system.

- What were the lessons learned from this experience and how can we apply these lessons learned to smart decision making about future IT system development?

You have done a lot of work in the past on modernizing the DOD IT system. Can you please describe to us the lessons learned from your experience with the DOD IT system?

- What were your biggest successes?
- What were the biggest challenges?
- How can we take the lessons learned from both the successes and challenges and apply them to future IT implementation?

**Questions for the Record**
**Congressman George Holding (NC-02)**
**"Software Update Required: COVID-19 Exposes Need for Federal Investments in Technology"**
**July 15, 2020**

**Question for Dr. Robert Wah:**

Over the last few months, this pandemic has highlighted the need to procure improved data collection and analysis technology for agencies across the federal government. Whether providing secure connections for government employees working from home or creating efficient data streams to track the spread of COVID-19 in communities across the country, our emergency response has heavily depended on our technological framework and resources.

I am proud to say that my district is home to many of the innovative technology companies that have helped fuel the government response to this virus. The SAS Institute, headquartered in the Raleigh area, has been at the forefront of improving advanced data analytics software long before the pandemic began; but during this national emergency, they have worked tirelessly to provide specialized data analytic software to CMS to help them track and contain the spread of covid-19 in nursing homes.

SAS's work with CMS is an excellent example of how close public-private partnerships can effectively and efficiently identify shortcomings to best meet government needs. Before we assume that blindly throwing money into our outdated framework will solve our problems, we should focus on strengthening public-private partnerships whose experts can identify specific information technology shortcomings and focus on cost-effective ways to innovate.

- What are some ways that we can improve inefficiencies within our existing technology framework?

Questions for the Record

Congressman Bill Flores (TX-17)

"Software Update Required: COVID-19 Exposes Need for Federal Investments in Technology"

July 15, 2020

Questions for Dr. Robert Wah:

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- What were your biggest successes?

- What were the biggest challenges?

- How can we take the lessons learned from both the successes and challenges and apply them to future IT implementation?

Response:

As mentioned during the hearing, I completed over 23 years of active duty military service in 2006. This was several years before the events mentioned in this question so I cannot comment based on first hand knowledge or being directly involved with the decision makers in DoD or VA in 2011 or 2013. Some issues that have been cited about the 2 different systems, DoD and VA, are the widely different requirements for the two organizations. The DoD delivers healthcare in brick and mortar facilities in the US but also in many other countries like Japan and Germany as well as in operational environments like ships, planes, and theatres of operations like Afghanistan and Iraq. The VA delivers care in US and territories. Having a single technology system fulfill all these requirements is challenging.

Some of the successes I cited at the hearing involved electronic prescribing in the DoD. I have not prescribed medications on a paper form in nearly 30 years while providing care at a DoD facility-it is always done electronically. This is a remarkable comment on how advanced the DoD Health IT was as it cares for 10 Million patients in over 520 hospitals and clinics worldwide. While this has lowered transcription error due to handwriting interpretation, it also allowed DoD to deploy the Pharmacy Data Transaction Service (PDTS) which created a near real time database on all the prescriptions written for 10 Million patients. So when I write a prescription electronically at Walter Reed Bethesda and push "enter", within 2 seconds PDTS sends back information if my new prescription conflicts with the patient's allergies, conflicts with other medications prescribed or is a duplicate of an existing prescription. This system has all the patients' prescriptions from Military Treatment Facilities like Walter Reed Bethesda, the mail order pharmacy system and over 66,000 civilian pharmacies used by DoD patients. Over the years, electronic prescribing and PDTS has prevented millions of serious medication problems which would have led to significant harm and complications to patients.

The DoD and VA care for large, dispersed patient populations of nearly 20 Million patients across thousands of hospitals and clinics worldwide. It is a complex task to have an IT system that works in all of these environments. There are many areas of recommendations for successful procurement and implementation of these systems. My recommendations are:

- Make surer the goal is to improve care and health for DoD and VA patients, it is NOT just an IT systems Procurement and Deployment project
- Be flexible in procurement process that allows the DoD and VA to get the best of private sector market innovation and capability. In some cases due to unique requirements, there may need to be Government based technology/software integrated with Commercial Off the Shelf technology but this should be kept to a minimum. In general, the government is not the ideal software developer.
- Emphasize interoperability and open standards when procuring systems so they can communicate and interact with other systems outside of DoD and VA.
- Avoid proprietary solutions that can be closed and lead to "Vendor lock"
- Make sure clinical perspective is part of the process from the very beginning of procurement, design and deployment of Health IT systems. This is crucial to getting a system that works with the clinical workflow and business processes of healthcare delivery and is not a hindrance or burden on the users.
- When budgeting and planning for these technology systems, be sure to include business process innovation to take full advantage of the change to new digital systems
- Include planning and budgeting for training to maximize use of the new systems; do more than just simple "button pushing" training but make sure the entire healthcare delivery workforce knows how to optimize workflow and business processes to get the most from having new digital tools to improve care of the DoD and VA patients.

-Robert Wah, MD

Questions for the Record

Congressman George Holding (NC-02)

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July 15, 2020

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- What are some ways that we can improve inefficiencies within our existing technology framework?

Response:

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