The Congressional Digital Service Pilot Report

February 2022

Written by Leisel Bogan
Director and Fellow, Congressional Digital Service Fellowship

with Alex Prokop, Britney Lyons, and Johncarlo Cerna
Fellows, Congressional Digital Service Fellowship

TECHCONGRESS

Acknowledgments

Table of Contents

Introduction

2020 began in Congress with grave challenges—a Presidential impeachment trial had just begun, a conflict with Iran loomed on the horizon, and the World Health Organization announced the emergence of a deadly coronavirus. The turmoil intensified as the virus spread globally, wreaking havoc on healthcare and economic systems, and exacerbating existing social and economic inequalities. Constituent needs spiked at the very moment governance institutions all over the world were forcefully incapacitated by a dramatic shift to virtual work.

Throughout the 116th Congress and into the 117th, the United States Congress fulfilled its Constitutional duties under conditions and rules that were not designed for the digital age. The circumstances required the institution to rapidly adjust its technical and operational capabilities, accelerate its existing modernization efforts, and adapt its rules and procedures amid health, justice, economic, and political crises. Despite the unprecedented and trying circumstances, the U.S. Congress rose to the challenge and found new and creative ways to continue serving the American people. In the House, among many innovations, the House Armed Services Committee adapted to a paperless process and finished its markup of the National Defense Authorization Act in record time. The House Office of the Clerk shifted away from accepting legislation through the ornate wooden "Hopper" on the floor of the House of Representatives and moved to a new electronic submission system. New emergency rules were put in place for members to vote by proxy. Both the Senate and the House conducted virtual hearings, increased adoption of digital signatures, and made it possible to allow staff and members to conduct work from home to comply with social distancing recommendations.

One year before the global pandemic forced Congress to move to a virtual work environment, on a blustery March 12, 2019, the Select Committee on the Modernization of Congress held its first hearing with the stated priorities of improving legislative transparency, technology, cybersecurity, staffing recruitment, and staff retention. During the hearing, Majority Leader Hoyer (D-MD) announced that he and Minority Leader McCarthy (R-CA) were committed to creating a congressional digital service organization modeled after the United States Digital Service (USDS) that was created for the Executive Branch by President Obama in 2014. A Congressional Digital Service, like the USDS, would utilize cutting-edge technical expertise and

operate outside of traditional CIO and CTO functions to help Congress adapt its processes and technologies to legislate more effectively in the modern era.

Fifteen months later the Select Committee on the Modernization of Congress (SCMC) hosted the TechCongress Congressional Digital Service (CDS) fellows to support the technical and digital needs of the institution, provide technical expertise to the Committee's technology recommendations, and to provide an educational opportunity for the fellows.

Prior to the launch of the TechCongress Congressional Digital Service Pilot Fellowship, TechCongress conducted an assessment of the existing technical capabilities in Congress and how digital service organizations are best designed and equipped. TechCongress interviewed technology experts from global legislative bodies that had adapted quickly to pandemic conditions and consulted technical experts within the United States Congress. With that information, TechCongress designed a fellowship program that might demonstrate how a uniquely tailored digital service organization could support the U.S. Congress. Because of the urgency presented by the pandemic, TechCongress finished the assessment and launched the program in less than six weeks. Once launched, the TechCongress Congressional Digital Service Fellowship concentrated most of its work in the House of Representatives, but its scoping and collaboration efforts included the Senate.

This report represents a collaborative effort and provides the background of the Congressional Digital Service pilot and the conditions under which it was launched. It highlights some of the issues the pilot sought to address, and the institutional offices and the SCMC recommendation projects the pilot supported. It also includes highlights from the global perspective, crises learnings during a critical period in Congress, and relevant findings of the program.

Although the effort was unique for TechCongress and the SCMC, it would not have been possible without visionary leadership in Congress, the longstanding efforts of both House and Senate technical experts, or the large network of individuals and organizations that are committed to supporting the first branch of the U.S. Government.

Supporting the House Select Committee on Modernization

The primary issues the pilot examined and supported were captured by some of the recommendations made by the House Select Committee on Modernization in the 116th Congress, including:

Recommendation 95
Establish a Congressional Digital Service 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.

Recommendation 97
Identify changes made to House operations due to the COVID 19 pandemic and determine what – if any – additional changes should be made.

Recommendation 47
Ensure that staff have the most up-to-date technology and equipment to continue effectively working on behalf of constituents in the event of a disruption or emergency.

Recommendation 34
Update House procedures to allow members to electronically add or remove their name as a bill cosponsor.

Recommendation 54
Expand the use of digital signatures for a majority of House business, including constituent communications.

Recommendation 55
Develop bipartisan plans on how technology and innovative platforms can be best incorporated into daily work.

The engineers, designers, developers, and technologists who participated in the pilot had extensive experience in software and hardware engineering, design, information and cybersecurity, project management and strategy. They contributed to several projects within the institutional support offices of the House of Representatives including electronic bill submissions, constituent management systems, rules for cloud computing, and cybersecurity assessments.[1]

The Congressional Digital Service pilot experts also supported the existing efforts in the US Congress to improve the links between technology and institutional processes. These efforts contributed to the SCMC's broad recommendations to make Congress more effective, efficient, and transparent, modernize and revitalize House technology, streamline processes, save taxpayer dollars, and improve the continuity of operations.

---

[1] Institutional support offices of the U.S. House of Representatives include: the Clerk of the House, Chief Administrative Officer, Sergeant at Arms, Office of the Legislative Counsel, Office of the Parliamentarian, Office of the Law Revision Counsel, Office of Interparliamentary Affairs, House Commission on Congressional Mailing Standards, Office of the Inspector General, Office of General Counsel, House Chaplain, and the Historian of the House.

Background

Between the beginning and end of March 2020, confirmed positive cases of the Coronavirus in the United States ballooned from 12 cases to over 31,000. Cases on the Hill began to spread as well, and offices and committees in Congress were suddenly caught off guard by the need to shift to virtual work environments. In less than six weeks, by mid-April, 535 offices and most Committees in Congress were struggling to work remotely in some form, 44 members of Congress had self-quarantined, 7 had tested positive for the disease, and national news headlines announced that the United States had the most confirmed cases of the virus in the world, with nearly 4,000 deaths. Meanwhile, as it became clear that a significant proportion of the virus spread asymptomatically, many interns and staff in Congress continued moving from office to office collecting wet signatures for appropriation letters and other business.

Roughly eight weeks after the initial cases of Covid-19 were reported in Congress, in May 2020, the SCMC was one of the first committees to hold a virtual event. On May 15th the Select Committee held a discussion about Congress' technology capacity and ability to work remotely. SCMC heard from TechCongress' founder and Director, Travis Moore, and Lorelei Kelly from the Beeck Center for Social Impact and Innovation at Georgetown University. During that discussion, Travis Moore emphasized the importance and value to taxpayers of the Executive Branch Digital Service organization, and how a similar organization could be useful to Congress.

Digital service organizations tackle technology and process challenges that exist outside of the scope of traditional IT/CIO functions. These
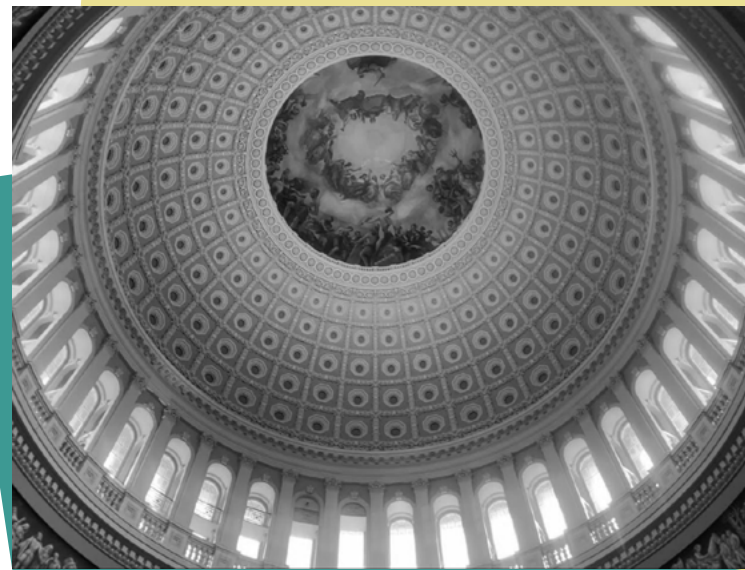
organizations are usually comprised of engineers, designers, user experience researchers and developers who have deep expertise in designing and implementing novel services. Digital service organizations currently exist within the executive branch and at the state and local levels of the U.S. government. They also exist within the governments of many countries including the U.K., Canada, Argentina, France, Singapore, and New Zealand, among others. Every country takes a distinctive approach to digital service organizations, and digital transformation efforts, but the common goal of these organizations is to utilize technology and streamlined processes to improve government services delivery. In an era of rapid technical change and development, governance institutions need responsive, agile, and efficient systems to adapt to the shifting landscape. Digital service organizations are increasingly used to help these efforts.

As Congress rushed to work remotely in the middle of the pandemic without an existing digital services organization in place, the SCMC hosted the TechCongress Digital Service fellows and deployed them to institutional support offices, including the Office of the Clerk, House Information Resources, and the Office of the Whistleblower Ombuds.

"In an era of rapid technical change and development, governance institutions need responsive, agile, and efficient systems to adapt to the shifting landscape. Digital service organizations are increasingly used to help these efforts."

Identified Issues

The pandemic created a unique quandary for legislatures all over the world: most democratic legislative bodies, including the United States, have charters that require deliberation and in-person representation. They also require a certain number of representatives to be physically present to conduct business, known as "quorum", a practice that pre-dates the American colonies by several centuries. When TechCongress began scoping a Congressional Digital Service Fellowship, many outside Congress did not understand why the institution did not simply vote remotely or utilize video conferencing and other technologies like the private sector does. The challenges presented by the pandemic, however, were Constitutional as well as technology related.

When the pandemic hit, technology experts in Congress accelerated their ongoing work to modernize the institution and introduce new technologies. However, they also continued to deal with issues including funding and budget constraints, low office and Committee adoption rates, and Constitutional rules and legal precedents that have for years complicated technology developments like remote voting and cloud computing implementation.

The Congressional Digital Service pilot's initial assessment identified several issues with Congress' adjustment to a modern operating state during the pandemic.

Initial Findings

Digital signatures were not widely adopted and utilized.

Initially there was no way to electronically submit bills and other legislative documents to the floor of the House (although that changed quickly).

Constituent communication tools and form submissions were not standardized, were difficult to access, and did not integrate with other systems.

There was a lack of technology sharing between offices, in part because every office can operate on its own terms, technically and otherwise, under the security and technical guidance of the Sergeant at Arms and other institutional support offices.

Document review software was difficult to utilize.

There were communication siloes between offices, committees and institutional support offices regarding innovation, technology, and process improvements.

There were several constitutional, technical, cultural, and financial challenges to moving to a cloud computing environment.

Information about Congress is often difficult to navigate from the outside.

It is often difficult for staff to find information about the institution from the inside as well.

Organizational Findings

Understanding the culture and distinctiveness of Congress was critical.

Congress is a unique organization that requires specifically tailored support systems.

The CDS Pilot program was an exercise in civic entrepreneurialism that was able to demonstrate a new model to Congress before one was officially adopted.

Starting small and in the House of Representatives was essential.

Being mindful of who absorbs the risks of any similar effort plays a vital role in establishing support for the initial work.

"When TechCongress began scoping a Congressional Digital Service Fellowship, many outside Congress did not understand why the institution did not simply vote remotely or utilize video conferencing and other technologies like the private sector does. The challenges presented by the pandemic, however, were Constitutional as well as technology related."

Recommendations and Other Projects

Throughout the spring and into the summer of 2020, Congress pivoted to a virtual working environment that required significant changes by everyone, especially institutional support offices. In response to the crisis, institutional support offices in the House of Representatives, including the Office of the Clerk, the Chief Administrative Office (CAO), House Information Resources (HIR), and the Government Publishing Office (GPO) began or accelerated important digital transformation projects like supporting the creation of an electronic bill submission process, the creation and adoption of digital signatures tools, the implementation of XPUB to improve document formatting[2], revisions to Congressional websites to make them easier to navigate and more accessible to all Americans, including those with disabilities.

The Congressional Digital Service pilot Fellows were based on the Select Committee on Modernization, but the SCMC detailed the Fellows to three institutional support offices: the House Information Resources (HIR), the Office of the Clerk of the House, and the Office of the Whistleblower Ombuds. The Fellows provided technical expertise and helped support the development of technology tools and projects. They also learned how the institution operates as well as how it acquires, builds, and utilizes technology to work on behalf of the public.

Electronic Bill Submissions

On April 7, 2020, in response to the danger presented by Members gathering in person and in close quarters, House Speaker Nancy Pelosi (D-CA) announced a new policy, in consultation with the Rules Committee, Committee on House Administration, Office of the Clerk and Office of the Parliamentarian, to implement an electronic submissions system for all Floor documents. With the proposed changes, Members can submit introduced bills, Constitutional Authority Statements, and additional cosponsors via a secure email-based alternative to the physical wooden box (called the "Hopper") where Members typically submit such material. The staff in the Office of the Clerk created this a new system and process for bill submissions

---

2 The SCMC was the first Committee to use XPUB to publish an official report.

over the weekend of April 3-5, and on April 7, the eHopper went live. Later in the year, a senior Congressional Digital Service Fellow engineer and designer provided additional technical and design expertise for improvements to the eHopper system, including the creation of a proof of concept, revised user stories, and related material.

The eHopper is both effective and efficient— by September 2020, less than five months after launching the system, more than 2000 bills had been submitted via the new e-hopper.

Digital Signatures

During the early stages of the pandemic, members and staff were increasingly concerned that staffers were moving physically from office to office collecting wet signatures for co-sponsorship of letters and other legislative business, a long-standing tradition in both the House and the Senate. The behavior had the potential to spread disease to every office in Congress. The Chief Administrative Office (CAO) moved to create a new system for staffers to collect signatures of members electronically. Years before in the Senate, however, an enterprising staffer in Senator Reed's (D-RI) office created a digital signatures tool called "Hancock" that eventually evolved into a tool the Senate Sergeant at Arms deploys to Senate offices called "Quill". Although Quill was being rolled out in the Senate in the Spring of 2020, at time of the launch of the CDS pilot, it had not yet reached the House.

Over the course of the pilot, the CAO's House Information Resources (HIR) worked collaboratively with the Senate and across the House to develop and integrate Quill for use in the House of Representatives. Two Congressional Digital Service pilot engineers and developers worked within HIR to help socialize the new tool to member offices and Committees and they provided feedback on the tool's features and effectiveness.

Constituent Management Systems (CMS) and Constituent Communication Tools

Members of Congress communicate with their constituents via telephone, mail, and, increasingly, emails to members. Staff then respond to the request, often by standard mail, but also via email, with systems and processes that have remained largely unchanged in over forty years. As the pandemic forced members to respond to constituents using remote tools and technologies, many offices and members discovered flaws with their Constituent Management Systems (CMS) and challenges to utilizing the data those systems provide.

The CDS pilot experts collaborated with HIR to help assess various CMS tools, provide recommendations on data, privacy, and cloud computing resources, and evaluate architectural options for future system implementations. These efforts helped support work related to

SCMC Recommendation 43, allow for faster correspondence between Representatives and their constituents, Recommendation 47, ensure that staff have the most up-to-date technology and equipment to continue effectively working on behalf of constituents in the event of a disruption or emergency and Recommendation 50, help streamline casework requests and help constituents better access federal agencies and resources, the House should implement a secure document management system, and provide digital forms and templates for public access. Work continues on these recommendations.

SCMC Website and Report

As the Select Committee on Modernization finalized its recommendations in the 116th Congress and designed a website and report to communicate the recommendations and work to the public, it was clear that a technical expert, engineer, and designer could provide valuable guidance, feedback, and design direction for the effort. A CDS engineer and designer provided technical and user experience design improvement recommendations to the effort and helped ensure the report was first report formatted with XPUB. The CDS team also provided assessments of the current state of Congressional websites and their accessibility to the disability community in preparation for a hearing on the issue. These efforts contributed to the implementation of Recommendation 27 to improve access to websites and improve access to congressional websites for individuals with disabilities.

Office of the Whistleblower Ombuds

The nonpartisan Office of the Whistleblower Ombuds is responsible for creating and sharing whistleblower engagement best practices with all offices of the House. Although the Office of the Whistleblower Ombuds does not receive whistleblower disclosures, it does advise House offices on how to handle whistleblower information. Ensuring whistleblower privacy and confidentiality requires strong information security tools and practices. The CDS engineer detailed to the Office of the Whistleblower Ombuds advised on the information security and confidentiality guidelines for both internal and external documentation, including the comprehensive Best Practices for Working with Whistleblowers exclusively for Congressional offices. Additionally, the CDS engineer provided guidance on the role and use of commercial whistleblowing software in the House of Representatives and provided a preliminary report on the feasibility of such software operating within the unique IT constraints of the House.

Institutional Connectivity

Throughout the CDS pilot, the engineers, technical experts, and designers liaised with the myriad of institutional support offices to help enhance communications across Congress. These communication efforts provided increased visibility to exceptional efforts across the institution that other offices, committees, and teams could emulate. The Committee on House Armed Services, for example, had an incredible technical and policy team that created the first hybrid remote and digital markup process for the National Defense Authorization Act (NDAA). The effort resulted in the NDAA being completed in record time. The CDS pilot noted that other Committees and offices could learn from their experience and processes if they had better access to Institution-wide information. Facilitating greater communication about technology and process best practices align with SCMC's Recommendations 55 and 84, to encourage subcommittees to pilot how technology and innovative platforms can be best incorporated into Committee and staff work.

The CDS pilot operated informally as a liaison in the House. A formal entity could further enhance communication, bridge gaps between stakeholders, and help foster trust between Congressional entities. The Bulk Data Task Force is a successful and important example of such a collaborative, communicative effort. Their work in the House could be used as a model for future collaborative bodies related to technology.

"The CDS pilot operated informally as a liaison in the House. A formal entity could further enhance communication, bridge gaps between stakeholders, and help foster trust between Congressional entities."

Global Parliamentary Adjustments to the Pandemic

As the novel coronavirus spread rapidly around the world, the U.S. Congress was not the only legislative body forced to move to a remote work environment. The unique circumstances of the pandemic paralyzed parliaments and law-making institutions globally because, as mentioned, they were unable to meet and work closely in person, which is usually a parliamentary requirement. Because of that, many legislative bodies, including the United States Congress, did not have technologies or processes in place to debate, deliberate, or vote remotely, communicate with constituents, or to accommodate virtual hearings.

The CDS pilot found that parliaments that had undergone digital transformations before the pandemic hit, like those in Estonia and Brazil, or that had already implemented digital services organizations prior to the crisis were the most productive and capable of continuing their legislative work. Legislative bodies that had already changed their rules to accommodate instances when voting in person is impossible were able to continue operating as well. For example, in 2012 the Spanish parliament changed its rules for remote voting to accommodate challenges to in-person voting, and because of that, by the time the pandemic hit, its Chamber of Deputies had already created an app to enable remote voting. Brazil, which began its digital transformation in the early 2000's, shifted to a remote environment quickly, and declared their state of emergency by a remote vote of its Congress in March 2020. Even the parliaments of small states, like the Maldives, were operating online in March.

> "The parliaments doing this best are the ones with a good link between technology, process, and the overall management of parliament"
>
> **- Andy Williamson, senior researcher and expert at the IPU**

Several organizations, including the Inter–Parliamentary Union's Innovation Tracker, documented how other states adjusted to legislating during the pandemic. Like the pilot findings, Inter–Parliamentary Union (IPU) researchers noted that the more successful parliaments: a) had strategic plans in place and established governance processes regarding digital tools, b) were able to change their rules temporarily, and c) had adopted cloud computing technologies as well as "a culture of cloud." [3]

"The parliaments doing this best are the ones with a good link between technology, process, and the overall management of parliament," stated Andy Williamson, a senior researcher and expert at the IPU.

Throughout the CDS pilot, the technology experts supported and documented the existing and important revisions to technology, processes, and the overall management of the institution that occurred throughout the Congress and identified opportunities for future efforts and improvements.

_____

3 CDS pilot interviews with IPU researchers.

Findings for a Permanent Congressional Digital Service

The Modernization Committee's CDS pilot program concluded that if Congress were to implement a permanent Congressional Digital Service (CDS), it should have three specific functions that would not only continue to support institutional improvements, but also provide value and encourage efficiencies across the government. Congress must be equipped to address technology issues because all three branches of government are impacted by Congress' technology capabilities and expertise.

The CDS pilot also identified four priorities Congress should pursue to establish a permanent digital services organization. These priorities are embedded at least in part in each of the SCMC's first set of recommendations.

Core Functions

- Operate as a connective service across the Institution.
- Build and implement digital services technology.
- Provide policy and technology expertise.

Priorities

- Increase capacity.
- Bridge the political/institutional divide.
- Improve processes as well as technology.
- Create a new pipeline of technology talent and mechanisms for retaining existing talent.

Three Core Functions

1

Operate as a connective service across the Institution.
A permanent CDS should operate as a liaison for the various organizations and offices within the legislative branch, like the inter-agency process of the Executive Branch. This would help eliminate silos of information and expertise that regularly cripple policy and government services delivery. Most policy failures are failures of process rather than technology, and many processes fail due to communication issues. As the pilot highlighted, Congress would benefit from a singular organization that could communicate effectively across the institution to bridge gaps of technical expertise and provide visibility into various policymaking processes. A CDS would enable Congress to continue working to avoid inefficiencies created by duplication and could help minimize translation failures.

2

Build and implement digital services technology.
The House Office of the Clerk and the Senate Sergeant at Arms are extremely skilled in UX/human-centered design. A CDS could help promote this expertise across all institutional support offices and expand it to build the best tools for committees and member offices. A CDS could also contribute to project management for these projects, building beta projects that account for unique cultural elements of Congress, and Congressional technology DevOps and cloud computing efforts. As the pilot concluded, the House of Representatives was in the beginning of its cloud transformation. The effort could benefit from a team anchored by outside technology experts as well as tenured Congressional staff.

3

Provide policy and technology expertise.
Congress could continue benefiting from a digital services organization capable of providing technical policy expertise and support to the policymaking process. Such expertise would be particularly useful for policies that require technical implementation by executive agencies. CDS policy experts could help Congress avoid technical failures and implementation problems like those that occurred during the implementation phase of policies related to the Affordable Care Act and the launch of HealthCare.gov.

Four Priorities

1

Increase capacity.
Continued increases in funding to institutional support offices would further improve Congressional capacity and enable those offices to utilize technology to deliver services more effectively for the American people. To continue improving capacity for both member offices and committees Congress could:
- Hire more staff to increase committee and member office capacity.
- Reduce the workload of current staff to allow space and time to make technology improvements.
- Provide compensation for staff whose workloads increase during technology improvements.

2

Bridge the political/institutional divide.
Political stakeholders should increase engagement with institutional offices to build consensus, enhance communications, and foster mutual trust.
- Because the CDS pilot team was detailed from the Select Committee on Modernization to institutional offices like HIR and the Office of the Clerk, communication between the two offices was naturally enhanced. The arrangement provided opportunities for better collaboration and helped foster trust between the organizations. Formalizing such relationships would also reduce duplication between entities working on similar projects, eliminate inefficiencies created by information silos, and could help preserve institutional knowledge.
- As mentioned, institutional offices and political offices could benefit from greater communication and transparency regarding their chosen technologies. Congress is made up of 535 individual member offices and as a result, the CDS pilot found that individual offices and committees often pursue their own technical projects and unknowingly duplicate efforts in other offices. To eliminate duplication, enhance collaboration and promote best practices, it would be helpful if offices had formal opportunities to communicate about the tools they use and trust.
- Collaborative tool adoption could also help facilitate connectivity between institutional support offices and other offices working to modernize in Congress. Collaborative chat can reduce the overhead of communications and facilitate shared workspaces where conversations and documents are available to all. Greater bi-cameral communication on legislation or mutual technical processes, like digital signatures, could make the legislative process more efficient.

3

Improve processes as well as technology.
Inefficient or broken processes, not technology, are often the biggest barrier to effective government services delivery.
- As noted, many technology tools currently available to Congress are not utilized to

their fullest potential. A digital services organization could help socialize the value of these tools to offices that have had difficulties adopting and using them, or that are unaware of their existence.

- Congress should continue to expand professional development for all who work in Congress by utilizing best practices from the private and public sectors, particularly in the areas of people management, work prioritization, and communication.

- A permanent CDS could help Congress evaluate incentives and create mechanisms for minimizing risks for technology development and adoption. Member offices are innovative on their own-- many of them are early adopters of new technologies, and some have built technology tools to improve Congressional processes. Such efforts should be encouraged with incentives such as grants or resources to offices that want to develop new technologies. Economic incentives are widely utilized in the private sector and could also be adopted in Congress. Institutional offices could choose an area to incentivize innovation for a year, for example, with corresponding metrics, and allow employees to receive bonuses based on progress made in that area. Another useful incentive may be to allow pay scales and promotions to be based on skill and work achieved, rather than being based solely upon years of experience. Finally, to build incentives while minimizing risks, Congress could start by implementing feedback mechanisms within and between offices that focus on solving the issue instead of assigning blame.

4 **Create a new pipeline of technology talent and mechanisms for retaining existing talent.** Institutional support offices have skilled and dedicated career professionals who have extensive institutional and technical expertise in their field. A modern Congress will empower the existing staff and create an environment that attracts and retains additional technology talent to accommodate the rapidly evolving technology landscape.

- The pilot found that the "Digital Service" brand would help Congress attract new talent for technical roles because it has a widely understood definition. The term "digital service" is currently in use by the Executive Branch, in state and local governments, and by parliaments and legislatures all over the world.

- Congress is a complex and intimidating organization that is difficult to navigate for those who are unfamiliar with it. A Congressional Digital Service could support and enhance existing efforts to make Congress more accessible to the public from a digital perspective. It could help improve existing legislative transparency efforts such as making Congressional websites easier to navigate and creating databases to track oversight efforts. It could also provide technology tools and expertise to bridge the digital disability divide that keeps many individuals with disabilities from being able to adequately access legislation, oversight materials, testimonies, and other Committee information.

- Internal Congressional websites and resources are also difficult for staff to navigate. In the House, there is an excellent Staff Academy resource for training and acquisition of other educational materials that is currently being overhauled and improved.

Crisis Learnings and Future Work

The CDS pilot concluded that Congress could use the lessons of the most recent crises to better prepare for the future. Preparations could include future-proofing the institution with a permanent CDS and further securing the tools, technologies, processes, governance structures, and talent that will enable Congress to function more efficiently, effectively, and transparently for the American people.

In addition to accelerating change, the CDS pilot found that crises also create, highlight, or exacerbate inequalities and lack of access. Technology can solve some of these issues, but it can also make them worse. At the beginning of the pandemic, political leaders expressed concerns to the CDS experts regarding Americans' lack of access to broadband, smart phones, and other devices that enable the public to engage with an increasingly tech-enabled Congress. Lack of access to technology can often mean a lack of access to our political institutions. Technology should not create greater barriers to the ability of the public to petition members of Congress, express concerns, or otherwise engage in our democracy. Although there continue to be many efforts in Congress to address these gaps, these issues will remain as Congress makes permanent technology changes and further implements the Select Committee on Modernization's Recommendations to modernize the Congress.

Additionally, following the events of January 6, 2021, the CDS pilot engaged with other experts in conflict and reconciliation, crisis response, disaster continuity planning, and physical and information security. Those conversations pointed to opportunities for additional improvements in the House of Representatives that could be supported by a permanent digital service organization, as well as broader institutional changes that could contribute to minimizing polarization, promote inclusion and respect, and make Congress work better for the public. The CDS pilot concluded that Congress could benefit from an all-hazards taskforce, implementing conflict resolution best practices, and by creating a strategic future planning organization.

All-hazards Technical Taskforce

Although Congress has a Continuity of Operations Planning (COOP) organization, there is a gap between what the House organization does and how those efforts are communicated across Congress. Congress could potentially benefit from an all-hazards taskforce or group of institutional and political leaders empowered to plan for disasters and crises (like the COOP), but it could focus on critical technologies. Disaster preparedness experts noted that this group in Congress could oversee "tear sheets" or high-level disaster response planning documents that would provide a quick way to identify:

- Processes to respond to the disaster or crisis.
- Essential tasks and technologies.
- Individuals responsible for essential tasks and the technologies they need to complete them.
- Critical tools required to complete the processes and deliver essential services to the institution.
- Congress could benefit from a centralized crisis communications organization. Such an organization could help convey essential messages to the public, receive input, and facilitate inter-institutional operations with cutting-edge communication tools.

Conflict Resolution Best Practices

Congress could benefit from implementing best practices in conflict resolution. The conflict and polarization experts interviewed, who have spent decades working on civil rights issues, domestic conflicts, and the Irish troubles, provided the following recommendations for reconciliation:

- Develop a shared lexicon. When individuals speak different languages, or lack a shared vocabulary for common experiences, it can create unnecessary friction.
- Include third parties. Relationships and interlocutors are key to calming friction. Third parties can help diffuse tension and bring in outside perspectives.
- Create neutral spaces. Informal gatherings with both parties and an outside neutral party are helpful when discussing critical issues or negotiations.
- Foster dignity. Respect is essential and starts with leadership promoting the dignity of others.
- Accept disagreement.
- Build trustworthiness.
- Develop loss acceptance. Processing the losses and accommodations that any agreement between conflicted groups will impose, and how to accept those losses, will be critical to peace. In polarized and competitive environments individuals have usually embedded their identity in their victory over others.

Conclusion

The Congressional Digital Service pilot effort by the TechCongress and the House Select Committee on Modernization provided a valuable case study for Congress during an extraordinary stress test of the institution. As currently configured, the United States Congress' organizational and technical infrastructure is designed to respond to 21st century problems with 20th century technologies and processes. This issue is not without precedent, however. At critical moments in U.S. history, enlightened public servants have repeatedly worked collaboratively to redesign and reconstruct the U.S. government to respond to new governance challenges. The current transformational efforts of the institutional support offices in Congress, enhanced by the Select Committee on Modernization's ongoing work and recommendations, are an important part of ensuring the United States Congress is organized and equipped to fulfill its Constitutional duties as a co-equal branch of government.

The United States has the technology, the people, and the resources to ensure that a modern Congress can represent and respond effectively to the American people. By continuing to act on the Select Committee on Modernization's recommendations in the 116th and 117th Congresses, and by implementing a permanent Congressional Digital Service and making other organizational changes, and potentially expanding those efforts into the Senate, the United States Congress can adequately meet the challenges of 21st century governance. The Congress has the power to make the institution more accessible and responsive to those it serves and ensure that it can fulfill its Constitutional duties safely, efficiently, and productively.

"Specifically, as you recall, I called for a new Congressional Digital Service, and this committee has since successfully piloted that idea. Thank you. I hope that a permanent version of the program can be established in the 117th Congress."

Majority Leader Steny Hoyer (D-MD), April 15 2021