

CONGRESS AND TECHNOLOGY: MODERNIZING THE INNOVATION CYCLES

HEARING BEFORE THE SELECT COMMITTEE ON THE MODERNIZATION OF CONGRESS OF THE HOUSE OF REPRESENTATIVES ONE HUNDRED SEVENTEENTH CONGRESS SECOND SESSION

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THURSDAY, JUNE 23, 2022

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON THE
MODERNIZATION OF CONGRESS,
Washington, D.C.

The committee met, pursuant to call, at 9:02 a.m., in Room 210, Cannon House Office Building, Hon. Derek Kilmer [chairman of the committee] presiding.

Present: Representatives Kilmer, Cleaver, Perlmutter, Phillips, Williams, Timmons, and Davis.

The CHAIRMAN. Okay. The committee will come to order.

Without objection, the chair is authorized to declare a recess of the committee at any time. I now recognize myself for an opening statement for 5 minutes, probably shorter.

So a few weeks ago at our hearing on pathways to service, there was some interesting discussion around the concept of small wins. There is a natural tendency in Congress to focus on hitting legislative home runs, but small wins can provide a sense of great accomplishment, and over time, they can accumulate into big wins.

Let me give an example. In the 116th Congress, this committee recognized a need for a specialized group of technologists, designers, and others to support the House's internal and public-facing operations. And we recommended establishing the Congressional Digital Services Task Force. Passing the recommendation was a small win. The next step was demonstrating its worth. Leading by example and practicing what we preach is a big part of this committee's ethos. There is real value in showing that it is possible to actually do the things that we are recommending, and this is why the committee decided to pilot the first ever Congressional Digital Service Program.

In the spring of 2020, the committee brought on board four digital service fellows and appointed them to various House offices to help with existing efforts to modernize Congress. The fellows successfully contributed to a number of modernization projects, including digital signatures, the eHopper, and various constituent management systems. These small wins resulted in the creation of an official House Digital Service earlier this year. I would certainly classify this first of its kind effort in Congress as a big win.

There are a couple of reasons for sharing this story. The first is that it is a great example of how it is entirely possible to accomplish big things by taking a small-wins approach. That is especially important when it comes to IT modernization. Incremental im-

provements made consistently over time can lead to transformational change.

The second is that it demonstrates Congress' desire and willingness to address its own institutional shortcomings. We know that Congress has a lot of catching up to do when it comes to technological innovation. These issues are complicated and require the kind of expertise that Congress has traditionally lacked. The House Digital Service will help identify pain points and develop solutions so that Members and staff can better serve the American people.

This is an especially important point to keep in mind as we discuss various IT challenges today. There is a tendency to view Congress' technological shortcomings as insurmountable, but they are not.

And the third is that it proves what is possible when outreach and listening are built into the process. The committee didn't develop the idea of the House Digital Service out of thin air. We spent a lot of time listening to Members and staff talk about their IT challenges and a lot of time listening to institutional and technology experts talk about solutions.

So I think that kind of example matters, and I am thrilled that the CAO's office has built outreach into its process for standing up the House Digital Service. They are meeting with digital directors to better understand what the technology trends, challenges, and needs are across the House, and they are doing listening sessions with Member offices to learn more about common IT obstacles.

I look forward to hearing what recommendations the experts joining us today have for ensuring that Congress is equipped to take full advantage of the latest technological innovations. And given the process I just described, I am also really interested in hearing your thoughts on strategies for getting Congress focused on tech modernization.

So, with that, let me welcome if Vice Chair Timmons has an opening statement.

Mr. TIMMONS. Thank you, Mr. Chairman.

We have been doing this for 3.5 years, and I cannot believe you didn't use your line that Congress is an 18th century institution using 20th century technology to solve 21st century problems. This might be the only hearing he didn't use that in the opening. So I think it is a very appropriate hearing to mention that.

I have been here 3.5 years. One of the first hearings we had on the Modernization Committee I brought my pager. Literally they gave me a pager when I got sworn in. I still have it in my office. Apparently, we have to pay for it, and I guess I have been paying for it for 3.5 years. We have got to look into that. I am not sure if I actually have to pay for that; but if I do, we might have to give it back. I don't think anybody uses the pagers these days.

Mr. Dwyer, your apps you have created are incredible. Dome Watch is awesome. Dome Directory is fantastic. Before we started the hearing, I was mentioning to him that I literally was working with an app development company to try to create Dome Directory. And then I happened upon it I guess shortly after it came out, and I was like, that is a great idea. I had it first but couldn't actually implement it. So I can't wait to hear other things you are working

on and other things that you think we can do to make this place more efficient.

I spend a lot of time thinking about the calendar and the schedule and overlapping obligations while we are here, and I do think that creating a committee calendar that deconflicts or at least just shows committee chairmen and chairwomen what the conflicts are to create at least an option that would have the least conflicts possible, maybe including some kind of block scheduling to allow different committees to deconflict. That involves us being here more. We can't be here 65 days in a year and be able to get all of our work done. It inherently overlaps, and then we only spend 5 minutes in committees reading things that have been prepared for us as opposed to learning from one another's ideas and collaborating and legislating.

So I do want you all to touch on time and things that you think we can use technology to become more efficient.

I think the Dome Directory app facilitates relationship building, and I just want to point that out. Generally speaking, it is really hard to know your colleagues when you have 435 of them. It is just challenging to know who everybody is and what committees they serve on, and it has been very helpful.

I use Congress in Your Pocket, which is \$500 out of your MRA, and your entire team gets to use it. And I have found that that has been very helpful in understanding who serves on what committees, what their position is on the dais, and just—it makes you more competent as a legislator because you know your colleagues and you can easily assess where they are from and what they are working on.

So technology has the ability to make us better at our job, and I look forward to hearing your thoughts on things that we can recommend to make this place work better. And thanks for being here.

With that, I yield back.

The CHAIRMAN. I know I missed some of the formal technical stuff I was supposed to read. So, with that, the committee will use its rules that allow for more flexible hearing format that encourages discussion and the civil exchange of ideas and opinion. In accordance with clause 2(j) of House rule XI, we will allow up to 30 minutes of extended questioning per witness. And, without objection, time will not be strictly segregated between the witnesses which will allow for extended back-and-forth exchanges between members and the witnesses.

Vice Chair Timmons, I will manage the time to ensure that every member has equal opportunity to participate. Additionally, members who wish to claim their individual 5 minutes to question each witness pursuant to clause 2(j)(2) of rule XI will be permitted to do so following the period of extended questions.

Okay. So, with that, I would like to welcome our three witnesses who are here to share with us their expertise on technology in Congress. Witnesses are reminded your written statements will be made part of the record.

Our first witness is Stephen Dwyer. Mr. Dwyer serves as senior advisor to House Majority Leader Steny Hoyer. He will be focused on technology policy and digital strategy. He is the chief architect

and manager of Dome Watch and Dome Directory, the popular apps used to closely follow the House floor and identify Members of Congress.

Mr. Dwyer, you are now recognized for 5 minutes.

STATEMENTS OF MR. STEPHEN DWYER, SENIOR ADVISOR, HOUSE MAJORITY LEADER STENY HOYER, WASHINGTON, DC; MR. REYNOLD SCHWEICKHARDT, SENIOR ADVISOR, LINCOLN NETWORK, WASHINGTON, DC; AND MS. MELISSA DARGAN, CO-FOUNDER & CEO, TOURTRACKR, SEATTLE, WA

STATEMENT OF STEPHEN DWYER

Mr. DWYER. Thank you, Chair Kilmer and Vice Chair Timmons, for the opportunity to testify today.

I have had the honor of working for Majority Leader Steny Hoyer for nearly 20 years. I have always focused on technology, tech policy, digital comms and, most uniquely, working on civic technology.

Leader Hoyer, through his leadership budgets and staff, has always prioritized digital tools that benefit Members, staff, and the institution of Congress. This often has had the added benefit of making Congress more open and transparent. I have been fortunate to have had Leader Hoyer's trust in leading many of these efforts.

Our biggest success is the Dome Watch app, which has been installed on over 100,000 devices over 7 years. It is heavily used by Members, staff, and others who closely follow the House. We have another app called Dome Directory.

We also run a private intranet for Democratic staff called DemCom that has been in heavy use for 14 years. It does many things that we saw lacking in Congress, like a résumé bank, staff directory, and a database for internal documents.

We built other custom systems, including ones for whipping votes and measuring Members' reach on social media.

We have co-hosted, along with Republican Leaders Cantor and McCarthy, four official Congressional Hackathons over the past 10 years. These events have helped foster a community of people on and off the Hill who are interested in the digital infrastructure of Congress.

My top recommendation is simply that Congress should better prioritize digital technologies across the board. I commend the Modernization Committee for doing exactly that over the past few years and the institutional offices that have accelerated progress of late.

Like we did with C-SPAN in the eighties, websites in the nineties, social media in the early 21st century, we need to adopt modern digital tools to improve the functions of Congress. This is happening everywhere. Stores and restaurants all have online ordering systems. Children's soccer teams use apps to manage schedules and messages. But in Congress, interactions with the public have improved only incrementally.

Most businesses today hire programmers, designers, and data specialists either directly in-house or through contractors. We need to hire more in Congress, and we need to recognize the higher pay required for these in-demand skills. This is especially true for Con-

gress' work since Congress' work product is digital. It is information, laws that greatly impact the world and people's lives.

Congress is decentralized which helps for generating innovation. Each office should be encouraged to innovate to improve their operations, and the centralized offices, like the CAO, should help facilitate and scale any innovation.

One downside of the decentralized structure is silos. There should be more collaboration across the legislative branch. Just as the AOC oversees all the physical infrastructure of Congress, some or one group should have authority over all the digital infrastructure in Congress, something that is currently lacking. One possibility is the Congressional Data Task Force, which formerly was called the Bulk Data Task Force, a recommendation from the Modernization Committee to change their name, which was great. I have worked closely with them over the years, and they have been very successful at getting different silos to work together on foundational issues of improving Congress' digital infrastructure. I recommend that they be given more direct authority to lead Congress in these areas.

My other suggestion is the newly created House Digital Service that Chairman Kilmer mentioned in his opening remarks. It should have a broad mandate to allow it to expand as it matures, eventually working on transformative projects that transcend the legislative branch, not just in the CAO.

Hackathons could also help with collaboration. The hackathons we have hosted have been more idea-a-thons than nontechnical staff, but institutional offices could host more traditional hackathons with coders from across the leg branch.

We should also better coordinate with the Senate. There is significant duplication of efforts between the two Chambers on things that would not threaten the independence of each Chamber. For example, legislative drafting systems could be better aligned or combined.

We should continue to open congressional data. I commend the Library of Congress for just this week announcing public access to the congression—the Congress.gov API, which should happen later this year. More congressional sites like *clerk.house.gov* should follow suit.

We should do an assessment of mission critical systems that have been developed in committee and leadership offices and make sure that they be can be supported in the event of a change of vendor or leadership of the office. I believe that that should include our Dome Watch app and DemCom intranet, as well as other systems I am aware of like the GOP Cloak Room site and the Rules Committee and NDAA amendment systems.

All custom systems that are made for the House like those systems should be open source by default. This would help other State and international legislatures reuse our work and collaborate on shared challenges, and it would also ensure that we are not locked into a single vendor, saving long-term costs.

The House cloud approval should be revamped. It is too slow and inflexible, in my opinion. For example, my co-witness today built an app specializing and managing the congressional tour process,

but the approval process took too many months and was opaque. We should welcome innovators like her.

We should also create a new process to accept unsolicited technology proposals. I often get meeting requests from companies that believe their technology is a good fit for Congress, but they don't know how or who to present it to.

Finally, my final recommendation is we should modernize constituent communications. This is more of a big idea which I was asked to come up with, think of big ideas. So currently, the public can only send an email to their Member of Congress, which usually results in a generic response. This hasn't changed in my nearly 20 years here in Congress. Most people would prefer to have their message posted publicly, like on social media or an online petition.

We should build an open platform for constructive discussion of bills before Congress. Users could post public opinions of bills before Congress. Advocacy groups could post en masse. There could be up voting and down voting functions. There would have to be content moderation, like with any open online platform, but the goal would be respectful civic dialogue.

Thank you again for the opportunity to testify today.

[The statement of Mr. Dwyer follows:]

Stephen H. Dwyer, ModCom Testimony, 6/23/2022

Thank you, Chair Kilmer and Vice Chair Timmons, for the opportunity to testify today.

I have had the honor of working for House Majority Leader Steny Hoyer for nearly 20 years. Since I majored in computer science in undergrad—something rare among Congressional staff—and focused on technology while in law school, I have been able to specialize in areas of technology throughout my Congressional service. That has meant covering technology policy within our office, being a leader on digital communications within the Democratic Caucus, and—perhaps my most unique and rewarding role—being a resident civic technologist within Congressional leadership. It is mostly that third area from which I wish to share my experience and recommendations for the Modernization Committee today.

Leader's Hoyer's Office Work on Technology

Leader Hoyer has always prioritized technology in his leadership offices, by dedicating budget and staff toward adopting, or if needed developing, various technology or digital tools that benefit members, staff, our Democratic Caucus, or the institution of Congress. This often has the added benefit of making Congress more open and transparent. I have been fortunate to have had Leader Hoyer's trust in leading many of these efforts over my many years working for him in Leadership.

Our biggest success is the Dome Watch app, which has been installed on over 100,000 devices over seven years and has had four major iterations. It is heavily used by Members of Congress and staff, as well as members of the public that follow the House of Representatives closely. We also have a second app called Dome Directory, which is both a Congressional directory and memorization tool, which just recently launched its second major iteration.

Our most technologically sophisticated digital property is called DemCom, which is a private intranet for Democratic staff in the House and Senate, a rare bicameral tool. DemCom has had five major iterations over the last 14 years. It does many things that we saw lacking in Congress, so we built them for the benefit of Democratic staff, like a resume bank, a staff directory that is as good as the expensive ones that lobby shops purchase, a database of intra-Caucus documents—like talking points, for example—organized by legislation, and a calendar that combines six different congressional sources. We also have built other custom systems for uniquely Congressional purposes, like a system for whipping members on close votes, and a system that runs our annual social media contest among House Democrats.

We have co-hosted, along with Republican Leaders Cantor and McCarthy, four official Congressional Hackathons over the past ten years. These events have helped foster a community of people who are interested in the digital infrastructure of Congress.

Big Picture

My top recommendation is simply that **Congress should better prioritize digital technologies across the board**. I commend the Modernization Committee for your efforts on Congressional technology to date, as you have already made many substantial recommendations in this area. And I commend the institutional offices that have greatly accelerated progress in this area over the past few years, including

the Chief Administrator's Office (CAO), the House Clerk, the Library of Congress, the Government Printing Office (GPO), and the House Administration Committee (CHA).

But much more should be done.

Congress must evolve along with the world around us. Like we did with electronic voting in the 70s, CSPAN in 80s, websites in the 90s, and social media in the early 21st century, the present demands that we develop specialized digital tools to improve the basic functions of Congress. This is happening everywhere—grocery, retail stores, and restaurants all have online ordering systems, taxis cabs now are all app driven, even children's soccer teams use apps to manage team schedules and messages. But in Congress, not much has changed during my nearly 20 years of service. Yes, Congressional websites have gotten incrementally better, and Members of Congress adopted social media en masse which has improved, or at least increased, communication between Members and the public. But most work is still done through email like it was twenty years ago. And if a citizen wants to reach out to their Member of Congress to voice their opinion on a bill, the process is mostly unchanged from twenty years ago.

Most businesses today hire programmers, designers, and data specialists, either directly in-house, or through contractors or software-as-a-service providers. Congress does some of this but should do much more. This is especially true since Congress's work product is information—laws that greatly impact the world and peoples' lives.

Proposed Solutions

Congress is a decentralized institution which is helpful for generating innovation. **Each office, whether Member, committee, leadership, or institutional, should be encouraged to innovate to improve their operations.** They should be able to do so through vendors or cloud services or in-house. And the **centralized offices, like the CAO, should help facilitate and scale any innovation.** I commend the CAO and the Modernization Committee for beginning this through the creation of the House Digital Service and other efforts.

One downside of the decentralized structure is the existence of silos. **There should be more collaboration between the many different offices and agencies within the legislative branch.** Just as the Architect of the Capitol (AOC) oversees all the physical infrastructure of Congress, **there should be some group with authority to oversee all digital infrastructure of Congress.** I suggest two possibilities. One is the Bulk Data Task Force (BDTF), which I commend the Modernization Committee for recommending they change their name to the more general Congressional Data Task Force, since bulk data access has largely been accomplished, yet far more work remains. I have worked closely with the BDTF over the years, and it is the most successful example I've seen of constructive collaboration between the different legislative branch silos on modernizing data and technologies. **I recommend they also be given more direct authority to lead Congress in areas of data and technology.** They are mostly comprised of institutional staff that often feel limited by a lack of direct authority to push for progress in these areas. My other suggestion is the newly created House Digital Service (HDS). While it is inside the CAO, **HDS should have a broad mandate to allow it to grow and expand as it matures,** hopefully eventually creating and/or implementing custom systems that transcend the various legislative branch agencies. Perhaps both could work together, where the **BDTF helps make decisions and the House Digital Service oversees the implementation** of those decisions.

One small example of this silo problem is official Member pictures which are used in most Congressional apps including ours. There are many different sources, but each have different limitations. GPO has good ones but doesn't release them with Member IDs making them difficult to use, the Clerk's BioGuide collection is well structured and easy to use but unfortunately only provides low resolution photos, while Congress.gov has a collection that often includes dated photos. The result is that all apps that use Member photos duplicate efforts and must patch together from various sources. This is a needless barrier to innovation and similar issues exist in many areas of Congressional data.

A related recommendation is to **better coordinate with the Senate** on these fronts. There is significant duplication of effort between the two chambers on things that would not threaten the independence of each chamber. One example is in the bill drafting processes, where both chambers should use more compatible systems, or even the same system, to increase efficiencies. Another example is the Communicating with Congress API (CWC), which accepts and delivers millions of messages from advocacy organizations to individual Member constituent databases. The Senate recently developed their own version of CWC, but I would recommend we use one system, which would be easier and cheaper for both chambers and for the advocacy organizations. The Quill program for managing Member letters and signatures is an excellent recent example of how the two chambers can share innovative custom systems.

We should also **revamp the CWC**, which was a major development 14 years ago when it launched but has changed little since. Like any heavily used system, it should be iterated on based on feedback from all users.

Another recommendation to combat the silo problem is to **host official Hackathons for Congressional programmers, designers, and data specialists**. The Leadership Hackathons we have hosted in the CVC Auditorium have been more idea-a-thons, as we have invited many non-technical Congressional staff and interested members of the public to brainstorm problems we face that could have technical solutions. But the House should host more traditional Hackathons to bring together technical staff from throughout the Legislative Branch to work on big projects and development sprints.

Congress also generally needs more programmers, designers, and data specialists working throughout the institution. We need to **recognize the high pay required for these in-demand skills**. And while much of this work will continue to be accomplished through contractors as is appropriate, we should **hire more of these specialists in-house**. Many of these in-demand workers are motivated as much by title and office as they are by salary. Many want to serve their country directly, like we've seen in the U.S. Digital Service and 18F in the executive branch. Working directly for Congress is more prestigious than working indirectly through a contractor. Acquiring their work through contractors is often more expensive and creates more separation between the experts in Congress who use the tools and the skilled workers who create the tools. For example, our initial versions of Dome Watch were built by a contractor, one that I think highly of. But we were paying a high hourly rate for a single programmer who was developing very custom code and who was only getting a fraction of our costs. We now work directly with the programmer resulting in significant cost savings.

Innovation requires open data. You cannot build innovative new tools for Congress without structured access to Congress's work product, which is data like bills, amendments, Members, roles, legislative actions, etc. The BDTF has made bulk access to Congressional data a reality, but far more should be done. **API access** is the next step. Congress.gov, Clerk.house.gov, and other official Congressional

websites use robust APIs like most modern websites. Those APIs should be opened, at least inside Congress but also to the public at large. This would make creating innovative new tools for Congress much easier. All government websites should consider themselves an open data repository in addition to a website, which means giving API access and documentation and creating feedback channels that are monitored and responded to.

Another recommendation is for **the institutional offices to do an assessment of mission critical systems that have been developed in committee and leadership offices** and ensure that those can be supported in the event of a change of vendor or leadership of the office. I believe that our Dome Watch app and DemCom intranet are mission critical systems. I also believe the GOP Cloakroom amendment and vote tracker is mission critical, as are both the Rules Committee and NDAA amendment systems. I'm sure there are other systems that would also qualify. The House should ensure that the significant investments that have been made in these systems over many years should be supported and protected in the long term.

A related recommendation is that all custom systems that are made for the House, like the aforementioned committee and leadership systems, be made **open source by default**. Benefits include the reliability and security that result from having more people see and use your software, and the possibility of helping other state and international legislatures reuse code and collaborate on shared challenges. Most of these systems are internal only, so security risks are low. This would also ensure that these systems are not locked into a single vendor, which could result in higher costs and risk of loss if the vendor company is unable to support the system in the future. We in the Majority Leader's office have written into our software development contracts that we as the office own any code that is developed, and that has allowed us to change vendors numerous times to keep costs low. We have occasionally released code and documentation from our digital products on online open-source repositories, but we should do more of that. The House should encourage and provide support for open-source efforts.

Another recommendation is for the **House cloud approval process to be revamped**. There should be different processes for different categories of cloud services. For example, services that are built specifically for Congress should be given expedited consideration, since their business model depends upon use within Congress, unlike general cloud applications. We are fortunate that some people and businesses invest in innovative new tools built specially for us, and we should encourage and facilitate that. For example, my co-witness today built a specialized app for managing the congressional tour process. But the approval process took far too many months and was opaque. We should welcome these innovators and work with them openly and expeditiously to make sure legal and technical requirements are met. Another example is general cloud services that do not involve sensitive information. It is impractical to demand these companies incur legal costs and change their terms of service over provisions that are exceedingly unlikely to ever be litigated. This unfortunately has become a barrier to House use of many popular online tools.

Another recommendation is to **create a new open process for the House to accept unsolicited technology proposals**. Because of my reputation for working on technology inside Congress, I often get meeting requests from companies that believe their technology is a good fit for Congress. These meetings usually end with a plea for me to connect them with the decision-makers inside CHA, the CAO,

or other institutional office. We should create an open process for companies to make these pitches directly to the institution for consideration.

My final recommendation is to **modernize constituent communications with Congress**. Currently, the public can only send a private email to their Member of Congress, which usually results in a generic response email. This hasn't changed in my twenty years in Congress. This is often far from satisfying for the public. People don't want their message to go into a black box, they usually want it publicly posted like on social media or an online petition. We should **build an open platform for civil and constructive discussion of federal policies before Congress**. Users could submit opinions on bills before Congress, which would be open by default. Advocacy groups could post en masse. They could still be delivered via CWC to Member databases like before, but the default will be to publicly post the messages. There could be upvoting and downvoting functions. There would of course have to be content moderation systems like with any open online platform. But it could be governed on the principle of advancing respectful and constructive civic dialog structured around actual bills before Congress, and not driven by commercial impulses. By not creating such a system, we have ceded this ground to social media companies, even though it is not their focus. Yes, they have created civic teams and try to facilitate this to some degree, but it is too much to compete with kid photos and birthday wishes and 20 second dance videos. Serious efforts have been attempted here in the past in the private sector with limited success, not because of technology shortcomings, but because of a lack of users. An official platform from Congress would have better odds at success.

Conclusion

Sometimes I am surprised by the success of Dome Watch. It isn't groundbreaking technology. It is simply applying the latest mobile app trends and technologies to one of the Majority Leader's primary responsibilities, which is running and scheduling the House Floor. What makes it stand out is how rare that is inside Congress. There just aren't many other offices that have realized that an app can help them carry out their existing functions in a modern and efficient way. Many small business owners understand this, as an app is simply part of doing business nowadays. We need more of this in Congress, not just with apps but with prioritizing and adopting the latest web technologies.

Some people tell me, "You all have made a great app, but you're a Congressional office, not an app company, so shouldn't you just open the data and let the private sector do it?" And while I agree that government data should be open and easily accessible, which is the case with most of the data in Dome Watch, there is virtue and pride in a government office developing and maintaining an app to distribute the information it creates. An article a couple years ago said, "There are no advertisements on the app, but if there were, the developers could charge absurd prices because the people who use Dome Watch are some of the most important people in the nation in terms of influencing legislation."¹ I do not fault 3rd parties for building apps like Dome Watch and making money from influence advertising, but I am also proud that anyone can get the same information in a clean and modern way direct from the source without any advertisements. It's simply good, modern government. Hopefully we can see more of it throughout Congress.

¹ <https://www.dailydot.com/debug/steny-hoyer-app-dome-watch/>

The CHAIRMAN. Thanks, Mr. Dwyer.

Our next witness is Reynold Schweickhardt. Mr. Schweickhardt is a senior advisor at Lincoln Network. Previously he served as senior technology advisor at the General Services Administration. He has also served as the director of technology policy for the Committee on House Administration, the strategic advisor on technology and cybersecurity for the House's Chief Administrative Officer, and as the chief technology officer at the U.S. Government Printing Office.

Mr. Schweickhardt, you are now recognized for 5 minutes.

STATEMENT OF REYNOLD SCHWEICKHARDT

Mr. SCHWEICKHARDT. Can I get a light here? Hopefully I am smart enough to use the technology.

Chair Kilmer, Vice Chair Timmons, and members of the committee, I am pleased to appear today to testify about ways to improve the digital capacity of the House of Representatives. I will be speaking to structural issues that raise the cost of implementing digital initiatives to serve Members, staff, civil society groups, and last but certainly not least, their constituents.

Let me give the committee a kudos for another successful recommendation with the fully funding of the Modernization Fund by the appropriators earlier this week.

In over 20 years supporting the House and the legislative branch, I have collaborated with stakeholders across the House of Representatives and the legislative branch, built working relationships with executive branch agencies, members of civil society, academics, and businesses to increase the transparency, effectiveness, and resilience of the House.

Three key areas to consider are: One, how should technology be governed and funded in the House and across the legislative branch? There is not a single overwhelming problem but, rather, a series of smaller and medium-size issues which cumulatively increase costs and impede the pace of technological change.

A critical step would be creating a method for House-wide prioritization of projects to avoid the added costs and delays of technologists juggling as many as 10 different projects at the same time. Other improvements would include clearly chartering the House's technology organizations, consolidating control over infrastructure, and allowing for innovative acquisition strategies to improve the onboarding of new technologies.

Secondly, what technology products or improved processes should be mandated to improve the digital experience of all stakeholders? We are thinking automating time-consuming and expensive manual processes can improve transparency while freeing up funding to continue modernization.

Regarding the creation of committee hearing documents, we estimate that \$4 million could be freed up by the automation of automatically creating hearing documents.

Further, I recommend extending the Clerk's Legislative Information Management System, or LIMS, to include internal committee legislative workflows. The standardized processes improve resilience and reduce the number of so-called cuff apps supporting committee processes.

Third, how should the tensions between creativity and stability be managed? The use of open source software can be a proxy for this discussion, where and when, how should it be used. There is also attention between standardization and diversity of tools; when should workflows be part of the centralized products, such as LIMS; and when is having a variety of choices important.

The House has used open source software for many years. In my written testimony, I discuss the different aspects of open source utilization and how to structure its use with a full range of House tools.

There is an understandably high standard for the reliability and resilience of the legislative process. The use of open source should be incorporated into that development process using the recommended acquisition flexibilities for core House tools.

On the other hand, consider the oversight process in a typical committee where each side and individual Members seek a competitive advantage for their views or Steve Dwyer's intranet to support Democratic members. A robust strategy to encourage innovation in competing tools allows Members to pick the best tools for their individual needs.

Both ethics concerns and regulations regarding the use of the Members' representational allowance, or MRA, can limit the use of open source software. For example, Members using the MRA to create open source software can't supplement other Members' MRAs by releasing it for general use. This is a problem which could be addressed.

In summary, these are complex issues with many nuances and interdependencies. I am happy to respond to questions or participate in further discussions as needed. I look forward to working with this committee and continue progress on these important issues.

Thank you, Chair Kilmer. I yield back.

[The statement of Mr. Schweickhardt follows:]

Written Testimony of Reynold Schweickhardt, Nonresident Senior Fellow, Lincoln Network

Before the Select Committee on the Modernization of Congress

June 23, 2022

Chair Kilmer, Vice Chair Timmons, and Members of the Committee:

I am pleased to appear today to testify about ways to improve the digital capacity of the House of Representatives. I will be speaking to structural issues that raise the costs of implementing digital initiatives to serve Members, staff, civil society groups, and, last but certainly not least, your constituents.

I have served at the Committee on House Administration for 13 years and the U.S. Government Publishing Office (GPO) for eight years in a variety of leadership roles supporting the modernization of the legislative process as well as the full range of institutional capabilities. Examples include creating the Legislative Branch XML working group, implementing docs.house.gov, modernizing committee audio and video capabilities to include uniform webcasting, forming the Legislative Branch Cyber Security working group, participating in the Bulk Data Task Force, and increasing the resiliency of the legislative process.

In doing this work, I have collaborated with stakeholders across the House of Representatives and the legislative branch, and built working relationships with executive branch agencies, members of civil society, academics, and businesses.

I have been asked to speak today to two issues: first, structural and governance issues that impede effective digital cooperation across the legislative branch and, second, the effect of ethics rules on modernization.

Three key issues to consider are:

1. How should technology be governed and funded in the House and across the legislative branch?
2. What technology products or improved processes should be mandated to improve the digital experience of all stakeholders?
3. How should the tension between creativity and stability be managed? The use of open source software can be a proxy for this discussion—where and how should it be used?

Institutional and Organizational Issues: Governing and Funding

Many of the impediments to addressing the technology needs of stakeholders are being worked around in Congress today. Few are showstoppers in and of themselves. Rather, these impediments risk resulting in the death by a thousand cuts: many small and medium-sized problems that cumulatively increase costs and slow progress. This results in stakeholders implementing creative workarounds, which do not necessarily scale. The same type of problem is solved multiple times, resulting in non-interoperable systems and greater maintenance costs, sapping funding for innovation.

The following sections enumerate the problems that arise and my recommendations for reform.

Prioritize Projects

A key reason congressional projects take longer than equivalent projects in the private sector is that there is no overall prioritization mechanism in the House or the larger legislative branch. In short, there are too many concurrent projects. Each stakeholder tasks House Officers, especially the House Chief Administrative Officer (CAO), with projects, and no entity has taken on the role of program management to prioritize and integrate the schedules and needs of competing or dependent projects. This is not a competency issue within the officer organizations; it is a higher-level problem regarding how the institution as a whole prioritizes and manages technical projects.

This means that internal technologists are balancing too many separate projects concurrently, and thus many projects are part time and involve the inefficiency of stopping and starting work. This also applies to contracted resources, which need to fully employ their people. If the funding does not allow for full-time work, vendors will add other projects so that their people can multitask. The inefficiency of working on multiple projects grows as the number of concurrent projects rises. It is not surprising that this arises, as there is also no single entity with a wide range of scope that is responsible *sua sponte* for identifying technology projects, responding to user needs, and pushing forward innovation.

If needed functionality is not provided centrally in a timely manner, then various stakeholders will implement their own ad hoc solutions. (See “Technology Use in Committees” below.)

The House should establish a transparent process for prioritizing projects and resources that provides Officer organizations clear direction. Its charter should include not just listening to internal stakeholders, but also non-legislative branch stakeholders who have a track record of pushing for innovation inside Congress.

Another promising way to address these challenges would be empowering, expanding, and leveraging the House Digital Service. The House Digital Services team¹ is part of the Chief Administrative Officer's organization within House Information Resources. The team's current scope restricts what kinds of problems it can address without negotiation with other stakeholders. As recommended by this Committee, increasing the scope by chartering a House-wide Digital Service would allow for greater utilization of their capabilities.

Address Funding Models

The pacing of all projects is limited by funding. The Appropriations Committee has more requests than funding for the legislative branch allocation. Consider the following scenario: If a technology project is scoped for five years, it is not unreasonable to allocate 20% per year. However, this precludes accelerating progress if conditions permit. It may also mean that projects are not finished as promised, because in the best case it finishes on time; finishing ahead of schedule becomes impossible.

It should be noted that not all projects need to be accelerated. If a working legacy solution is expected to reach the end of its useful life in four years, a three-year replacement project does not need accelerating. Projects solving an unmet need that affects the effectiveness of Congress should be candidates for a more aggressive funding strategy, which should be tied to that project meeting and exceeding the project plan. This could be accomplished with greater use of multi-year or no-year funding to provide additional flexibility.

The Modernization Fund, which this Committee has advocated for, is a good step forward. I recommend using it to fund projects of no more than four to six months' duration in order to deliver timely results, which in turn would increase support for the strategy as people see tangible benefits. In addition, efficiencies gained from these modernizations, and resulting cost savings, should be rolled in part back towards further technology modernization efforts.

Centralize Technology Functions

No other national parliament splits technology development in the lower chamber between two entities—the Clerk and the CAO—according to the Congressional Research Service (CRS) and my interactions with parliamentary delegations. Given the unique nature of the House's organizational structure, improvements should be made. There are a range of options that could be adopted, from most wide-ranging to most specific:

¹ MODCON Recommendation 95: Establish a Congressional Digital Services Task Force to examine the need for and role of a specialized group of technologists, designers, and others to support the House's internal and public-facing operations.

1. *Create one central IT organization* like other national legislatures and the U.S. Senate. For example, the House could charter a House Chief Information Officer as the CIO of the entire House and transition technology organizations to that CIO. Product Managers who best understand the business model and customer needs should remain in the other organizations to serve as experts and advocates.
2. *Establish two central IT organizations with clearly defined roles.* The Clerk would become responsible for all legislative related development, including HOLC and within Committees. The CAO would be responsible for all other centralized IT in the House.
3. *Identify smaller IT organizations that would demonstrate progress,* if options 1 and 2 are not possible in the next Congress. For example, Consolidate the Sergeant of Arms CIO organization to the CAO and the IT functions of the House Office of Legislative Counsel to the Clerk.

Additionally, *if option 1 is not implemented, assign responsibility to the CAO for all digital infrastructure and devices connected within House buildings*, including the House side of the Capitol. The scope of that responsibility should be negotiated with stakeholders but should include all network devices. The CAO should ensure that the resilience of this infrastructure matches the continuity and data preservation requirements of House leadership for affected organizations.

Digital Services Roadmap

Each legislative branch agency invests in technology. The Government Accountability Office (GAO) should select a maturity model to help guide agency progress. GAO should be tasked with creating an agency self-assessment on digital service capabilities and maturity for each agency using the maturity model.

A number of entities publish roadmaps and maturity guides for digital service organizations. It would be helpful to have one definition in the legislative branch to enable apples-to-apples comparisons for funding and coordination of development projects amongst the agencies.

Consider as well a co-creation process or coordinating function among the legislative branch agencies. For example, are there ways that the services of the GAO, GPO, or CRS should coordinate with one another and use shared services, tools, or data? Instead of focusing these agencies around the legislation that established them, perhaps they should be designing their products from the point of view of the congressional end user. Building synergies across agencies that address common issues could be more fruitful than having them thinking inside the proverbial box.

Acquisition Flexibility

The executive branch through the General Services Administration (GSA) supports challenges and contests as one method of acquiring solutions. There is specific statutory authority,² which excludes the legislative branch. These methods can broaden the number of participants attempting to solve the given problem and help nurture a community through the interactions of a contest. Contests can choose to require that all submissions be open source to aid all developers in maturing solutions to that problem set. Of course, this is not appropriate in all circumstances.

One concern in the House has been how to match the level of effort with the compensation to avoid the ethics issues previously discussed.

The Library of Congress has hosted³ legislative data competitions to improve access and visualization tools with cash prizes for the winners. The challenge was restricted to legislative research due to the scope of their appropriations.

I recommend establishing legislative authority for the House to conduct contests and challenges with monetary compensation.

I discuss elsewhere how co-creation, such as the use of open source software, can be another way for the House to improve its technological capabilities.

Improve Data Sources for Oversight

Congress uses external information from the executive branch and outside entities as part of the committee oversight process to assess program effectiveness. An entity such as the Government Publishing Office (GPO), the Library of Congress (LOC), or the Bulk Data Task Force should be responsible for curating that information into standard formats and access methods on behalf of the legislative branch. Publishing standards for data elements so that unique and common identifiers are used increases the ability to combine disparate data sources effectively.

Depending on the stability of how the external data is stored and curated, it may be necessary to import information so that it is under the control of the legislative branch and not subject to “correction.” In addition, there may be value in pointing to information held externally, although

² Public Law 111-358, section 105.

³ The Library of Congress offered top prizes of up to \$10,000, which created significant interest from civic technologists. See Tina Gheen, “Library of Congress Announces First Legislative Data Challenge,” Library of Congress, July 16, 2013, <https://blogs.loc.gov/law/2013/07/library-of-congress-announces-first-legislative-data-challenge/>; “Library of Congress Announces Second Legislative Data Challenge,” Library of Congress, September 10, 2013, <https://www.loc.gov/item/pm-13-161>; and “Library of Congress Launches Congressional Data Challenge,” Library of Congress, October 19, 2017, <https://www.loc.gov/item/pm-17-132>.

it may make sense to utilize internet archival sources to verify what was posted at a given point in time.

Standard access methods through uniform Application Programming Interfaces (API) simplify integration into established information systems, such as congress.gov and govinfo.gov. In addition, a mature digital infrastructure allows users—Members, staff, and the public—to create ad hoc reports, queries, and visualizations. Congress should consider how these needs could be more effectively met through business intelligence products to reduce the effort of staff to create custom information products.

The House should continue to work with the Senate on providing for common needs of Members. The Senate shared and is maintaining the Quill application with the House, which is an excellent precedent. Extending scarce resources by dividing up developing constituent support workflows, such as an Military Service Academy nomination process, would improve efficiency and service.

Technology Use in Committees

Support for technology use within Committees is no one’s specific responsibility; the Clerk, CAO, Legislative Counsel, and the committees all own portions. One of the challenges is how to spread process improvements enabled by technology laterally across the committees. For example, one House committee funded and is maintaining an application for managing the Questions for the Record (QFR) process, which includes a history of QFR questions and responses by roles such as Assistant Secretary for Management over time.

Individual point solution tools in committees are costly to develop and maintain and violate the “develop once, use many” principle. Furthermore, best practices do not easily spread among committees, especially when new staff are onboarded, because of separate ad hoc tools and processes. It would be wise to conduct an in-depth survey of committees for these unique tools and practices and to consider whether and how such tools could be offered on a chamber-wide basis.

Furthermore, lawmakers should consider the resilience of committee operations during a continuity event. The nature of the event will determine which committees need to meet after an event which may have caused the unavailability of key staff from those committees. Replacement staff, perhaps clerks from other committees, need to understand the differences in committee rules and practices from their own committee, but they should not have to learn different tools in order to conduct a hearing or markup in the aftermath of an emergency.

The Office of the Clerk should extend the functionality of the Legislative Information Management System (LIMS) to support required committee functions. Where differences in process cannot be resolved, LIMS should adjust the workflow for each committee.

Automatically Create Committee Reports

A pilot project was developed by the Committee and House Administration, working with the Office of the Clerk to use the information in docs.house.gov to automate and standardize the creation of committee hearings. With this Committee's recommendation for electronic submittal,⁴ this project should be rechartered. Government Publishing Office funding⁵ of at least \$4,000,000 in 2017–18 was used to create and publish these reports; this funding could be freed up through automation. This was intended to save staff significant time creating these reports, improve the quality of the documents by making sure the information is in appropriate data formats, and improve the timeliness by which reports are reported out to the chamber and made available online.

Staff met with each committee's legislative staff in 2013–14 to establish a standard house format with adjustments for the unique needs of each committee. Docs.house.gov would have been expanded to include additional information, such as transcripts. A vendor developed prototype software to demonstrate the feasibility of a modern report format; the project was turned over to GPO, which decided not to proceed in 2017. The cost of the prototype was \$50,000.⁶

Stability Versus Innovation

Different domains have different requirements for stability, consistency and innovation. The core legislative process has very high requirements for stability, accuracy, and repeatability. By contrast, there are many tasks undertaken by stakeholders in the House that are repeated and time-consuming, but automation is not supported by the chamber. In those instances, there may be greater risk-tolerance and innovation, allowing an increased workflow to improve productivity.

The House should define a strategy regarding where and how to use open source and acquisition flexibilities to best effect.

Core functionality, such as how committees operate, should be incorporated into centralized tools but could be acquired via internal development, open source strategies, co-creation with outside stakeholders, and/or challenges or competitions as appropriate.

⁴ MODCON Recommendation 53: The House should make permanent the option to electronically submit committee reports.

⁵ In 2017–2018, the Legislative Branch Subcommittee funded \$4,419,000 for details to Congress and \$2,360,000 for creating and publishing Committee Reports. Current year report language no longer includes this information. Details are used mainly for the creation of committee reports but also support other requirements.

⁶ This was prior to Mr. Halpern becoming the GPO Director.

However, this raises the question of where technology should be differentiated. A framework for committee oversight, as discussed above, could be matched with a range of query and visualization tools so that each side or Member in a committee could use their own strategy to inform the oversight process.

Effects of Ethics Concerns on Modernization

When the Committee on House Administration established the Congressional App Challenge in 2015,⁷ I worked closely with Ethics Committee staff to establish the rules of the competition. At that time, the Congressional Art Competition⁸ was a logical starting point for the discussion. Technology companies often have issues before Congress that they wish to influence. It was not a concern that the makers of art supplies would use the Art Competition as a means for undue influence. This explains the different rules for different competitions; it would be simpler for House staff to have one set of rules for all competitions involving students.

Open Source

Open source technology development involves developers publishing their code in a public-facing code repository, allowing for others to use the code, and enabling others to submit suggestions on how to improve or expand the code's functionality. (By comparison, closed source means that the code is not published online and individuals are not allowed to modify the code.) This open source technology ecosystem underpins much of the technology we use today.

Typically, developers find pre-written code in open repositories, such as GITHUB, to speed up the technology development process. Many of these pre-written pieces of code solve problems of general interest, such as comparing the text between documents. However, if the code focuses specifically on technology needs of Congress, then in some instances the Ethics Committee may view it as an attempt to encourage favoritism for the creators. This creates anomalous results, as the operations of Congress are of general public interest and it is not unusual for public stakeholders to be interested in similar questions as congressional staff. Nonetheless, there may be an apparent (if not actual) conflict that apparently arises from the potentially improper giving of a gift or conduct of work that may only be done by a paid employee.

There are several use cases to consider from an ethics perspective.

⁷ See "About," Congressional App Challenge, <https://www.congressionalappchallenge.us/about>.

⁸ The Congressional Art Competition was established in 1982 as the Artistic Discovery Competition and evolved over time into the Congressional Art Competition. High School students in participating districts may submit two-dimensional art. The winning piece from each district is displayed in the United States Capitol. The winners of the Congressional App Challenge create a video discussing their work, which is played on a display in the United States Capitol. See "Congressional Art Competition," U.S. House of Representatives, <https://www.house.gov/educators-and-students/congressional-art-competition>.

1. Incorporating free software components into product development.

The House has been using open source or free software for at least 20 years. These have been for general functionality and not House-specific requirements, which avoid one ethics concern.

2. Participating in the development of open source software.

Open-source development involves a give and take to discuss use cases, requirements, software defects, etc. It can be unclear when House staff provides input. At one end of the spectrum, providing input on software defects, etc., is a public-spirited effort to make technology better for everyone. At the other end, the Congress could be inappropriately tasking outside groups to do work for the House.

In the worst-case scenario, a major technology company spends hundreds of thousands of dollars developing and openly posting code that only the House will use for the purpose of influencing the House. On the other hand, non-profits and individuals in the civic or legislative tech space want to help make improvements in the legislative process or public access to information without raising ethics concerns.

3. Publishing House software for the open source community

Participating in open source forums by contributing internally developed source code is a welcome public-minded participation by congressional actors. The converse, using open source software in congressional operations, should be preceded by a plan to address security and incorporation of external code into House operated software.

4. Member offices jointly developing open source software.

This will run into limitations on the use of MRA funds, including staff time, which generally prohibit supporting non-House activities.

Clearer guidelines regarding participation in open-source communities, source of contributions, and breadth of reuse would help internal developers utilize open source without creating ethics concerns.

Summary

The House Select Committee on the Modernization of Congress is providing valuable leadership to modernize Congress's technology systems. To achieve these significant reforms, the Committee and the House of Representatives should address:

- The organizational placement of House technology organizations and their respective roles;
- Added acquisition flexibility to increase innovation;
- Defining a strategy for the use of open source that strikes an appropriate balance between stability and innovation;
- Legislative branch wide strategy and governance for information sharing, especially APIs and bulk data repositories, including access to appropriate executive branch information sources; and
- Reducing costs through appropriate use of technology.

The result of these constructive reforms would be a more effective and accountable Congress that uses technology to work better for Members, staff, and the American people.

The CHAIRMAN. Thank you, Mr. Schweickhardt.

And last but not least, we are joined virtually by Melissa Dargan. Ms. Dargan is the cofounder of AppMy, LLC, a company that builds digital platforms for government, such as TourTrackr.com. She previously served as a staffer for Congressman Ed Royce and the House Foreign Affairs Committee. She also helped launch the Congressional App Challenge, a nationwide initiative that works with Members of Congress to develop district-specific challenges for students who are interested in technology.

Ms. Dargan, you are now recognized for 5 minutes.

STATEMENT OF MELISSA DARGAN

Ms. DARGAN. Thank you.

Chair Kilmer, Vice Chair Timmons, and members of the select committee, I am honored today to testify.

Customer-focused innovative technologies have advanced, yet many everyday congressional constituent services are managed manually. Member offices can benefit from facilitating a more transparent and welcoming tech startup ecosystem on Capitol Hill for new tech products.

Like many in this room, I came to Washington, D.C., over a decade ago to make a difference. Prior to launching TourTrackr, the tour management platform that has helped book over 124,000 tours and that is used by nearly a hundred Member offices to digitally organize constituent tour requests, I started my career as a staffer on Capitol Hill, first working for Representative Ed Royce's D.C. personal office and then the Committee on Foreign Affairs.

Next, I co-launched the Congressional App Challenge, a district-wide competition for middle school and high school students that encourages them to learn to code, and inspires them to pursue careers in computer science.

Based on my experience as a former staffer and now tech entrepreneur, I am uniquely positioned to identify the challenges and opportunities of growth related to tech innovation in Congress.

When I first started on Capitol Hill as a staff assistant, I remember processing many constituent services manually. From constituent tour requests to flown flag purchases, these important responsibilities were tracked using printouts, binders, Excel spreadsheets. It was fragmented and inefficient. At the time, there were no digital alternatives that the House offices were approved to use. So while these tasks seemed easy, they were tedious, repetitive, and time-consuming.

Fast-forward to nearly a decade later, despite the advancements made in commercial technology, most House offices were still processing administrative work such as tours and flags manually, pretty much the same way I was doing it years prior. So seeing this market opportunity, I set out to create a product that I wish existed during my time, a platform that would simplify and digitize the congressional tour process.

Planning D.C. tours is a great constituent service that allows you as Members to connect directly with the people you serve when they fly into our Nation's Capital. By developing a tech solution, my goal was to allow staffers to improve the quality of constituent engagement while minimizing administrative tasks, which took an

average of about 12 to 20 hours a week. Thus, staffers would then be freed up to do what they came to Washington, D.C., to do—effect change.

Working on a new startup company already faces hurdles. The added House complexities, such as the lack of new vendor support and lack of information on navigating how to even sell to a congressional office, made establishing a needed tech product very difficult, even for someone like me who understands how Congress operates. The closed nature of the House creates restrictive barriers that ultimately decrease competition and prevent new technologies from ever succeeding.

I respect and understand that the House has high standards for new tech approval. Protecting security and personal identifiable information are critical to ensure the integrity of the institution. That said, upholding these priorities and creating a welcoming environment for new tech products can be done simultaneously.

Through my experience, some opportunities for change the select committee can investigate include: In the category of transparency, for instance, to eliminate information asymmetry, there should be a clearly defined process, including feedback and tracking, along with outlined requirements that provide a roadmap for new tech submissions while maintaining security protocols and structures.

Then in the category of support, to reduce any confusion, the House should designate a point of contact for these new tech submissions so that submitting entities know where they are in the process.

Lastly, in the category of streamlining, to maximize efficiency, the House may want to consider working with the Senate to align their approval standards and processes for new vendors and especially ones that are already approved in either Chamber.

Thank you for all the work the select committee has done to bring innovation to the Halls of Congress. It is my hope that these suggestions pave the way for more efficient, creative, and innovative solutions that make a difference ultimately to improve a Member office operation and constituent services. I look forward to answering your questions and to continuing the discussion with the select committee.

Thank you, and I yield back my time.

[The statement of Ms. Dargan follows:]

Testimony of Melissa Medina, CEO of TourTrackr (Owned by AppMy, LLC)
Before the Select Committee on the Modernization of Congress
Hearing on “Congress & Technology: Modernizing the Innovation Cycle”
Thursday, June 23, 2022 at 9am ET

Chair Kilmer, Vice Chair Timmons, and Members of the Select Committee, I am honored to appear today to testify. Customer focused innovative technologies have advanced, yet many everyday Congressional constituent services are managed manually. Member offices can benefit from facilitating a more transparent and welcoming technology startup ecosystem on Capitol Hill for new tech products.

Like many in this room, I came to Washington D.C. over a decade ago to make a difference.

Prior to launching TourTrackr, the tour management platform used by nearly 100 Member Offices to organize constituent tour requests, I started my career as a staffer on Capitol Hill - first working for Representative Ed Royce’s DC personal office and then the Committee on Foreign Affairs. Next I co-launched the Congressional App Challenge, the district-wide competition for middle school and high school students that encourages them to learn to code and inspires them to pursue careers in computer science. Additionally, I created CONGRES\$ - a YouTube Series focused on providing personal finance tips to Congressional staff. Based on my experience as a former staffer and now tech entrepreneur, I am uniquely positioned to identify the challenges and opportunities of growth related to tech innovation in Congress.

When I first started on Capitol Hill in 2011 as a staff assistant, I remember processing many constituent services manually. From constituent tour requests to flown flag purchases, these important responsibilities were tracked using printouts, binders and excel spreadsheets. It was a fragmented, inefficient process. At the time, there were no digital alternatives that House offices were approved to use. So while these tasks seemed easy, they were tedious, repetitive and time consuming.

Fast forward to nearly a decade later, despite the advancements made in commercial technology, most House offices were still processing administrative work (such as tours and flags) manually - pretty much the same way I was doing it years prior! Seeing a market opportunity, I set out to create a product that I wish existed during my time - a platform that would simplify and digitize the Congressional tour process.

Planning DC tours is a great constituent service that allows you as Members to connect directly with the people you serve when they fly to our nation’s Capitol. Prior to COVID, managing tour requests took anywhere between 12-20 hours a week depending on the district. Imagine managing a couple hundred or few thousand tour requests for multiple DC government sites that

only Congressional offices can book. By developing a tech solution, my goal was to allow staffers to improve the quality of constituent engagement while minimizing administrative tasks so they can do what they came to Washington D.C. to do - effect change.

Working on a new start-up company already faces hurdles. The added House complexities (such as the lack of new vendor support and lack of information in navigating how to sell to Congressional offices) made establishing a needed tech product difficult - even for someone who understood how Congress operates. The closed nature of the House creates restrictive barriers that ultimately decrease competition and prevent new technologies from succeeding.

I respect and understand that the House has high standards for new tech approval. Protecting security and personal identifiable information (PII) are critical to ensure the integrity of the institution. That said, upholding those priorities and creating a welcoming environment for new tech products can be done simultaneously. Through my experience, some opportunities for change the Select Committee can investigate include:

Transparency:

- To diversify access, it would be helpful for the House to develop a process for evaluating and working with small businesses, vendors and start-ups.
- To get a wider range of new product offerings, it would be great if the House allowed new companies or vendors to submit unsolicited tech proposals for review and approval.
- To eliminate information asymmetry, there should be a clearly defined process (including feedback and tracking) along with outlined requirements that provide a roadmap for new submissions while maintaining security protocols and structures.

Support:

- To reduce confusion, the House should designate a point of contact for these new tech submissions so that submitting entities know where they are in the process.

Streamline:

- To maximize efficiency, the House may want to consider working with the Senate to align their approval standards and processes for new vendors.

Thank you for all the work the Select Committee has done to bring innovation to the Halls of Congress. It is my hope that these suggestions pave the way for more efficient, creative and innovative solutions that make a difference ultimately improving Member office operations and constituent services.

I look forward to answering your questions, and to continuing the discussion with the Select Committee.

The CHAIRMAN. Thank you, Ms. Dargan.

And I now recognize myself and Vice Chair Timmons to begin a period of extended questioning of the witnesses. Any member who wishes to speak should just signal their request to either myself or to Vice Chair Timmons.

Let me kick things off. I have one kind of broad question that at least two of you spoke to, and then I have one super specific question just because it is something that bugs me.

On the broad question, both Mr. Dwyer and Ms. Dargan mentioned some of the challenges onboarding new technology and working with outside vendors. I am just hoping you can give us some counsel as to—so is there a difference in how the House and the Senate approach this? And how does the executive branch approach this? Any lessons we can learn in terms of potential reforms we might propose that would make this process easier in the House?

Mr. DWYER. I can start on that. And, Melissa, if you want, you can jump in as well.

I would say the way the House and the Senate deal with outside technology vendors is very different. I would say the House is actually significantly more open. So my personal opinion is that the House should take steps to be further open. But if compared to the Senate, we are actually in pretty good shape.

They, for example, have been very hesitant towards cloud technologies, which the House was hesitant for a while but lately has been more embracing. And, you know, thank goodness we did before COVID because we have been using cloud technologies a lot.

But, you know, the executive branch, it is mostly the FedRAMP program which we rely upon. You know, Zoom, for example, they had to go through and have a FedRAMP version, which is approved by the executive branch, and that makes it easy for us in the House to say, okay, well, we can approve that as well pretty quickly. But there are still, as Melissa was talking to, many challenges in the House trying to adopt new technologies.

And my overall top recommendation is that we shouldn't treat all, they call it cloud services, the same because they are just very different. Some are like Melissa's, very specifically made for Congress. And so I think those should be given extra attention because they are built for us. And then some are just, you know, general use applications from companies that don't really know or care much about Congress, and so those should maybe—especially when they don't have much PII, personally identifiable information, perhaps they don't need to have as much scrutiny.

But those are my thoughts. I am not sure if Melissa has additional thoughts.

Ms. DARGAN. Yes. Thanks for addressing the question. I do echo what Steve had mentioned initially.

I will say in terms of the difference between the House and the Senate, openness was one that I had noticed with the House in even entertaining, initially, cloud services.

What I will say is some of the similarities with processes where it first goes to security, assessment, and then approval and authorization by the committee is similar in both Chambers. The difference I had experienced was in time of the approval process. So

what was interesting was, while the Senate was less open initially to cloud services, they only took 2.5 months, about 7 weeks, to approve TourTrackr, where in the House, it took about 34 weeks, 8 months.

And that is just something I wanted to be able to call out, because in a timeframe like that with a small company like mine, it could be very difficult for a company who is trying to get set up if they have to wait 8 months before even being able to have the allowance of operation.

The other thing I wanted to note in terms of what the executive branch does, so some of the agencies, they also have programs that support small businesses. They have an office like within the SBA where small businesses, women-owned businesses, underrepresented businesses can have a support to help them through the process to understand how to get through and get approved.

And in the executive branch they also have, I believe it is SAM.gov, where there is a list of requested contracts that they are hoping to get built or get done that these businesses now can refer to and submit proposals for.

So that may be something to consider on the House side, if there are open reqs of items that offices are hoping to be built or need help to be built, that companies can submit proposals for in order to then be reviewed. And that is just something I wanted to make sure I focused on where on the executive side they do provide support. There is a whole website for small businesses to onramp and onboard, and that may be something where small businesses and startups can be put together where they have support from Congress.

The CHAIRMAN. I think that is really helpful, something we should take a closer look at.

The other—if my colleagues will indulge me asking the specific question that bugs me. You know, one of the challenges we have in this place is we are sort of 435 independent contractors, each with our own operations, each using often different technologies, although there are some similarities.

You know, where this is particularly problematic is where we have failings identifying common themes across the offices. So just as an example, during COVID, you know, we were getting a lot of calls about postal disruption. And when I was on the floor, I would talk to my colleagues and say, man, we are really—phones are ringing off the hook about postal disruptions. And they would say, oh, yeah, me—our office too. Right? And right now, we may have our caseworkers work that issue, but there is no way to feed it into any sort of institutional learning.

You know, same thing around challenges with the VA or, right now, I mean, I think all of our offices are getting overrun with combination of visas and passports. And, you know, to me there would be value in exploring some way to use probably—I mean, almost assuredly, anonymized data that comes from our constituent management systems to spot and address trends in the casework so the institution can solve some of these problems that usually rest at the agencies.

So I wanted to just take your temperature on that. Good idea, bad idea, something our committee should recommend?

Go ahead.

Mr. SCHWEICKHARDT. Absolutely. I have given a little bit of thought to that issue. The data is held at different CMS vendors, and I think that a process where that data is extracted and anonymized into a larger pool that could be subject to analysis or looking at trends both for constituent service and themes for oversight would be very valuable to the institution.

Mr. DWYER. Yeah. I think it is a great idea, and I think it is something that I—I know a lot of the companies that run the constituent databases as well, and I think it is something they probably would be excited about. You know, I think offices could maybe opt in. You know, it wouldn't have to be mandatory, and certainly anonymize the data, but I think it would—you know, I think we neglect all the information that we get from our constituents. If you take it as a whole, I mean, we get millions of emails every week from people all across the country and, you know, many thousands of casework problems with the Federal Government. And, of course, we individually deal with them, but I think there should be some more collective action, and I think it is a great idea.

The CHAIRMAN. Vice Chair Timmons.

Mr. TIMMONS. Thank you, Mr. Chairman.

Mr. Dwyer, what is your new fancy app you are working on? What is your new piece of technology that you are working on?

Mr. DWYER. Well, our newest one is—we haven't sent the press release on it yet, but Dome Directory 2.0 is live as of a few weeks ago, and—

Mr. TIMMONS. What is the difference?

Mr. DWYER. We added a number of new features. A number of them were requested by Mr. Hoyer himself, but he also hears from other Members on the floor a lot about it.

We added—you used to only be able to look at the whole Dem Caucus or Republican Caucus. Now you can look by committee. You can also look by major caucus, which I think is somewhat unique to the app. A lot of people don't have good data on, you know, which are the major caucuses and the different roles and leadership roles.

We added a search box right at the top because you used to only be able to quiz yourself, but now you can—now you can just go find a particular Member. Mr. Hoyer wanted that because he often just wants to pull up a person.

We added three or four different bios for every Member. The issue I am most excited about is we added defining votes from this Congress, so we picked four or five of the most consequential votes for this Congress and we listed them for every Member.

Mr. TIMMONS. I mean, who owns Dome Directory and Dome Watch? Hoyer's leadership?

Mr. DWYER. Yeah, the Office of the Majority Leader.

Mr. TIMMONS. Okay. And he will give it to whomever if he ever does leave Congress?

Mr. DWYER. I assume that is the case, yes.

Mr. TIMMONS. Okay. That is very interesting.

The CHAIRMAN. I am sorry to interrupt. Can I interrupt real quick?

Mr. TIMMONS. Yes, sir.

The CHAIRMAN. Mr. Schweickhardt, you said something that if you use your MRA to develop an app, you can't share it, so how do you guys get around that?

Mr. SCHWEICKHARDT. They are not using MRA. They are using leadership funds.

The CHAIRMAN. Okay. Thanks. Sorry to interrupt.

Mr. TIMMONS. So the 59th recommendation we made last Congress was to create a common committee calendar portal to help with scheduling and reduce conflicts. I think this is something that could make a big impact on this institution, and we are having a tough time getting traction, other—it is being worked on.

Do you all have any thoughts on what we can do to maybe move a little quicker?

Mr. SCHWEICKHARDT. One of the challenges with technology in committees is there is not a clear LA button to push. It is bifurcated between the clerk and the CAO and the committees themselves. So I think one of the recommendations is to clearly focus who is responsible for legislative product so there is an accountable owner.

I think the other challenge that I alluded to is there is no gatekeeper for scheduling projects. So in the CAO, they may—teams may be working on 5 to 10 projects, so they tell you they are working on your project and they are, but they are sort of shuffling things back and forth versus a program management kind of functionality that says, what are the three things we want to accomplish in the next couple of months; let's knock them out, and then let's figure out what the next set of important things are.

Mr. TIMMONS. With the additional resources we got in the modernization account, could we use those to speed it along?

Mr. SCHWEICKHARDT. Absolutely.

Mr. TIMMONS. Mr. Dwyer, what do you think?

Mr. DWYER. I think the building foundation has been laid. Seven or eight years ago now, there was the creation of something called doc.house.gov, which is not widely used by the public, but it is used internally a lot. I know Reynold worked on that. I know the Bulk Data Task Force worked on that a lot.

For the first time ever, all committees are required to post all hearings in one place, and that is where they post it. They are also required to post all testimony and documents related to every hearing. So—

Mr. TIMMONS. Is that done in House rules?

Mr. DWYER. I believe that is in House rules is what required that and the creation of it.

Mr. SCHWEICKHARDT. Yeah.

Mr. DWYER. And, you know, that is another example where the House is ahead of the Senate. I hear that their committee schedules is not all in one place and their videos—or all the committees are not in one place. So I commend the House for that.

So I think that is the foundation. But I think, you know, amplifying that, you know, making a more consumer-friendly version of that so you can at least see all the conflicts, I mean, that is sort of the first step, and I think that could be a project for the Modernization Fund.

Mr. TIMMONS. Ms. Dargan, what are your thoughts?

Ms. DARGAN. Yes.

Mr. TIMMONS. I was asking about trying to deconflict to the committee calendar. We made a recommendation to do a common committee calendar, and we are still working on it. So do you have any thoughts on what could move it along?

Ms. DARGAN. I think both of the panelists who have addressed that question have covered it in terms of how to get that. And just having worked on the Foreign Affairs Committee prior, I will say that that would be a very helpful tool moving forward. So whatever the Modernization Committee can do to push that, whether it is recommendations or freeing up, you know, certain funds to be able to create something like that, would be very helpful.

Mr. TIMMONS. Okay. One quick last question. This could save millions of trees in this institution. I rarely use the materials that are printed out. I mean, every time I go to Financial Services, there is a stack that thick.

Mr. PERLMUTTER. Some of us still use paper.

Mr. TIMMONS. Well, we can make it optional. We can make it optional. But, I mean, how challenging would it be to go paperless as the default, and if somebody wanted paper, they could get it?

Mr. DWYER. I wholeheartedly agree. We have certainly reduced the amount of paper quite a bit. I am sure there is a lot more to be done. Now, my expert here worked for a long time with the GPO who probably has more strong thoughts on this.

Mr. SCHWEICKHARDT. So I think that, for example, the recommendation about automating the production of the committee hearing document from docs.house.gov, so extending that allows for the creation of electronic document. I think that a lot of the costs that are incurred are in the creation of that first copy, and then the printing becomes pretty incremental. And as Members have become more digitally savvy, I think it is a much more practical alternative, with exceptions.

It is interesting you mentioned the pager in some random desk drawer. There was a huge controversy at the time when we tried to replace it because there was an equity issue that Members needed to have exactly the same notice of a floor vote, and if it was coming through email or some other mechanism, somebody might be 3 minutes delayed. It was like a horrible thing. And as people became more accustomed to how the digital world worked, that issue went away, and the pager is rightfully in the back of the desk drawer.

Mr. TIMMONS. Thank you. Mr. Chairman, I yield back.

The CHAIRMAN. Mr. Phillips.

Mr. PHILLIPS. Thank you, Mr. Chairman.

It is clear there is a bias against change in this institution. But, Mr. Dwyer, I will start with you. In your estimation, where is the ideas bottleneck? Is it House Admin? Is it leadership offices? Is it the various agencies? But, like, what is the crux of this? Who needs to champion at least employing technological improvements?

Mr. DWYER. Yeah, that is a great question. I think there is a lot of ideas out there. I think we need to do a better job of sort of collecting them. I think the Modernization Committee deserves a lot of credit for collecting all these ideas, but I think there needs to be more of a permanent institutional sort of way to collect these

ideas and to properly evaluate them and elevate and prioritize them.

But, yeah, I think we just need to create the processes to collect those. I think, again, the Modernization Committee shows that, you know, once you create that process, you get a whole lot of very good ideas. So I think at every level, Member office, committee level, leadership, institutional offices, I think there is a lot of good ideas.

I would say, on the institutional offices, I think there is a lot of ideas, but they often are afraid to share them. They are just more risk averse. And so I think if we could somehow give them a little more authority to sort of improve things, rather than I think often they feel that their job is just to keep the status quo flowing.

Mr. PHILLIPS. But who is the “we”? Is it the Speaker of the House? Is it majority leaders, minority leaders? Is it the chair of House Admin? Who needs to kind of inspire it other than the ModCom?

Mr. DWYER. I think in technology, unfortunately, there isn’t much of a lead. I mean, I think House Administration provides leadership, as does individual leadership offices. But I think a lot of it goes to the different institutional offices for a lot of the technologies here on the Hill, and they are just very sort of disjointed, you know, where you have got the CAO, you have got the Clerk, you have got the Library. And I think we really need more authority across all of them.

In my prepared testimony, I recommend the Bulk Data Task Force, which is now the Congressional Data Task Force, which I think is—if they had more authority, they could sort of do more good things. But I do think it is a lack of leadership, that is correct.

Mr. PHILLIPS. If I could just ask one more of you too. I loved your recommendation about an open public discussion forum for bills. Take us through just quickly, if you would, you know, how that might—how that would work, you know, from inceptionalization to actual implementation, based on the status quo. You know, how could we approach that?

Mr. DWYER. Sure. Thank you. It is just that, you know, right now, as was largely the case when I started in Congress nearly 20 years ago, if you want to weigh in on legislation before Congress, you just have to send your Member an email, and then you might get a response, often weeks later, and it is usually kind of canned, and so that is sort of a frustrating process often; not always but often.

And the idea is just that, nowadays, when people take time to write an opinion on something, they usually want it posted publicly. I mean, that is just what they expect in the age of social media. And so I think because we haven’t created a system like this—so the system I envision is just an open platform of all bills, try to structure the conversation, try to keep it focused on legislation and policy.

There would—of course, like any open online system, there would need to be content moderation, which is difficult. But I still think, you know, you could have simple functions like up voting and down voting. It wouldn’t have to always be messages. It could just be support or nonsupport on different bills and stuff. And I just think

it could—it would be a large project, but I think it could be very constructive in the long run.

Mr. PHILLIPS. Could it be attached to congress.gov or something—is that—

Mr. DWYER. That is what I imagine, yes.

Mr. PHILLIPS. Okay.

Mr. DWYER. I certainly would use the database—

Mr. PHILLIPS. Yeah.

Mr. DWYER [continuing]. For congress.gov for all the current bills to try to structure the conversation.

Mr. PHILLIPS. All right. I yield back. Thanks for your—oh, yeah. Please, Mr. Schweickhardt.

Mr. SCHWEICKHARDT. In terms of what is limiting progress, I think that I would—with the many silos comes turf—

Mr. PHILLIPS. Uh-huh.

Mr. SCHWEICKHARDT [continuing]. And there is a tendency to negotiate around those sort of perceived immovable objects.

When docs.house.gov was mandated in House rules, one of my jobs at House Administration was to manage the implementation and the creation of it, and there was a committee that didn't think that they would be subject to those rules, not to get into oversight versus appropriations differences. And with the support of the Speaker's Office and negotiation to understand the business process in appropriations, managed to create an all-encompassing solution.

And so I think that I would point to the silos and someone or some organization that could be House Administration, could be the leadership, really arbitrate those differences—

Mr. PHILLIPS. Okay.

Mr. SCHWEICKHARDT [continuing]. And say, I understand that is in your turf or in your charter, but we are going to look at this from an institution wide perspective and make a better solution.

Mr. PHILLIPS. I appreciate it. Thank you both.

The CHAIRMAN. Mr. Davis.

Mr. PERLMUTTER. He just got here.

The CHAIRMAN. Sorry. Did you have a question?

Mr. PERLMUTTER. No.

The CHAIRMAN. Okay.

Mr. DAVIS. You know, Ed—

The CHAIRMAN. We call—

Mr. DAVIS [continuing]. Seniority on this, even this select committee matters, and I—

The CHAIRMAN. Perlmutter is the ideas bottleneck actually.

Mr. DAVIS. He clearly is. I call it Bronco's fan—

Mr. CLEAVER. Yeah.

Mr. DAVIS [continuing]. Inertia.

Quit triggering me, Ed. Quit triggering me.

Anyway, look, I want to thank Chairman Kilmer and Vice Chair Timmons for recognizing me before Mr. Perlmutter today.

Reynold, I don't want to ruin your reputation by saying this, but you have been a longtime friend of mine, and I have just appreciated the work that you have done to make this institution as technologically limited advanced as we are today. I mean, that is like moving a Herculean effort forward trying to get an institution

to change, and you have been part of that process to make that happen.

Mr. SCHWEICKHARDT. Thank you.

Mr. DAVIS. But—and it is great to see you back here in the House office buildings again, and I certainly hope you don't go away.

He is the guy, if you want to know any institutional technologic—technology issues, he is the one to turn to.

And then also—and this is where my questions are, Reynold—is you mentioned the newly launched House Digital Service, and you mentioned—you recommended its expansion, right? I wasn't here earlier. Have you already gone over that process at all?

Mr. SCHWEICKHARDT. [Nonverbal response.]

Mr. DAVIS. Okay. You also highlight the House's institutional issue of not having a central body to prioritize those technology products. That was something Mr. Dwyer just mentioned.

I actually happen to think House Administration should be the clearinghouse for solving those problems, but—and I was reminiscing with former Chairman Harper just about an hour and a half ago about how it was awesome to make sure we dealt with furniture issues, transparency issues when it came to spending.

And now House Administration is dealing with H.R. 1. We are dealing with more legislative issues. This has become more of a legislatively or leadership-appointed authorizing committee. And that, to me, is a big change. And, frankly, I think it puts what this ModCom committee is trying to accomplish by making the House as an institution move forward—I think it puts that on the back burner. And that has to change, in my opinion.

Do you see that, Reynold, and do you have any recommendations for what we should do going into the future on House Administration?

Mr. SCHWEICKHARDT. So certainly as a longtime House Administration Committee staffer, I have to support the role of House Administration in these processes. If you look to the Canadian Parliament, they have a long-serving chief technology officer. He—I think he is getting ready to retire. And so there was continuity in a technology strategy and a technology roadmap.

And so my testimony, I talked about the difference between sort of stability and innovation and how to manage that tension. And I think that there is a role to sort of herd the cats in terms of keeping the innovation from disrupting the institution.

We need more innovation. By the way, that is not a, you know, keep the door shut. But, you know, how to manage that in an effective way.

I think some of the listening sessions that have taken place to understand what are the needs of different job roles; what is a legislative counsel versus a staff assistant versus a scheduler; you know, what are their challenges in, you know, supporting the Member and the institution—

Mr. DAVIS. Well, you—

Mr. SCHWEICKHARDT [continuing]. Are important.

Mr. DAVIS. Your time on House Administration mirrored my time as a staffer too for Congressman Shimkus, and I can tell you, today, the access to training, the access to products, the access to

technology is much, much more ubiquitous than it was when I started in the nineties and worked throughout the early 2000s.

But we have got a—we have got a problem and an issue that this committee, I know, has debated and House Administration has not debated enough. What is your suggestion on how do we find that balance between the House and the CAO trying to develop technology when there might be that technology that we could get off the shelf and maybe work it into our security apparatus? What is that fine line?

Mr. SCHWEICKHARDT. So I think that—so there is two kinds of technology, right? There is the—everyone in the world needs Zoom, and the House needs to use Zoom as well. So what are those non-proprietary technologies or nonlegislative-specific? And then there is the, what do we need to have developed, like Melissa's application, that no one else in the world needs to use?

I think one of the missing pieces is how to leverage the energy and the enthusiasm of the civic tech community. There is a lot of people who want to support the legislative process, that want to strengthen the first branch of government. And some of the ethics concerns, some of the acquisition concerns prevent that from happening.

If you look at the executive branch with challenge.gov, they have different statutory authority to use contests and challenges. You know, build me a better airplane, and I will give the one who builds the best airplane the contract and the money. It speaks to some of these issues that were discussed earlier in terms of having a defined process that is open and transparent in terms of how we do that.

So I think, going back to acquisition and competition, I mean, one of the problems, I think—you know, my opinion today with challenges is, if you have a contest and you—you know, we will give you a dollar for the winner, you get into, you know, ethics concerns and so on.

The Library of Congress has authority to provide funding, which they have used to work on congress.gov. But the House seems to lack that same authority to say, I will give you \$5,000 for the world's best, you know, constituent communication widget.

And Steve, I think, may have some thoughts.

Mr. DWYER. Yeah. If I could just say it is a good point, sir, that you made on, like, whether to build or buy. And I think you certainly want to buy if you can, if there is a—you know, there is no reason to build something that already exists. But I think we are somewhat unique.

Now, we are not entirely unique. You know, there is a—a bunch of other State legislatures that do a lot of the same things we do and international. But, yeah, the TourTrackr app is a good example.

Another good example is, you know, the Senate recently developed in-house a really nice, clean, new app for—it is called Quill. It is for managing letters and signatures. And that saved—I mean, our office, that saved us so much time this appropriations season compared to previous seasons. Great efficiency gain.

Mr. DAVIS. Did you say the Senate developed something before the House?

Mr. DWYER. Yeah. And it is——

Mr. DAVIS. Interesting.

Mr. DWYER [continuing]. Very rare that a tool is being—a bi-cameral tool is now in use in both Chambers in the same way.

Mr. DAVIS. That is great.

Mr. DWYER. It is a great example of nobody else really has the same letter, signature problem that we do with 535 signatures that we always have to, you know, jumble on different letters, so——

Mr. DAVIS. Well, I appreciate your testimony, both of you.

Thank you, Chair Kilmer. And I would seriously like to sit down. This is a very leadership-driven operation here.

Mr. PERLMUTTER. Bingo.

Mr. DAVIS. And I have—you know, I was very supportive of the legislative branch modernization fund, but I have some big concerns with how that money is being utilized right now with an overwhelming amount going to the Approps Committee and to the CAO. And I would love to sit down with you and your boss to talk about some of these concerns, if that would work out too.

Mr. DWYER. Of course.

Mr. DAVIS. Thank you.

Thanks. I yield back.

The CHAIRMAN. Thank you.

Mr. Cleaver.

Mr. CLEAVER. Thank you, Mr. Chairman. Just this whole issue of technology is one that I am—I appreciate the committee leadership bringing to us.

I want technology to be my servant, my—but there seems to be an effort for—you know, afoot to make it our god, and—not at this committee hearing. But, I mean, you know, I have a 6-year-old grandson who is constantly trying to teach me, you know, how to use this phone app that I had no business getting, because all the stuff on here, I don't—my 6-year-old knows everything.

So I have some apprehensiveness about just going all the way in as it relates to technology. However, every office probably has a contract with a technology person, somebody that—IT comes in and they—the computers go down, the printers go down. And I am just—and we probably pay, you know, maybe as much as—we all probably have contracts, you know, probably 20 to 50 may be the range, maybe even more than that.

And so if we are spending that kind of money, technology is, in some ways, becoming, you know, ahead of us—you know, it changes every night. I get mad at this phone, because it says essentially, stupid, I told you I am not going to function unless you update me, and, you know, but—but do you—at least those of you who were around—have been around here, believe that maybe each office needs to have not just a contract, but somebody in there, just like a LA or regular member of our staffs at all times, who not only could, you know, help with the, you know, problems in the office, but also next-step technologies?

I mean, we—you know, here in Congress, we are in a situation where we have to catch up. This is not like making a decision about, you know, just another move. We are talking about catching up.

So given—what—if we had the dollars in our MRA, do you think that this would be—it would be a good idea for Members of Congress to have a technology person in-house?

Mr. DWYER. I certainly think so, sir. I think it is a great idea. I think that is happening more and more. I think there is just so much more that they need to do, even versus 5, 10 years ago when I was in the congressional office.

You know, a lot of that is in digital communications. Every office needs to, you know, not just take a bunch of pictures and post them on Twitter and Facebook, but they have to do more technical Facebook Lives. They have got to take their boss live. And there is a lot of technical tasks that didn't exist many years ago.

And so I think, you know, we have been recommending, within the Democratic Caucus, you know, the use of the title "digital," so digital aide or digital manager. And those people should be technical people, so not just communications specialists online, but also are competent with many different technical tasks.

I think data is also critical for every office.

Mr. CLEAVER. Uh-huh.

Mr. DWYER. Every office, when they communicate with their constituents, they are using complicated databases in targeting and such. And those are technical tasks that require—and I think having someone in-house is good, because they can sort of do all sorts of these different tasks for you, including more basic IT support as well.

And so I think that is absolutely needed, that we can't just think of traditional congressional staff of, you know, political science and history majors, but also more technical staff, I think, are helpful all around.

Mr. SCHWEICKHARDT. If I could add, sir, I agree with Steve's comments. A complementary aspect of that is to continue to standardize core IT so the person you are paying for doesn't—isn't figuring out how to make the computer get updated but, rather, that is something that the CAO should manage, so that the space where you have a technical advisor or digital advisor is, as Steve said, on communications. And I think on analytics, increasingly, you know, what did the executive branch or the industry or the trade association, they provide you a set of information to support their positions, there is many resources, but I think someone in the office who is in support of, you know, your positions to do data analytics and say, this is true, this isn't, you ought to ask them this question because, would be very helpful.

Mr. CLEAVER. Ms. Dargan.

Ms. DARGAN. I will add to that. For individual offices—and this is touched upon earlier—silos, right? So if each individual office has their own staffers and they come up with innovative solutions that other offices could benefit from, this is where it is going to be important to also have something that is a way in which these digital individuals can all communicate, because I know from personal experience, one issue that an office can experience, other offices have experienced in the past as well.

And if everybody is coming up with their own way in which to tackle it starting from scratch, it is—it can be inefficient and ineffective. And I would say, if the office decides to have an individual

digital person, there should also—the House should find a way to be able to bridge these silos so that one issue that gets resolved in one office, there can be an easy way to implement that in others.

And I—whether that is an open forum, whether that is a way that they can all communicate, I think there should be a way to bring these silos together as well on a holistic level, because that will help close some of these gaps.

Mr. CLEAVER. Thank you.

The CHAIRMAN. Mr. Perlmutter.

Mr. PERLMUTTER. So that sort of leads into the question that I was going to have, starting with you, Ms. Dargan. Just listening to this, it is sort of an age old problem of centralized versus decentralized. And, you know, you call us silos, but we are offices. We are individual offices and we kind of do things on our own.

But we need to have better networking and conversation. And it could be about technology. It certainly could be—you know, we did a big veterans pinning thing for, you know, Vietnam vets, and we started it, and nobody really knew about it, but then it—the word spread. I mean, there are good things that any offices could use. So we have to have a better networking process, I think.

But my question is a broader one, which is sort of a procurement/acquisition kind of issue. When you are a small business and you want to, you know, introduce your product to my office or to the Congress as a whole, to the CAO, what is the process? I don't even know. I mean, I am going to show my ignorance right here.

Ms. DARGAN. Well, thank you for posing the question. It—in the House side, the way that a startup would pitch even a product would be the Member office would have to support and turn in a document into the CAO asking for that startup and that product to be reviewed.

This was something, when I initially first started in actually getting approval, didn't even realize myself, because there was no information publicly known of how I could even get approved or that I needed approval in the beginning.

And so a Member office would have to support a startup or a vendor and submit documentation to the CAO. The CAO security team will then review the product to ensure that security assessment and risk assessment is done appropriately and that the technology is safe and secure for Member offices to use.

Once that is approved in the CAO side, it gets sent to CHA, where then CHA then does the final authorization. And if it—and if the product or company gets authorized at the end, then it can be approved on an approval list where Member offices can now use this technology.

So there are multiple steps, and it all starts with a Member office needing to submit a company to be reviewed initially. There is no open proposal where I could submit something myself and say, Hey, I know that this is a problem. I have spoken to other offices. Can I submit TourTrackr, for instance, to be reviewed by the CAO directly? I would have to first get a Member office to support me, and then have them submit that—that documentation and information in order for me to be reviewed or even looked at.

Mr. PERLMUTTER. So you can't go straight to the CAO?

Ms. DARGAN. Currently, I was unable to, and I don't believe there was a process to do that, because I was told I needed a Member office to support and turn in the documentation to even get me through the door.

Mr. PERLMUTTER. Is that the same for the Senate?

Ms. DARGAN. In the Senate, a Senate office had to also champion a vendor. And for them, though, their process is a Senate office sends a risk assessment to be reviewed by the Senate Sergeant of Arms. Then the Senate Sergeant of Arms reviews the risk assessment, provides their assessment to the Rules Committee. And then the Senate office also has to write a letter to the Rules Committee asking to use official funds, assuming that the risk assessment was approved and passed.

So it is very similar in that it has to go through, first, a risk assessment on both Chambers, and then it also has to go through approval by a committee. On the House side, it is CHA, and on the Senate side, it is Rules.

Mr. PERLMUTTER. Thank you.

Mr. TIMMONS. Just want to mention that we—

Ms. DARGAN. Thank you.

Mr. TIMMONS [presiding]. If we had a common committee calendar, then the chairman would still be here, and he wouldn't have to be out. I will—

Mr. PHILLIPS. Just saying.

Mr. TIMMONS. Mr. Phillips.

Mr. PHILLIPS. Thank you, Mr. Chair.

My question is about tech talent. I know that Congress is not exactly a hotbed of tech talent right now. For all of you, do you see a way that we can become a little bit more of an attractive institution for that kind of talent? I know it can be hard to compete economically with compensation, but how might we reposition ourselves and actually make it cool to serve the country with tech skills in Congress?

Mr. SCHWEICKHARDT. Yes, sir. I think that—you know, I had an opportunity to speak with a group of tech Congress fellows and, you know, they are very impressive. They are very accomplished. And so I think, from a rotational method, that there are people who are concerned about democracy in this institution who will step away from higher salaries and contribute.

What is lacking is building kind of that core capability. You know, people like Steve are kind of unique of having, you know, led technology strategy for Mr. Hoyer—

Mr. PHILLIPS. Uh-huh.

Mr. SCHWEICKHARDT [continuing]. For 20 years.

I would just say, I think that money is certainly part of it, but it is also the ability to get something done. You know, these are motivated people. If you hired—you know, if you had a Formula One driver fellow and you give her a golf cart, she is not going to go as fast and far as she does around the track, probably not going to stay very long, because it is not very satisfying to be here.

So I think that whole ecosystem are—you know, am I using modern tools? Are there modern methods? Is there the political will or the process to be effective and make change, all contribute to making the place, I think, more attractive.

Mr. PHILLIPS. Culture. Culture.

Mr. Dwyer.

Mr. DWYER. Sure. I think it is a great question. I think we could look to the executive branch for some inspiration. I think, you know, this is something that President Obama worked on and something that President Trump continued through their initiatives like the U.S. Digital Service and 18F at GSA. They created different flexible employment models like they did—yeah, I think they started with like 6 month and 12 months tour of duty. You know, say you are a Silicone Valley engineer but you are a little tired with your job and—but you want to help your country, you want to serve your country.

Mr. PHILLIPS. Like a sabbatical.

Mr. DWYER. Yeah, a sabbatical sort of thing. And I think they realized that those—those were often pretty short, because a lot of these—even the smaller projects, you know, you have really got to dive into for perhaps longer than a year. So I think they have expanded to 2- and 4-year tours of duty.

But they also found that a lot of those people ended up staying. You know, a lot of those people really do love more of a mission-focused work and get excited by the work and then—so after their tour of duty ends, they actually are able to work inside the agency.

So I think that is a good model that we should look to—

Mr. PHILLIPS. Appreciate that.

Mr. DWYER [continuing]. In the legislative branch.

Mr. PHILLIPS. Ms. Dargan.

Ms. DARGAN. I—I would echo that. Like, the innovation fellows were part of the executive branch's initiative where it was a short stint at first, and then what you could do is either elongate, but it gave these individuals who possibly had an interest in civic public service a taste of what it is like. And what is great is they have the tech background. Getting them in for maybe a 6-month, a year, 2-year stint gives them the ability to at least give back.

And in a number of cases—I mean, I know a number of innovation fellows. They ended up staying in government and transitioned away from the private sector because they felt that this was a fulfilling mission. They were put on projects that had end dates and deliverables and actual results. So, to them, it was also fulfilling because they delivered something that was used by the government at the end.

So I would say, if you think about it a little bit, it is like the Teach for America model, right? But it is, Hey, come, take that sabbatical, work in Congress for a year or two. It gives them the ability to get a little bit of a flavor of what it is like to work in public service, especially if they were curious.

Mr. PHILLIPS. Uh-huh.

Ms. DARGAN. But it wouldn't be necessarily such a huge shift and change if they wanted to go back.

The other part of it, I would say, is recruiting, because when I went to business school, I remember a number of these programs and organizations would come to our recruiting events. If something like this were to be, you know, launched within Congress, it would be important to get the word out and be able to recruit these individuals who you would want to target to come over, whether

that is the companies and going to them and pitching this kind of idea, or going off to like engineering programs in the various schools to let them know about this opportunity. The biggest thing in the pipeline as well is making sure you get the word out and recruiting the right people.

Mr. PHILLIPS. Great recommendations.

Mr. SCHWEICKHARDT. I am glad to—

Mr. PHILLIPS. Yes, sir?

Mr. SCHWEICKHARDT. One thought, sir.

Mr. PHILLIPS. Yes.

Mr. SCHWEICKHARDT. Today, the General Services Administration is recruiting a chief technology officer for a limited term appointment, exactly in this model. Dave Shive, the CIO, is engaged in extensive social media outreach. I think they have a session next week where they are going to have an open meeting for anyone who is considering applying for the position.

So sort of following up on Melissa's comments, they are very intentionally building an entire recruitment—advertising and recruitment campaign to bring in a world-class technologist for GSA.

Mr. PHILLIPS. Outstanding. Okay. Thank you.

The CHAIRMAN. [Presiding.] I wanted to ask about the use of open source. Can you speak a bit about the benefits of requiring new technology created for the House to be open source? Have you seen any examples of government or congressional tools being built using open source?

And I guess I also want to get a sense of, are there ethics concerns under current ethics rules when it comes to individuals within the House using open source code and problem posting forums like GitHub?

Mr. SCHWEICKHARDT. Yeah. If I could start. You know, in my written testimony, it talked about a couple different use cases here, and I talk about the Congressional Art Competition, where there is not a lot of concern about the makers of Tempura, Inc., or something, you know, having—using art competition as a leverage point into Congress.

When we set up the Congressional App Challenge, when I was at House Administration, the Ethics Committee was very—at that time, the staff of the Ethics Committee was very concerned about sort of undo influence of big tech and, you know, how to limit those—limit that impact. They provided some verbal guidance about the use of open source, but never, to my knowledge, issued anything in writing to sort of lay out that process.

And so, you know, the House has been a longtime user of sort of generic open source technology bringing—you know, making—sort of incorporating those functions. I think that an acquisition—one of the reasons I suggest an acquisition authority is you can explicitly have a sort of market-based competition that recruits open source developers.

I think the more—the point that would be very useful, if we could get to it, is how to have an ongoing kind of codevelopment collaboration with civic technologists, you know, maybe through the congressional—sorry—the House Data Task Force. It is still sort of burned into my brain, the old name—but some mechanism that ar-

bitrates or sets up a framework. "Arbitrate" is not the right word. Sets up a framework for that kind of participation.

The CHAIRMAN. Is there something that impedes that right now?

Mr. SCHWEICKHARDT. I think it is inertia, and I think there is ethics concerns about that.

One of those concerns is about the tasking of outside entities. So it is like, you know, you have—Steve, you know, this product he wrote, this Dome product, is really great, but we need these 27 enhancements to it, and he does it for free, and the institution uses it for free. Is that an appropriate scenario?

So a lot of these things are fact based, you know, the fact pattern. But there are those fact patterns that would raise issues, I think.

The CHAIRMAN. Go ahead, Mr. Dwyer.

Mr. DWYER. Sure. I think it is a good question. I think, you know, the House uses lots of open source software. I mean, most—a good example is most House websites that are run by the CAO are done in a system called Drupal, which is a very worldwide, popular, open source website software for managing websites and creating websites.

And the way it works at being open source software is that all that code is available for free on the internet, and it creates a very healthy feedback loop where lots of people are making fixes to the code and lots of people are suggesting fixes to the code and bugs with the code and reporting bugs. And so it is just a large online community that sort of works on a group project, which is just a system of code that makes good websites.

I think the Ethics Committee concerns, in my opinion, are a little overblown. I—I have seen an Ethics paper on this from probably 4 or 5 years ago. I don't think that they are actively working on it. I could be wrong. I don't know. But I think that there was some concern that, you know, through that open feedback loop, where people do just ask for things, like, hey, it would be great if this—if your feature that you made had these features, and they often do it. But they do that not just for Congress, they do that for anyone. If they just think it is a good idea, they do it.

So I think, you know, Ethics is worried that this could be some loophole for big tech to come in and see the needs for us and give us a large gift by making a bunch of software, but I don't think that that is much of a risk. I think the traditional use of open source is just a collaborative something, and I don't think that violates the spirit of the gift rule, which is what Ethics was concerned with.

The CHAIRMAN. Ms. Dargan, do you want to take a swing at that pitch or—

Ms. DARGAN. I believe my fellow panelists have covered most of it, and I agree in terms of what they say with the ethics concerns. I also think, with open source, prior when I was on the Hill, there was this notion that it would, you know, affect, like, risk assessment or what that would mean.

But what I will say is, when you have looked at open source examples, the building of extra features, if there was a concern of any risk, this is where, in the House side, the CAO would come—come up and have the ability to review any additional pieces that were

built off to ensure that it is safe for any Member office to use. And that would just be a process that would also be needed to put in—to be established.

The CHAIRMAN. Let me hit one final topic on my end. I don't know if any of my colleagues have any additional questions.

Mr. Schweickhardt, you actually spoke to the issue around sort of the siloing of technology development across the Congress. There are different support offices involved, like CAO and AOC and the Office of the Clerk. So how do we encourage more collaboration in technology development, and how do we encourage the CBO and the GAO and the GPO technology development teams to collaborate as well?

Mr. SCHWEICKHARDT. So I think that, you know, my recommendation has been to look at the scope and chartering of those existing technology organizations. I mean, to be clear, they collaborate today but just has friction as part of that process, so they are a little less productive. It is one of a death of a thousand cuts.

The House is unique, as far as I know, in national parliaments in having multiple institutional IT organizations in a single chamber. Some organizations, like the UK Parliament, in fact, has a single CIO for both the House of Lords and the House of Commons, but that is probably a bridge too far for us.

So I think that looking at consolidating that institutional IT into a single organization would have the most impact but is the most difficult. If that is not possible, consolidating into the Clerk's IT organization for legislative functions. So, you know, House Office of Leg Counsel, you know, has some IT functions—they are relatively small—both for the efficiency of putting them together, but also from a charter point of view, you know, Clerk owns all legislative IT regardless of where it is, so you know who is responsible for it.

Mr. DWYER. Yeah. I think it is a good question. I think it is a problem that there isn't authority over all these different—because these different silos do very large things. I mean, you have to—the CAO manages all the communications with the public and all the websites of Members of Congress. The Clerk handles all the voting and the internal operations of the floor and the websites related to that. The Library and GPO handle more of like the historical records. And nobody's really in charge of how they all interact.

So I want to go back to the Congressional Data Task Force. It is one of the few areas where I have seen them interact very well, and that—you know, it is now 10 years now they have been working together. But I do think, you know, like the UK model, like of having a single person that had authority over them or—that is just my remarks. You know, maybe the task force has authority over all of them to sort of embolden them to make some more large changes and deal with the silo problem.

Mr. SCHWEICKHARDT. We—one of the things—one of the things we did at House Administration, working with the Appropriations Committee, was try to create a single—a process for the cybersecurity initiatives of the different IT organizations and to create a common assessment, so that the appropriators could look on an apples-to-apples basis on the level of IT risk in the different organizations across the leg branch, which really all—many—most of those organizations, except for the AOC, are part of the legislative

workflow. They are part of that supply chain to get a bill to the President's desk.

That was a very intensive effort. So I think that, you know, solving that—one of the broader aspects of those different IT organizations is worthwhile, but it is one of those things where incremental progress is probably more achievable than a—you know, than a grand solution.

Mr. DWYER. Can I just add, the—back to the task force model, it was unique that the House rules that created it said that they must meet regularly and they must, like at least once a year, I believe, you know, meet with the public to discuss their progress. And so I think just—so having some structure, force the silos to meet with each other regularly, just to make rules about that, and to meet with the public, the users of this information at the end of the day, I think is a—

The CHAIRMAN. Is that the place to do it? Is the task force the place to do it rather than having a position, right, like CIO with dotted line relationships to all the technologists in these various agencies?

Mr. DWYER. I think either is possible, but I think the authority kind of—it doesn't exist right now, but should be created and either a person or a group like the task force.

Mr. SCHWEICKHARDT. I would agree with that.

The CHAIRMAN. Ms. Dargan is nodding her head. I don't know if you have anything else you want to add.

Ms. DARGAN. [Nonverbal response.]

The CHAIRMAN. Okay. Any other questions from my colleagues? Go ahead, Mr. Cleaver.

Mr. CLEAVER. One kind of parochial—maybe a question. What—if you guys will take a guess. What would be an entry level salary for a technologist in—considering you guys are probably familiar with how the pay is over here, but just a guess.

Mr. DWYER. Yeah. I would say I have some experience in this—in the House Democratic Caucus pushing a digital specialist, for example, who, you know, aren't necessarily coders or designers or engineers, which is more technical and have higher-level degrees that are more in demand. But, you know, I think because it is a new position in a lot of offices, it often is pretty junior, but I still think it is a great start. And so I think, you know, most of the staffers with "digital" in their title are being hired, you know, above the normal staff assistant type position but not much above. But I think, you know, if they are able to prove their worth, I think they often have their salaries rise pretty quickly within offices, that I have seen.

Mr. CLEAVER. Okay. Thank you.

Mr. CHAIRMAN, I just realized we have four members of this committee on Financial Services, including Mr. Timmons, and we have Jay Powell today, so that is why I think some of it—where a couple of members are going.

The CHAIRMAN. Well, I am glad you are here. I am glad you are both here.

So, with that, I would like to thank our witnesses in particular for being here, and for their testimony today, and thank our com-

mittee members for their participation, even with Financial Services conflicts.

As always, I want to thank our staff for putting together a terrific hearing. I think the insights we got here definitely sort of cohere to some specific recommendations that our committee can make, so thank you for that.

And to our stenographer, thanks for—I am sorry we talked so fast.

Without objection, all members will have 5 legislative days within which to submit additional written questions for the witnesses to the chair which will be forwarded to the witnesses for their response. I ask our witnesses to please respond as promptly as you are able.

Without objection, all members will have 5 legislative days within which to submit extraneous materials to the chair for inclusion in the record.

And, with that, this hearing is adjourned.

Thanks, everybody.

[Whereupon, at 10:26 a.m., the committee was adjourned.]