

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/>