HANA SCHANK - ORAL TESTIMONY

Lisa Charles lives outside of Charlottesville, Virginia. The 42 year old divorced mother of two typically qualifies for the Earned Income Tax Credit. She works when she can, but spends the bulk of her time tending to her older son's severe medical problems. His endocrine system does not function properly, and he spends a lot of time in and out of the hospital.

Because Charles was below the filing threshold and had not filed 2018 or 2019 taxes, she was one of an estimated 12 million Americans who had to claim her stimulus check using the IRS's non-filer portal. In March, sitting beside her son at the hospital, she filled out the form. She really needed the money because she was behind on rent and facing eviction.

To date, she has not received the stimulus money for her children OR the $2,148 she qualifies for under the EITC. What Charles didn't understand is that the non-filer portal prevents its users from claiming the EITC. As a work-around to allow non-filers to claim a stimulus check, the portal files simple tax returns for its users, unbeknownst to Charles and millions of other Americans. So when she attempted to claim the EITC, because she had used the portal, the IRS said she had already filed taxes and couldn't do so again. To remedy the situation, Charles must mail a 1040 form to the IRS and wait for the agency to work through its backlog and get to her. In the meantime, Charles' bills won't wait.

When it comes to federal IT failures, we are used to hearing stories about websites crashing, or huge cost overruns and delayed launches. But Charles's story is, more and more, what federal IT disaster stories will sound like. Unless the federal government changes its approach to technology, badly designed systems layered on top of a badly thought through process ending up in a total failure of service delivery for the people who need it most is our future.

Yes, it is true that the federal government often relies on IT systems that date back to the 1950s, which doesn't help matters. But two bigger issues created the Catch-22 that Charles and millions of others are caught in. And it is worth noting that while this example is specific to the IRS and the CARES act, it could be happening with any agency and any new policy at any time.

The first is that these systems were built for a time when people didn't use computers from home. They are built for phone, mail, fax, or in person contact.

The second issue is that when government implements a policy, that policy **implicitly** relies on existing IT to be delivered. But the policy creation process **doesn't take delivery into account**. Congress is used to enacting policy and having it then be a reality. In today's world, there is an entire technology component that must be put into place in order to make policy a reality. For

something like the CARES act, that money doesn't exist for the people who need it until they are able to successfully file for and receive it.

That means that policymakers need to think about things like:

- How will people apply for this?
- How will people track the progress of their applications - the way they can track a package they ordered online?

Thinking about delivery means thinking about all the different types of people who might file for something, thinking about how they might file, and what might go wrong. Businesses wouldn't survive without thinking this through. Yet it mostly doesn't happen in federal IT projects.

So what is the solution?

First, there needs to be a modern technology workforce inside the government, and this starts from the top - there must be a very senior person at each federal agency who has a background in technology, who can bring that experience to bear on policy decisions.

Second, **all policy decisions must include a tested delivery plan**. That should start here, in Congress.

Finally, I want to touch on cost savings. When IT fails it is expensive. We see cost overruns into the billions of dollars. Bringing senior tech talent in-house, while potentially expensive as a line item, would likely lead to tremendous cost savings as there would be people who could advocate for building the right thing the right way the first time. There would be no need to patch unforeseen holes quickly, as the IRS was forced to do with the CARES act. Government would get it right, save money, and serve the people the way it is intended.

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WRITTEN TESTIMONY

Lisa Charles lives outside of Charlottesville, Virginia. The 42 year old divorced mother of two typically qualifies for the Earned Income Tax Credit. She works when she can, but spends the large bulk of her time tending to her older son's severe medical problems. His endocrine system does not function properly, and he spends a lot of time in and out of the hospital.

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When it comes to federal IT failures, we are used to hearing stories about websites crashing, or huge cost overruns and delayed launches. But Charles's story is, more and more, what federal IT disaster stories will sound like. Unless the federal government changes its approach to technology, badly designed systems layered on top of a badly thought through process ending up in a total failure of service delivery for the people who need it most is the future.

Yes, it is true that the federal government often relies on IT systems that date back to the 1950s, which doesn't help matters. But two bigger issues created the Catch-22 that Charles and millions of others are caught in. And it is worth noting that while this example is specific to the IRS and the CARES act, it could be happening with any agency and any new policy at any time.

The first is that these systems were built for a time when people didn't use computers from home, and when the way people interacted with the federal government was via phone, mail, fax, or in person. So the older systems don't take any into account any of the modern ways we expect to communicate.

Our daily interactions with the private sector have changed dramatically just in our lifetimes. But when people interact with government, it is often like stepping into a time machine. Federal government applications are almost always onerous and take forever to fill out. When you do fill them out, they get sent into a black hole, or they don't play nicely with other systems, freezing you out of the process entirely.

The second issue is that when government implements a policy, that policy implicitly relies on existing IT to be delivered. But the policy creation process **doesn't take delivery into account**. Congress is used to enacting policy and having it then be a reality. But today, there is an entire technology component that must be put into place in order to make policy a reality. With the CARES act, that money doesn't exist for the people who need it until they are able to successfully file for and receive it.

Thinking about delivery today means not just thinking about the act of filing, but also doing all the things online that people would do if they ordered shoes or bought a lamp online. People need to be able to track the status of things. That is the normal way of interacting in today's world, and it brings a sense of security to people to know that someone on the other end of the computer screen is working on their case. When people can't track an application or a form they've submitted to the government, it feeds into the narrative that government business is opaque and conducted behind closed doors.

Thinking about delivery means thinking about all the different types of people who might file for a thing, and how they might file, and what might go wrong. This is SOP when building a piece of software, but because, especially in a crisis, government is often jerry-rigging and patching systems together, it is not often something that happens in federal IT.

So what is the solution?

First, there needs to be a modern technology workforce inside the government, and this starts from the top.

In 2005, USCIS began the ELIS project to digitize the nation's immigration system. Eleven years and $1B later, USCIS had managed to digitize two out of 94 different types of immigration forms.

When I interviewed Leon Rodriguez, the Director of USCIS who inherited the project from 2013-2017, about what would have helped him get his arms around righting a technology project gone wrong, Mr. Rodriguez said he wished he'd had a Technology Translator to lay out significant issues in non-technical terms.

In practice, this would be a dedicated senior person to serve as a technology liaison, in the way government officials have policy liaisons, to brief agency directors and put decisions into plain language. Because it is only relatively recently that technology has become the common medium for policy delivery, there is nothing that approximates this role. The CIO at most agencies is often overseeing multiple projects, as well as keeping the IT functional for the agency. The CIO role as currently constructed is not a policy role. It is not focused on delivery. CIOs are not typically at the table when policy decisions are made.

What is needed is a very senior person who has a background in technology, who can bring that experience to bear on policy decisions.

Second, **all policy decisions must include a tested delivery plan**. If the IRS had tested out the delivery of stimulus checks, even run a very small test with a handful of people, they would have found many of the holes that plagued the delivery of the checks. The non-filer portal, for example, was built hurriedly to plug a hole the IRS discovered after people came to file for the stimulus and discovered that if they didn't earn enough to file taxes there was no way for them to file for a stimulus check.

Finally, I want to touch on cost savings. Because of the way that ELIS was built, USCIS found it necessary to hire basements full of contractors. A basement I saw in Arlington, VA was filled to overflowing with contractors all tasked with clicking a single button or unsticking cases that were caught up accidentally due to a faulty ELIS algorithm, costing USCIS uncounted stacks of dollars a day.

When IT fails it is expensive. We see cost overruns into the billions of dollars. Bringing senior tech talent in-house, while potentially expensive as a line item, would likely lead to tremendous cost savings as there will be people who can advocate for building the right thing the right way the first time.

After decades of neglect, the federal government is short on internal teams and long on massive vendor contracts. I want to be clear that building internal agency technology teams doesn't mean an end to vendor contracts. What it does mean is increasing the in-house technical knowledge at agencies that is so critical, now, to how we deliver services. It means that when there is a crisis, there is an internal team who can react. It means that agencies are not limited to using what already exists.

There would be no need to patch unforeseen holes quickly, as the IRS was forced to do with the CARES act. Government would get it right, save money, and serve the people the way it is intended.

WHY GOVERNMENT WEBSITES FAIL

By Hana Schank (originally appeared in Fast Company, April 28, 2020)

Normally, lots of people go through their lives barely interacting online with the government. If you are a U.S. citizen, regularly pay taxes, and don't need food, housing, or health care assistance, you are probably only annoyed when you have to do something such as apply for a passport or renew your driver's license, and even then your annoyance level is minimal.

But during a crisis, a lot more of the population suddenly needs the government's help, and they are then shocked! — simply shocked! — to discover that those interactions are mind-bogglingly terrible. If you are one of the millions of people who attempted to file for unemployment benefits, stimulus checks, or small-business loans in any of the 50 states, you know of what I write. If you haven't had this experience, you at the very least saw the viral clip of the governor of New Jersey putting out a call, on live TV, for COBOL programmers — a language that hit its prime in the 1960s. The tech community had a good laugh at the New Jersey government's expense, and the rest of the world saw this as indicative of everything that is wrong with government technology. The systems are ancient and held together with the language equivalent of brittle masking tape. The applications are onerous and take forever to fill out. Assuming you can even access an application, given the rate that government systems seem to be crashing. Once you fill something out, there is no way to find out what is happening with your application. Yes, of course you want to track it the same way you track a UPS package and no, of course you cannot do that.

Those of us who have worked in government and around government technology are not at all surprised by this state of affairs. Of course the state unemployment systems are written in a 60-year-old programming language. Of course there's no way to find out the status of anything you've submitted, ever. Of course the sites are crashing. Government hasn't kept up with the times technologically for a number of reasons, most significantly a lack of market pressure to modernize and a failure to grasp the critical role that technology now plays in delivering on government's promises and policies.

The first thing to understand is that while it might be funny that government relies on one of the first programming languages ever invented, the language alone doesn't mean that systems must be terrible.

"If you understand what a user understands and wants to get done, you can design a good interface no matter what technology you have," says Chris Riesbeck, an associate professor of computer science at Northwestern University, who used to code in COBOL back in the '60s. "There might be some popular techniques in modern user interfaces that some older languages might not be able to support. But you can use COBOL to make a web service these days, which means the front end can be any whizzy thing you want."

The real reason government systems tend to be terrible runs much deeper than language. In the 1960s, the government, along with the private sector, began moving from being a solely paper-based organization to one that used computers. At this point, computers weren't supposed to be user-friendly, in part because that term hadn't been invented yet. People were happy they didn't have to write programs on punched cards, and that they could get computers to handle complex systems previously done manually. If it was complicated to get the computer to do that work, that was just part of the magic of the electronic age. It was an unspoken assumption that any computer program would come with a manual, and probably training, on how to use the system. No one thought about how the general public might use these programs at home because the personal computer didn't exist yet.

Then came the '90s. A lot of the world upgraded their old systems to more modern languages. Some did not. But suddenly with modem speed increasing and the rollout of broadband and DSL, people had the ability to do things from their home computers that previously had been done either by mail, phone, fax, or in person. Around this time two things happened in the private sector that did not happen in government. One was that private-sector companies saw that technology was critical to how they were going to be interacting with their customers, and began expanding their tech teams to meet that need.

In 1998, I worked at an advertising agency that maintained IBM's website. That is correct. IBM, which at that time was supplying 70% of the business world with computing power, did not have an in-house tech team maintaining its website. The advertising agency had a floor full of people who knew the popular coding languages of the day, or had graphic design or user experience know-how. I don't know if those consumer-facing people existed at IBM or not, but when the CEO of IBM discovered he couldn't navigate to IBM's latest direct-to-consumer PC in three clicks on their website (people were really into things being accessible in three clicks in the '90s), it was easier to just ask the people who also designed their ads to also fix their website. At that point, websites were only starting to be seen as something more than a silly thing young people were into. So in 1998, IBM did not have an in-house team maintaining their website. Today, it has more than 100 people on its digital growth and commerce team who are responsible for all aspects of IBM.com. Other industries that also had to staff up robust in-house technical teams included banks, airlines, and insurance companies.

Government, however, did not make the move to bring tech talent in-house. This is true at the federal, state, and local level. Yes, there were IT teams staffing up in government who did things like make sure everyone had email and that the printer worked. But government did not staff tech teams, in part because people in government did not see the growing connection between technology and delivering services for Americans.

By and large, paper processes remained on paper and in-person processes remained in person. In some cases, this was because some government processes really do need to be conducted in person. A citizenship interview, for example, follows standard questions, but immigration officers also rely on a gut feel that can only happen in person. Interviews to help families find temporary housing are also an -in-person process only, which allows case workers

to not only better understand a family's needs, but also to feel out whether they're looking at a domestic violence situation. In some cases, government likely didn't move online because its processes were so old and complex that the idea of building a computer system to replicate these processes seemed like a Herculean task. In some cases, even when Congress passed mandates that required computerization, federal agencies didn't budge. In 1996, Congress mandated that the U.S. automate both entry and exit screenings into the country for foreign nationals. The exit part of this system still doesn't exist, despite at least seven calls from Congress and the presidential administrations after 9/11, in 2005, 2013, 2016, and again buried in the notorious 2017 executive order last year that also included the "Muslim ban." The mandate has gone unfulfilled in large part because no agency has had the technological expertise to even conceptualize such a system, let alone build it, no matter how much Congress may want it to happen.

The second thing that began to happen in parts of the private sector, which bypassed government, is that people began to understand that user experience was a thing. And not just a thing that was a nice-to-have, but a thing that meant the difference between your site dying like MySpace or taking over the world like Facebook.

The private sector began to learn about the importance of user experience as they opened up their systems for the world to see. Think, for example, about the travel industry. Back in the day, travel booking systems were so complex and annoying to use that an entire travel agent industry blossomed based in large part on its ability to use travel mainframe systems, such as SABRE, to book tickets. You had to know the right keystrokes and combination of commands to get the vacation you wanted. Consumers could access these systems from home via early dial-up programs such as Prodigy and AOL, but according to a New York Times article from 1992, booking travel online was "almost as good" as using the telephone. SABRE grasped the importance of being easy to use for consumers and launched Travelocity in 1996. Other travel booking services leaped into the fray as well, and eventually those systems evolved to be user-friendly enough that travel agency giants such as Thomas Cook went out of business. In an industry like travel, there is clearly a consumer who will take their business elsewhere if booking a trip is hard.

But government has been slow to realize the importance of user experience in delivering on its agency mandates. In part this is due to the fact that consumers who need government services have no option but to get those services from the government. You can't go somewhere else to get a pothole filled or to find subsidized housing. This lack of pressure means that government has been able to exist in a subpar technical environment for far too long. It also means that government doesn't get the benefit of the feedback loop that the private sector does. People will come to government for passports or food assistance no matter how terrible the experience.

By the 2000s, many business saw that their choice was to move online or die. But government didn't face that kind of pressure. So while the rest of the world moved online, government often stayed paper-based. When government agencies did move online, they did it by hiring contractors rather than building in-house teams, in part because this was easier than creating

whole new job categories in a bureaucracy where hiring is highly regulated, and in part because, again, those in government failed to grasp that technology was now an integral part of how they delivered services.

To make matters worse, when government brought on contractors it often didn't go very well. It still doesn't, in part because of that missing technical talent. It's hard to oversee a giant system build if you've spent your career overseeing paper-based processes. As a result, government is rife with huge contracting system failures, starting with healthcare.gov — the website critical to the rollout of Obamacare, which launched months late and millions over budget — and continuing through today with the state unemployment systems crashing left and right. Any technologist working today knows to design systems for the worst possible scenarios, including the greatest possible number of people accessing a system at a time. You wouldn't design a bridge to hold the average number of cars passing over it and no more. Tech systems are the same. But typically there isn't anyone in government to press contractors on points like this. And contractors have no incentive to raise these points on their own because when their systems fail, they are brought back in for another round of work and more money. So you end up with a system that crashes when people need it most.

While the rest of the world has evolved to a place where we can track anything at all times, order anything from anywhere, and apply for things at midnight from our couch, government has been hopelessly stranded on an island in 1993. Tracking where an application is in a process is now not only user-friendly, it is essential. But because government skipped out on a lot of the technical progress over the past two decades, tracking where something is in government isn't as simple as flipping a switch. The basic architecture that you would expect to find in any modern company in the '90s is likely to still be a paper-based process in government. Or if not paper-based, then something that lives on one person's computer in Excel.

More critically, government is only just now learning that policies and benefits don't exist in the world without thinking through a user-friendly implementation piece. Yes, government offers unemployment insurance for millions of Americans who need it. Yes, the money is there if you ask for it. But no, it cannot provide that insurance without a functioning website. Even if the website functions, government cannot provide that insurance to people if the forms are too confusing and applicants swamp the help lines with desperate calls.

This has been true of government interactions for a long time, but it was a secret that only the neediest, the most marginalized, the people on the fringes knew. In Michigan, the people filling out the world's longest application form for public assistance knew it. Across the country, immigrants applying for green cards only to have their applications lost or stuck somewhere in the system knew it. But now it's not just the quiet populations we don't talk about who need government. Now we all need it.

There are people who have been working to change the way government functions in exactly this area. Sometimes they are called digital service teams or innovation teams. Sometimes they

are a group of people in the Public Works department who think government should be not only by the people, but for the people, especially where people need government most. Bit by bit, pieces of government are becoming user-focused. Teams are working on improving benefits applications in California, Vermont, Michigan, and elsewhere. But this work is slow, and it is hard. Catching up with 30 years of thinking on technology and being people-centered doesn't happen overnight. And in the meantime, if you know of any COBOL programmers, send them to New Jersey.

WHY THE ROLLOUT OF THE $2T CARES ACT WAS A MESS

BY HANA SCHANK AND TARA MCGUINNESS

(originally appeared in Fast Company, April 17, 2020)

Imagine for a moment that you are a member of Congress working on the bill that is going to help save the country from economic devastation. Unemployment is at a record high, business of all sizes are hemorrhaging money, the general populace is simultaneously terrified and bored. Where do you start? As researchers, product designers, and product managers well know, when designing anything, you start with the end users. What do people need? What's the best way to meet those needs? How will people access whatever the end product is?

If you are a member of Congress, you didn't start with any of these questions, because this is not how the standard policy design process works. Instead, you looked at what has and hasn't worked before. What should the Fed do? What about a cash infusion into failing industries? What about sending people checks? A shrinking economy needs money to flow, and the best way to do that is to get dollars in the pockets of people who need them, and will spend them right away. This economic analysis is important, deep work, but it also isn't nearly enough. Nowhere in the process is there a step in which policymakers think about delivery—how do people get those dollars?—and how that might impact policy design. Which is how we ended up with a $2 trillion stimulus package that doesn't factor in what people actually need or how they might have those needs met. As a result, a lot of that money will never reach the people it is intended to help.

A GOOD IDEA POORLY EXECUTED

The CARES Act—Coronavirus Aid, Relief, and Economic Security Act—allocates funds for large business, small businesses, airlines, and individuals. Individuals can request $1,200, more if they have children under 18. The bill also increases unemployment benefits—providing an additional $600 on top of what people can get from their state. But a complex web of bureaucratic requirements means that lots of people won't be getting what they need anytime soon, and maybe not at all.

As of this writing, only half of an anticipated 150 million payments have made it into people's accounts. There are myriad reports of people receiving "status not available" messages from the IRS portal when trying to see when they might get their checks. Others weren't even able to log in. The Payroll Protection Program (PPP), part of CARES aimed at helping small businesses, just announced that it has run out of money and cannot accept any more applications. And as if the process weren't cumbersome enough, the checks will also be delayed in order to emblazon President Donald Trump's name on them, as though they were a hotel or a golf course. By contrast, citizens of other countries around the world reported receiving their checks within hours of applying.

“FOR US, IT HASN’T REALLY SOLVED ANYTHING”

Margaret Coleman runs the T.W. Wood Gallery, an arts nonprofit in Montpelier, Vermont, that earns its revenue from after-school art programs and donations. Those two sources evaporated as a result of school closures and the economic downturn. She had to lay off her entire staff over the past few weeks. She cut her own hours down to 10 hours a week, which she says she spends exclusively applying for grants. (With two young children at home, Coleman doesn’t have oodles of time to work, so 10 hours is about all she can manage to eke out.) Coleman says the amount her organization needs to make it through the next few months is about $10,000, but there is nowhere to get that amount of money. “Compared to other organizations, that amount is minimal,” she says. “But it’s not there.”

Her nonprofit should be eligible for $18,000 through the PPP, but because that money can only be applied to payroll, she would need to rehire the employees she laid off, at a rate several hundred dollars less than they are able to earn through unemployment insurance. So instead she is looking to hire new people at $16 an hour for the two-month period covered by PPP. At which point schools won’t have restarted, the economy will likely still be in tatters, and the money from CARES will be gone.

“For us, it hasn’t really solved anything,” Coleman says. “It’s going to keep us in this weird floating position for two months. But then, when the organization is hopefully able to open back up, we won’t have anything to fall back on.”

USER RESEARCH IS MISSING

What would have helped, Coleman thinks, is putting the money toward the organization’s mortgage. This is exactly the kind of detail that reveals itself in big, bold letters when you conduct user research. But we know that Congress did not speak to end users in designing this bill because as former federal employees—at the Department of Homeland Security and the Obama White House—we know there is no process in place for this to happen.

When there isn’t a time-sensitive need (like a global pandemic), Congress makes an effort to hear from different end users (or in political terms, constituents) by calling experts who represent different points of view. They may summon someone who represents people with disabilities, or they will take calls from constituents, but this process only approximates deep user research. Some groups will not be represented. Additionally, the experts who speak to Congress may have a pretty well-informed sense of what people need in general, but those experts are rarely members of that user group themselves. And when it comes to something like receiving a stimulus check, it is not enough to learn that people need money, you need to go deeper to understand the barriers (fast internet, bank account) that would allow people to access emergency cash. User researchers are often asked if someone can pretend to be a different user group to save research costs. (“I can imagine what it’s like to be homeless,” for example.) But there is no substitute for hearing directly from real users.

The experts do the best they can, but there is no mechanism for sending out a survey or conducting user research and hearing the voices of those who have just lost jobs and don't know where their next paycheck might come from, who are facing a pandemic without health insurance, or who are under shelter-in-place orders without a home to shelter in. For critical swaths of the public there is no voice, and therefore no ability to truly empathize and understand what help looks like.

As checks have begun to arrive, we can see what people's most critical needs are by how they are spending the money. One early report shows that the stimulus money is going toward food and gas, though people quoted in the same article say they are using the money for everything from rent to student loans. There is value in understanding how the money is spent, and if the people who crafted the bill had been able to use that data as a starting point—what do people need help with and what does that help look like?—the resulting bill might have looked very different. Maybe a structural change such as raising the minimum wage is the solution. We will never know because we failed to ask.

It is also clear that delivery was not thoroughly thought through, in part because it took two weeks from the time the stimulus bill passed for the IRS to announce that they would be launching a portal for people to get a handle on when their payment would arrive. Government often announces the development of a seemingly simple piece of technology without having plans in place for actually building the thing, for a range of reasons including literal walls or even miles separating the policymakers and the technologists. Which means that a policymaker may announce a thing only to discover that an agency doesn't actually have the data available to make that thing a reality.

Sometimes the very structure of a bill accidentally leaves out the very neediest. In order to get a stimulus check from the federal government you have to file taxes. But 10 million low-income families don't earn enough to file taxes. It took weeks and urging for the IRS to build out a site for non-filers. Even people who do file taxes aren't necessarily covered. One hundred million taxpayers don't have direct deposit info on file with the IRS, which means that they won't see money until checks can get printed and mailed, which could take months. As we were writing this, the IRS launched a way for people to provide this information. And for those waiting for their checks to arrive by mail, we'll have to hope that the Post Office doesn't go belly up in the interim.

GOVERNMENT 'CAN' GET IT RIGHT

When government digs beyond the surface to truly understand an issue, positive changes happen. In Mobile, Alabama, a team working on reducing the number of blighted properties found multiple unexpected causes, including a small piece of the state constitution that needed amending, and were able to significantly reduce the number of blighted properties in the city. A team in Phoenix chipped away at underlying causes when looking to improve recycling rates and also had success. For governments willing to look at the thing they are trying to solve as

one piece of an intricately intertwined system, real, lasting change can happen. Congress has yet to take this approach.

So what should the policy design process have looked like for the stimulus bill? A quick check-in of user needs—what do people most need to pay and when—would have provided real world, immediate user data for policymakers to use as a guide. Similarly, conversations with the state and federal employees who process unemployment benefits would have yielded a gold mine of interesting and relevant information. Did those employees have any concerns as the number of people was set to skyrocket? Could their current process handle the crush of applications? Was there any concern that state unemployment websites might crash under the additional load? Were there any workarounds or outdated policy procedures that could perhaps be removed?

In 2015, when the government prepared for a tsunami of asylum applications from Syrian refugees, the Obama administration and the State Department and Department of Homeland Security made sure the system could handle the new load by reworking and digitizing the application process. Previously applications sat in a pile for as long as eight weeks, waiting for a refugee officer to physically show up and stamp them. By creating a digital stamp that allowed officers to review and stamp applications remotely, the government was able to admit more Syrians in one month than had been admitted in the previous seven months.

A final step for the stimulus bill: Once lawmakers had designed solutions based on what people really needed, they should've spent time thinking about how to deliver those solutions, and how that delivery might affect the policy itself. These are the annoying details of who will do what when and what. This is also very often the place where government fails. Sometimes this means people are filling out forms in one location and presenting identifying documentation in another. Sometimes it means the only place to submit a form is at some out-of-the-way location during business hours. It is why people might have to take off from work to apply for food assistance or take three trains and a bus with young children in tow to be placed in a new family shelter. It is the reason why interacting with government often means long lines and long hold times and endless waits.

Policymakers could have even run a quick one- or two-day test to see if the proposed solution had the desired effect. Sometimes there isn't time to do this critical step—in our current environment, where people are out of work and need to make rent and buy groceries now, running a test may not have been optimal. But even when the timeline is short, government can send up a few test balloons.

This isn't any one person's or agency's fault. Our government was built in a different time for a different time. The architecture of the IRS, the agency charged with delivering today's stimulus checks, started over 200 years ago. Keeping up with the digital age is challenging for all kinds of institutions, especially for cash-strapped state and federal agencies. Some of the smartest, most right-headed people we know work at all levels of government. But it is at these most critical moments, when we need government the most, that the cracks in how government functions

are split wide open for all to see. No one knew until last week that most government technology is written in COBOL, a language that is a punchline for anyone who works in tech. Well, no one except those of us who have worked in government, and who have been clamoring for years about how dangerous it is that government's most critical services run on the equivalent of a rusty telegraph machine. Now the world knows.

In the middle of a crisis, people need a functional government today more than ever. Congress can't wait until there is a nice chunk of downtime to upgrade the policy design process. This crisis demands new ways of thinking and acting. Starting today.

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