TECHCONGRESS AND PUBLIC INTEREST TECHNOLOGY

By its own description, TechCongress is a San Francisco-based initiative, with New America as its organizational home, that recruits technology professionals to spend a year on Capitol Hill to help boost Congress' ability to address critical technology policy issues. Its fellowship program places technologists in the offices of Members of Congress and congressional committees where they have worked on a wide array of issues including encryption, biometric privacy, autonomous vehicle and drone regulations, health IT, and government hacking.

The program's stated objectives are to:

- Build capacity in the legislative branch so that it can understand and keep pace with technological advances.

- Prove the value of technical knowledge in Congress so that the institution will hire for the expertise and bring it in-house.

- Build cross-sector leaders who understand the challenges and the complexities of government and the implications of technological change, and can bridge the technology sector and government.

After selecting and placing the first three classes of Congressional Innovation Fellows—with a growth in the size of each class from two fellows initially to six fellows in the current Class of 2018—TechCongress Founding Director Travis Moore had questions he wanted to investigate through an evaluation.

First was to examine the fellows' experience and how successful they have been in contributing to the substance of their host offices' technology policy work. So as TechCongress strives to show Members of Congress the importance of drawing on technological expertise in an era of rapid change, it wants to ensure fellows are as helpful as possible. At one level this question of demonstrating fellows' usefulness to overstretched congressional staffs is a generic matter of legislative tradecraft / talent management, irrespective of subject matter. Given the fellows' limited time frame compared to permanent staff, how can they move up the learning curve and serve as productive team members?

Another set of questions homed in on the interchange and collaboration between this particular professional specialty and policymakers in Congress. What do technologists and congressional staffers and Members get and learn from one another? What do they need to understand about one another? By building cross-cultural understanding between the professional cultures, it can help improve the fellowship experience and help advance other goals. As funders and grantees work to build the field of public interest technology, clarifying the role of tech expertise in policymaking can help establish strong cohorts of technologists in Congress and other policymaking institutions.

David Shorr

715-252-1877 • DavidShorr@gmail.com

SUMMARY OF KEY FINDINGS

1. Most decisions by congressional offices to take fellows—seven of ten in the sample—were attributed to **committee assignments.**

2. The challenge of better policies on emerging technologies is widely appreciated as spanning all areas of policy. More than half of fellows and supervisors interviewed expressed some version of **"Tech touches everything."**

3. Fellows can begin shouldering **significant responsibilities within the first two months** of their fellowship, provided they look for the right cues from their colleagues.

4. Acculturating to congressional staff work is a matter of **gaining a practical sense of what is possible**, rather than paying dues.

5. **Meetings with stakeholders** who come into the office are a setting in which fellows have shown particular value.

6. The **Mark Zuckerberg hearings are seen as emblematic** for the weak grasp of technology in Congress generally and the effectiveness of TechCongress in particular.

7. While many fellows came to the fellowship as strangers to policy and politics, their experience shows **how the tech and policymaking worlds can be bridged.**

8. The **agenda-setting power of media coverage** figures prominently into legislative staff work.

THE EVALUATION

The evaluation used semi-structured interviews to look at the fellowship experience in-depth, from the vantage of the fellows as well as the senior staff who supervised them (interview protocols and list of key informants are included as a appendices). It examined original decisions to host fellows, the orientation and matching process, modes of work, office operation, skill-building, mutual learning, agenda-setting, key relationships, and markers of success.

As mentioned, the inquiry looked both at day-to-day effectiveness in a congressional office and the broader institutional picture. On the latter, TechCongress gauges progress by the staffing decisions of congressional committees and Members' personal offices and whether they invest in technology policy specialists. For them the clearest form of success is when a host office keeps an Innovation Fellow on board as

> Clarifying what technologists contribute to policymaking can help the broader public interest tech field-building effort.

permanent staff after the term of the fellowship—something that has already happened twice in the program's young existence. In other words, **TechCongress' theory of change is that demonstrations of effective staffing on technology policy issues will convince congressional offices to create positions devoted to those portfolios.**

The following evaluation questions were central for this project:

- In what ways do fellows spur congressmembers, congressional offices, and congressional committees to delve more deeply into tech issues, and what are the keys to making that happen?
- How can fellows offer the most value to the offices in which they're place and meet the needs of their supervisors and colleagues?
- Looking at the experiences of the fellowships, are there particular issues, types of issues, or areas of tech policy that draw more interest on the Hill than others?
- How should the fellowship program and process—particularly the training at the start of the fellowship period—be tailored to better serve the aims of TechCongress as well as the hosting offices?
- What if any lessons and ideas do the informants' responses offer for ongoing monitoring, learning, and evaluation?

Keeping sight of the big picture, **the evaluation collected fellows' and supervisors' assessments of the prospects for TechCongress' broad objective of a Congress that is more engaged on technology policy and tackling a fuller and more active agenda.** Another line of inquiry regarding the role of media coverage was added after the first few interviews.

This project did not focus on judging performance or probing for weakness in the way that a typical evaluation would. While some course corrections and natural questions of organizational development are explored in a separate confidential report focused on TechCongress' operation, the initiative's overall success is clearly evident from its placements, high satisfaction of fellows and host offices, fellows' record of productivity, the program's strong reputation, and the conversion of two fellows into permanent staff in the offices of Senator Ron Wyden (D-OR) and Senator Brian Schatz (D-HI). Instead the evaluator and TechCongress founder took this opportunity to explore the keys to effective staff work and the challenge of upping Congress' game on technology policy. As a result, **the findings below have broader relevance for TechCongress' colleagues in the effort to build the public interest technology field as well as other congressional fellowship programs.**

The core sample of key informants for the evaluation were current and past Congressional Innovation Fellows, along with their senior staff supervisors. Ten semi-structured interviews of fellows were conducted with: the two fellows from the original 2016 class, three from the 2017 class, and five technologists currently serving fellowships. To ensure current fellows were speaking from a sufficient base of experience, their interviews were purposely delayed until their third month. In light of a key finding about opportunities for fellows to build key skills in the initial weeks, this turned out to be good timing to talk about learning the ropes in congressional offices.

> Findings can be broken down into the classic categories of congressional staff work: the "Three Ps" of *process*, *policy*, and *politics*.

In nearly all cases, the seven supervisor informants were interviewed after the evaluator had already spoken to the corresponding fellows so the conversation with the senior staffer could be informed by the fellow's perspective. Since one of those staffers had supervised two fellows, this meant that the evaluation interviewed supervisors of all but two of the fellows in the sample. Four of the supervisors were Democrats, and three were Republicans.

As a structure for the evaluation findings, I have adapted a classic synopsis of congressional staff work: the so-called 'Three Ps' of *Process*, *Policy*, and *Politics*. The category of 'Process' includes a discussion of the **legislative tradecraft the TechCongress fellows have used and the learning curve for their apprenticeships.** The findings on 'Policy' discuss the public interest technology field-building challenge in Congress and thus speak to TechCongress' central objective. They address the **congressional appetite for technology policymaking and the intercultural encounter between technologists and lawmakers.** The third section on 'Politics' gives informant responses to a question we asked about the partisan political overlay on technology policy and the work of fellows. While the question elicited some diverging responses, **it offers ideas on how politics and policy relate to one another.**

PROCESS

In our interviews with fellows, we pursued a question about which TechCongress was especially curious: the *forms* that the fellows' work was taking. TechCongress is agnostic when it comes to congressmembers' choices to focus on one technology policy challenge versus another—instead pressing the case simply for engaging on tech policy, *any* tech policy. Based on the program's interest in the impact of its fellows', however, it wanted to know how fellows were using the various tools in the legislative toolbox.

All ten fellow informants were asked about their use of different levers of policy influence, and there were patterns in their responses:

MECHANISMS USED BY TECHCONGRESS FELLOWS	
Letters	7 fellows
Staffing hearings	6 fellows
In-office meetings	5 fellows
Roundtables (convene or attend)	3 fellows
Internal memos / reports	3 fellows
Bills	2 fellows
Resolutions	1 fellow
Amendments	1 fellow
Commissioning studies	1 fellow
Rapidly finding info	1 fellow

For different reasons, the top three emerged as a clear cluster of the most common techniques of the Congressional Innovation Fellowship. Letters from Members of Congress to a federal agency or a private corporation were generally seen as an efficient and effective way to exert pressure and induce action. The interviews also indicated that, in terms of difficulty level, letter-writing is relatively easy to learn. And it's worth noting a split among fellows in how they rated the value of letters—with one vouching that letters "shame the recipients into doing what you want them to do," and another saying "If we really care about something, then we should just go ahead and legislate."

On the other hand, the relative rarity of fellows working on bills points toward a much higher degree of difficulty and longer time horizon involved in crafting and passing legislation. For instance, a fellow who worked on amendments to bills that are already drafted said they used this tool precisely in order to piggyback onto efforts with decent prospects of being enacted. Another enterprising fellow worked in a similar spirit by cold-calling other congressional offices that were

pushing technology initiatives the fellow viewed as misguided. Rather than working on amendments, though, this fellow tried to dissuade or redirect the other offices' efforts, sometimes with success.

Not surprisingly, the fellows mentioned hearings as being a natural rhythm of Congress. This notion tracks with a separate correlation we found in which **most decisions to host a TechCongress fellow (seven of ten) were attributed to committee assignments / jurisdictions.** The period of the evaluation did include a highly dramatic—and for TechCongress extremely topical—set of hearings: testimony by Facebook CEO Mark Zuckerberg amidst revelations of Cambridge Analytica's use of Facebook to manipulate the 2016 election. (We'll return to the subject of those hearings further below.)

But whereas congressional committee hearings function as public, sometimes theatric, airings of the issues, the evaluation found that **staffers' meetings with stakeholders in the privacy of their offices are a noteworthy match for the skills of the Innovation Fellows.** These are settings in which the fellows—with their special insight into the practical workings of technology—can perform valuable service as polite-but-firm bullshit detectors. Whether the visitor has been invited to come in for the purpose of being grilled or instead requested the meeting as part of a lobbying effort, fellows and supervisors alike reported how helpful it is to draw on the expertise of the fellows as a reality-check. In fact, some of the informants described committee offices where the stream of such visitors is virtually nonstop. Interviewees also highlighted the related category of roundtables as offering a similar dynamic—being less public than a hearing and sometimes intimate enough to be just slightly larger than an office visit.

> Stakeholder office visits were seen as an especially appropriate and useful tool for fellows.

Lest we read too much into the top cluster of tools used by fellows, however, two of the categories at the bottom of the list were cited as main operating modes of a given fellow. One fellow, for instance, commissioned numerous studies from research services like GAO or CRS. Another frequently helped colleagues find information they needed on-deadline.

Climbing the learning curve

The evaluation interview protocol asked how fellows acquired the skills linked with all these policy tools and the capability they built over the course of the fellowship. There was a question about the progression of the fellow's role, followed by a test of the idea to lengthen the term of the fellowship (extensions by mutual agreement were preferred rather than a longer standard fellowship term). As might be expected, the question of extensions elicited comments about fellows "hitting stride" or "coming into their own" after a year. **The discussion of the initial period of learning the ropes, however, emphasized the opportunity to build substantial capability very quickly.** Fellows

and supervisors alike talked about fellows becoming able to assume more responsibility within the first month or two. The pattern was clear from numerous experiences cited:

- In their first month, one fellow spotted a clear failure by an agency to meet a statutory requirement to update privacy protections.

- When another fellow's closest collaborator in the office left after their first two months, the office had the fellow fill the departed colleague's role until a replacement was found.

- A third fellow noticed their interactions with colleagues becoming more productive after the first month.

- A senior committee staffer reported after just a couple months that their fellow was ready to take his own meetings.

- Another supervisor said that optimally "After a few weeks, you're ready to dive into policy."

That same supervisor, though, gave the fuller picture of how fellows should use the initial weeks and right-size their expectations for the congressional office experience:

> *Anything you can do to prepare in advance or within that first month is going to dramatically improve the quality of your experience. Because if it takes you a long time to adapt to the one-on-one of how a Hill office works, or how the Senate works, and things that are practical or not practical... You don't want to spend your time learning that, you want to be able to dive into policy. So the quicker you learn that stuff, the better.*

The point is to clue-in right away into the types of tasks being done in the office. The constant interchange among staff and the tasks being performed give a newcomer cues for the ways that staffers actually work on issues—as opposed to harboring fantasies about the glamorous stuff ('talking to the Senator every day' is an oft-cited fantasy) or being wedded to a grandiose proposal. It's less a process of paying dues than grasping what things are practical or not. The clear message from this seasoned Hill staffer is that **a focus on learning the right things off-the-bat is a fast track toward making a substantive contribution.**

The same TechCongress fellow who quickly started "taking his own meetings" gave a closely matching depiction of their initial months:

> *Ninety-five per cent of the learning is just showing up, letting the flow of the office wash over me, and see how they work. And there was no deliberate teaching on the part of the office. It's just everyone is swamped, and they have six things on their plate, and me taking some things off the plate to just try and work on. In the beginning I probably created more work for them because they had to spend more time fixing it than if they had done it themselves. And then over time I've gotten to the point where I'm a guy they can trust. It's actually just immersing in the work.*

In other words, supervisors are merely looking for signs that the fellows grasp how they can contribute—either on the basis of special insights / expertise or simply recognizing what needs to be done and knowing how to do it. They also encouraged fellows to bring their own ideas. As one senior staffer said, the most successful fellows push their offices somewhat. Fellows' expertise and

experience gives them a better sense of policy opportunities for issues that are unfamiliar to senior staff or Members.

And while the evaluation collected many accounts of healthy office teamwork and flat staff structures, it was also clear that some fellows find themselves in dysfunctional environments. As one fellow put it, "The metric for success is doing something cool that the boss gets credit for. As long as people are climbing over each other to get that, it'll be hard." TechCongress' own staff undoubtedly tries as much as possible to keep from placing fellows in such environments, but the trick is to match fellows to situations they're equipped to handle. Either way the message from fellows to Travis and Andres was to encourage them to be very direct with their advice on placements and not worry about keeping arm's length from the fellows' decisions.

> Acculturating to congressional staff work is less about paying dues than learning what things are practical or not.

POLICY

To varying degrees, fellows arrive on Capitol Hill as strangers to the entire realm of policymaking. Indeed, the whole push for public interest tech by TechCongress and others is premised on an assessment that the professional paths of technologists and government officials don't intersect nearly enough. This speaks to a deeper problem than the skill-building challenges described in the 'Process' section above. To the extent that technologists don't understand the basic imperatives of policymaking, it's hard for them to provide the right kinds of help and insight.

This evaluation served as a window into the encounter between the two professional cultures. And with the fellows bringing greater or lesser familiarity with the policy world, the perspectives from opposite ends of that spectrum—the practiced policy hand and the newbie—offer complementary insights about meshing the two professions. For instance, one of the fellows with the most policy experience offered a contrarian view:

> *I think it's very easy to latch onto this idea that we just need staffers who can speak tech because it makes intuitive sense. I actually don't think my reason for success on the Hill is because I'm an engineer or because I can translate from nerd into lawyer. I think what has allowed me to be successful is the fact that I'm an activist more than a technologist.*

This fellow argued that the advocate's art of thinking strategically and "breaking problems down into bite-sized pieces" (basically a paraphrase of "what is practical") is more essential to reach policy solutions than deep technical expertise is—that the engineer or computer scientist brings deep expertise beyond what is practically useful and, at any rate, is useless without policymaking pragmatism.

But the argument can only be pressed so far. For instance the fellowship experience of another fellow undercut the notion of all-purpose technologists. That other fellow said, "The one thing I want to be careful about is overconfidence in a domain area I actually don't have expertise in." Reportedly this fellow found himself at cross-purposes with two other fellows (one current, one former) where the issue fell right in his wheelhouse. He said this has made him all the more cautious in handling issues where he doesn't have direct experience.

And as even the contrarian first fellow acknowledged, there aren't enough policy-savvy technologist-advocates to fill a fellowship program. The answer is twofold. First, TechCongress should strive to have at least one or two fellows in each class who do have roots in the policy sphere. They are extremely helpful as mentors, models, and Sherpas for the others in their cohort. Second is to look at the engineer or scientist's abundant expertise in another way. Granted, **the Innovation Fellows' knowledge far exceeds what a congressional office can usefully draw on. So then how do you home in on the slice of their knowledge that is useful?**

> *"You're teasing through competing perspectives and doing shared thinking before you give advice to somebody who has an immense power to make decisions."*

Talking to the fellows elicited some interesting ideas. Here is how one current fellow summarized the role they play:

> *There is a set of implied tasks at the heart of this work. First find out what a Member is interested in, and then figure out where your knowledge and the technology intersect with that interest. Finally home in on what you can do that is different from what everybody else is doing.*

That may be easier said than done, but it does capture the pragmatic essence of providing substantive policy value to the decision-making principals (though it's worth repeating the supervisors' encouragement to go beyond Members' existing interests). More than that, this strikes me as an apt synopsis of the basic calculation for any and all policy advocacy work.

Another set of observations about the nature of policy work came from a current fellow who arrived at the fellowship without the barest notion of policymaking. Those reflections are worth quoting at length:

> *My first reaction was a negative one, and I'm not proud of this. I thought "This is typical government. They have grand ideas, but they don't have any of the actual skills or ability to actually make anything happen." It took me a while to realize the job here isn't to implement things or discover things. You're not serving in the role of a scientist here. They make policy, and you have to know what policy is.*
>
> *I do think about how can TechCongress prepare scientists for the world they're about to encounter. For instance, I could never fathom why a conversation was worth it. I looked at it like "These people*

are signaling like they're doing work, but they're not really doing work." And now I show up for work and have conversations all day, and you start to see why it is indeed work because you're compiling perspectives. You're teasing through very complicated systems—which is what a government, an economy, a state are: complex systems. You're teasing through competing perspectives, and you're actually doing shared thinking before you give advice to somebody who has an immense amount of power to make decisions.

Maybe such a description of policymaking as a problem of complex systems and collective reasoning would make it less strange for scientists. From my own vantage as an evaluator/practitioner, it resonates as accurate.

Here again it is possible to combine the perspective of this fellow with that of their supervisor. The supervisor, who was a fellow earlier in their own career, talked about being able to tell in an interview whether a potential fellowship candidate has **'it'** to succeed in a congressional office. The supervisor always checks whether candidates respond to the kind of social cues that test their ability to clue into how the policy dance works. Like other key informants, the supervisor emphasized that many of the skills are absorbed through exposure. Eventually the half-sentences people use to communicate within the office start to make sense. Likewise recognizing the special vernacular Members use with each other, or learning to conduct successful walking-down-the-hallway meetings, or finding the useful policy-salient nugget of information deep within an academic article.

"Tech touches everything."

The interview protocol both for fellows and supervisors opened by asking what interests on the part of a Member or office originally spurred the decision to take an Innovation Fellow. More particularly, are there certain issue areas that exert a special pull on the Member or senior staff? This was the evaluation's dog that didn't bark. On the contrary, the notion of technological change posing pervasive policy challenges was the most consistent unprompted idea of the entire project. Three fellows used the same words verbatim: "Tech touches everything." In addition, two more fellows as well as six of the seven supervisors paraphrased this idea. As one former fellow supervisor put it:

There continues to be a very big blind spot about technology—how it works, its impact on every sector of the economy and society. Although it's starting to be felt, and there's a growing number of conversations that are driving that debate right now. Whether it's the Russian interference in the election or whatever, people are now by osmosis starting to understand how technology is impacting EV-ERY-THING. Not just a telecom bill but a transportation bill, a tax bill... That understanding is not broad enough yet. The technical knowledge level in Members' offices is still low. Depending on the committee, you may or may not be able to rely on committee staff to get the Member up to speed. Even to make decisions on health care policy, if you don't understand technology you're really missing a big opportunity—or threat in some cases."

Another former supervisor cited the example of driverless cars and how those issues "draw on a range of specialties: transportation, internet of things, telecom spectrum, automotive technology,

traffic safety. It would be helpful to forge networks between committees that will be tackling different aspects of some of the same issues." This senior staffer has been very involved in the Congressional Technology Staffers Association for that very purpose.

The evaluation asked the senior staffers to draw comparisons with fellows from other programs whom they've supervised. One of the supervisors offered the following high praise:

> *In terms of the quality of the fellows, they are incredibly smart and hard-working. They ask questions and are not afraid. They are on a par with other fellows in terms of contributing to the work of the office. Actually they're better than some of the RWJF fellows who come in and tend to want to watch. TechCongress fellows want to do as much as we'll let them do. You can't ask for better than that.*

Another supervisor compared the Innovation Fellows favorably with AAAS fellows, whom they portrayed as having a hard time breaking out of their research specialty and generally being more ignorant about the rudiments of governance. That comparison led to an interesting question of whether technologists' backgrounds make them better attuned than research scientists to social and economic ramifications. Another issue that was probed in the evaluation was the danger of fellows being underutilized, which wasn't seen as a serious problem. In the view of senior staff, congressional offices are too interested in drawing on the technologists' capacity and insights to let them go to waste. That said, it is only prudent for Travis and Andres to continue guarding against this in their orientation and placement process.

POLITICS

As mentioned above, fellows and supervisors were asked about the partisan political overlay on technology policy and the work of fellows. By and large, technological policy issue areas were not portrayed as especially politically charged. Numerous informants who work on cybersecurity characterized those issues as bipartisan and relatively free of controversy. Meanwhile net neutrality was the one issue cited consistently as being sharply divided. Informants viewed Republicans as generally aligned with the telecommunication sector and Democrats with the tech industry.

Mostly informants reported a partisan split—in synch with the parties' general attitudes toward government versus industry—in the ways that the two political sides handle the different private and public sector stakeholders. In a nutshell, **Democrats press harder questions with corporations, while Republicans are tougher on government agencies.** Unsurprisingly, a number of fellows noted Republican reluctance to use regulatory solutions for private sector problems. One fellow went a bit farther in noting intra-party discipline they've observed. The fellow said most Members and staffers are quite careful to self-edit and not press businesses or agencies—depending on one's party—harder than their political side usually does. Be prepared for pushback if you take a more assertive tack than typical for your party, warned this informant.

Yet the evaluation found no consensus on the extent to which the partisan divide figures into the fellowship experience—or how much it should. One supervisor mentioned their firm office policy against having fellows work on politically charged topics, based on a belief that the partisan battle should be left to the political types. The opposite view was given by another senior staffer, though, who doesn't think fellows should be walled-off from politics and views fellows as having better political instincts than they're given credit for. Another fellow spoke positively about partisanship on Capitol Hill and the benefits of openly confronting one's political / policy opponents. As this fellow sees it, it's actually liberating to be able to slam another Member for trying to block one of your policy initiatives.

"People will view fellows as being able to contribute to their boss' media presence the more technology is covered in the news."

Two supervisors gave particularly interesting responses to this question. The first explained the importance of weighing political considerations and not focusing too narrowly on the policy merits:

> *Often what a fellow lacks is the ability to apply a political filter. You have to understand that's a consideration too. Not just is there a policy improvement to be made, but is there going to be any attention for this? Is it actually going to make a difference for people back home reading in their local paper about the things we're doing? Can we make people understand that? Part of it is putting things in relatable terms. It's not just coming with your sharpest policy blade.*

As the senior staffer indicates, politics is by its nature a business that's conducted in full view of the public—open for scrutiny, praise and/or scorn. This gives media coverage a crucial role, which was discussed in a number of the interviews. A second supervisor stressed the media's role in the following description of how political salience works:

> *Policy is driven by politics which is driven by media which is driven by people who care about things. And as people care more about things, they become more voting issues, you're going to see more politicians picking up on it. You will have more people hired in Congress because of their tech expertise to the degree that there's more media coverage of it. Because politicians naturally chase the news. People will view TechCongress fellows as being able to contribute to their boss' media presence the more technology is covered in the news.*

The same senior staffer also said that a good way to contribute to the office is to help boost the boss' media presence, and several informants talked about the close collaboration within their offices between policy and communications staff.

WE'RE FROM THE FUTURE AND WE'RE HERE TO HELP

The senior staffer's reminder about the fundamentals and drivers of politics bears apt lessons for TechCongress, particularly when it comes to pertinent news stories. As noted earlier, Mark Zuckerberg's congressional testimony on the 2016 election happened as this evaluation was being conducted, and it was the kind of media tableau that should serve as a helpful policy driver for TechCongress' objectives. With so many Members proving so ineffectual in nailing Facebook for the way it spread Russian disinformation, one could hardly imagine a clearer demonstration of the cost of tech policy ignorance and inattention. Here's how one current Innovation Fellow who prepared their boss for the hearings spelled out the implications for TechCongress:

> *From now on, Travis needs to cite the Facebook hearings as an example of the need for TechCongress program. That was fundamentally an opportunity to critically interrogate one of the most powerful tech companies in the world. Looking across those ten hours, I think it's hard to feel anything but disappointed with the level of scrutiny. I'm very proud of how my office participated, and I think that we were certainly an outlier. The inability to critically interrogate Zuckerberg was a product of the lack of in-house technical capacity. That's a real loss that there wasn't sharp questioning or a coherent strategy during that meeting. I think if more offices had resources and had a depth of technical knowledge, there would have been a much more interesting outcome.*

Nor was this fellow the only evaluation informant to point out the relevance of the Innovation Fellowship to meet a need in Congress that is just beginning to be recognized. But the current fellow makes an important point about the imperative for TechCongress to highlight the Zuckerberg hearings as proof of its case and mission.

> Will Members of Congress eventually view tech expertise as a necessity rather than a luxury for their offices?

Another fellow from one of the earlier cohorts summed up the Innovation Fellowship's role as a bridge between the tech and policymaking worlds and what it means for the recruitment challenge:

> *The role of the* [technology] *expert is to be someone who's living a little bit ahead in the future. How do you convince someone who lives in the future to come to a place that's far behind the curve, when they can have a lot more fun just living in the future and being on the cutting edge?*

Based on its first few years in operation, the program has compelling answers to that question. It has built a strong record of tapping fellows' expertise to help Congress be a bit less far behind and giving them the gratification of making a difference. From the fellows' vantage, first-hand

experience only increases their appreciation for the importance of the work. One former fellow who would like to have stayed in Congress said they are still interested in returning to public service—despite the significant pay cut it would entail.

The corroboration of the fellows' value is even stronger from the congressional offices in which they served. As one senior manager put it, their fellow "just made us so much faster. It's being able to keep on top of the issues and moving them forward." Another fellow's supervisor talked about good policymaking as a function of understanding the problem. They said the Innovation Fellow gave the office "another layer of expertise informing the given policy, building it out, and making it even better. It's like going from regular TV to high-definition TV."

The question for the public interest tech effort is whether Members come to view such capacity as a necessity rather than a luxury for their offices.

Appendix I – List of Key Informants

Bukky Adebayo, 2018 Innovation Fellow, Office of Senator Tom Udall (D-NM)

Collin Anderson, 2018 Innovation Fellow, Office of Senator Richard Blumenthal (D-CT)

Brandon Booker, Legislative Director, Office of Senator Rand Paul (R-KY)

JC Cannon, 2016 Innovation Fellow, House Ways & Means Subcommittee on Health Minority Staff

Melika Carroll, former Policy Adviser, Office of Senator Brian Schatz (D-HI)

John Costello, 2016 Innovation Fellow, House Oversight and Government Reform IT Subcommittee Majority Staff

Melanie Egorin, Professional Staff, House Ways & Means Subcommittee on Health Minority Staff

James Gimbi, 2018 Innovation Fellow, Office of Senator Rand Paul (R-KY)

Anderson Heiman, Senior Adviser, Office of Senator Ron Wyden (D-OR)

Joel Kelsey, Chief of Staff, Office of Senator Richard Blumenthal (D-CT)

Sunmin Kim, 2017 Innovation Fellow, Office of Senator Brian Schatz (D-HI) and currently staff member

Robbie Narang, 2018 Innovation Fellow, House Ways & Means Subcommittee on Health Minority Staff

John Price, 2018 Innovation Fellow, Office of Senator Cory Gardner (R-CO)

Chris Soghoian, 2017 Innovation Fellow, Office of Senator Ron Wyden (D-OR) and currently staff member

Troy Stock, Staff Director, House Oversight and Government Reform IT Subcommittee Majority Staff

Curtis Swager, Legislative Director, Office of Senator Cory Gardner (R-CO)

Maurice Turner, 2017 Innovation Fellow, Senate Homeland Security and Governmental Affairs Committee Majority Staff

Appendix II – Interview Protocol Questions

This evaluation is collecting different viewpoints on the work of TechCongress to get feedback they can use to boost effectiveness and that will help their funders address the challenge of public interest technology and policymaking on tech issues. I want to emphasize that this conversation is confidential, so I won't connect your name to anything you say today.

FELLOWS

1. Let's start with your observations about your host office's level of interest in this set of issues. For your congressmember and their office, what seemed to be the source of interest—the motivation—to get involved in technology policy?
   a. What sort of issues were they drawn to and why?

2. Now shifting to the tools and mechanisms you used as a fellow to take substantive action on an issue. Thinking of the most significant steps or initiatives you worked on, which kinds of tools did you use to advance an issue, or what kind of legislative or oversight processes did you find were key to having an impact?
   a. How did you gear up to operating those kinds of mechanisms, who did you work with so that you could use the tools of a congressional office? Did TechCongress help prepare you for this?

3. How about your job description within the office, what understanding did you have with your supervisor about responsibilities, your professional level, and lines of reporting / authority?
   a. How clear and explicit were these understandings? Do you have any recommendations about how TechCongress handles this?
   b. Can you think of any key moments when your supervisor and/or colleagues gained a better sense of your capabilities that helped them make more effective use of your skills?

4. Sticking with this idea of looking at the progression of the fellowship, how did your role evolve over the course of the year?
   a. What if the fellowship term were longer—say 18 or 24 months—how much more would you have been able to accomplish?

5. We talked before about identifying key tools and congressional processes, but what about relationships? What proved to be the most important relationships within the office and with colleagues outside the office?
   a. How did they develop?
   b. Have they continued / Do you expect them to continue?

6. We also wanted to ask about any political sensitivities you encountered. How did you observe politics playing into the issues?
   a. Were there partisan splits, and how did you deal with them?
   b. How much did it matter that you were working in a Republican or Democratic office?

7. Now wrapping up with questions about the big picture of Congress and technology policy, can you help give us a sense of how your work on technology issues during the fellowship fit in the larger context of trying to spur Congress to be more engaged? In other words, do you see the issues and initiatives on which you worked as contributing toward a fuller and more active tech policy agenda?
   a. Did you notice colleagues, senior staff, or Members themselves gaining more understanding of the issues and/or appreciation for their importance? Was there any change in the kinds of people or networks that senior staff or colleagues relied on for outside advice on technology issues? [i.e. did the office become more self-reliant or at least pull the fellow's resources / contacts into their own orbit?]

8. Last is a chance to give further feedback or thoughts. Do you have advice on how TechCongress can do a better job—whether it's a shortcoming you've noticed or just generally any observation about them that would be constructive and useful to our evaluation? Or maybe you'd like add to what you said earlier in the interview, given all the different pieces we've discussed.

SUPERVISORS

1. Let's start with your initial interest in taking a technology fellow, why are tech policy issues important to you and your boss?
   a. Did your office already have certain priorities in that realm, issue areas you on which you've been focused and active?
   b. Did the experience with [name] as a fellow have an impact on those priorities, by sparking new interests or changing your earlier sense of the opportunities or difficulties?

2. If you've worked with fellows from other fellowship programs, how did this compare with those?
   a. Are there lessons TechCongress should draw from the comparisons, whether negative or positive?
   b. Any other thoughts about coming from a background in technology into this unique environment of Congress?

3. Obviously TechCongress and the fellows themselves want them to make the most valuable contribution possible during their time with you. Looking at [name]'s fellowship and your overall experience on the Hill, what do you see as most important in order for these mid-career specialists to contribute to your office's work? How can they provide the best value and benefit to your incredibly busy and overstretched operation?
   a. In generic terms, how would you describe a successful fellow, particularly how they work with you and what you rely on them for?
   b. Are there markers of a successful fellowship term that you've observed, types of initiatives that a fellow tends to accomplish?

   Now I have a series of a few questions that don't require extensive answers

   c. Do you think it would be good to extending the fellowship period for some fellows to, say, 18 or 24 months?
   d. Based on those points, do you have recommendations for TechCongress' orientation process or just the advice they pass along to their fellows?
   e. Would you recommend—or have you recommended—to a colleague that they should take on a TechCongress fellow?
   f. Do you continue to keep in touch with [name]?

4. Now that we've gone over some nuts and bolts of working on Capitol Hill, I want to ask about the political overlay. By definition, these fellows are coming from a technical professional track different from other typical career backgrounds in a congressional office such as political operatives. What does that mean for the decision to host a fellow, choosing fellowship candidates, the work they do, new considerations they have to be acculturated to…?

5. The final questions are about the purpose of these fellowships and TechCongress' strategic goal, which is to spur Congress to invest in its own technical expertise and take on a much fuller and more active technology policy agenda. From your own sense of technological

trends—what you see in the news and back home on the ground—what is Congress doing well or badly to handle all the different issues and ramifications?

    a. Are there any particular technology issues linked with you and your boss' own operations—both here as well back home?

6. Last is a chance to offer further thoughts or feedback. Particularly on this question of how technology issues are addressed in Congress, did the experience of working with [name] cause any shifts in how you view or approach this portfolio, or who you look to as a trusted source of information or advice on technology issues?