Who has the itch? Designing governance innovations in the health sector in Nigeria



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Comments are welcome

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Learning Series: Designing Governance Innovations in Resource-Constrained Settings

Introduction

In December 2021, MIT GOV/LAB, through a grant from the Bill & Melinda Gates Foundation, kick-started a collaboration with Gatefield, a Nigerian public policy and strategy firm; Co-Creation Hub (CcHub), a Nigeria-based African innovation center that provides tech design support to start-ups and governments; and Ekiti State's Ministry of Health. The partnership was designed to work with innovation teams from the Ekiti State Ministry of Health to develop informed prototypes of governance innovations that could improve service delivery in the health care sector.

One solution addressed the quality of care in public health facilities, and another addressed challenges in public health security.

We designed a two-week boot camp that provided teams with tools in design and the social sciences (behavioral science, research methods, etc.), as well as design support from our local partners, to develop the solutions. Teams identified the causes of the challenges they decided to tackle in January 2022 and were mentored through the stages of designing governance innovations. They pitched the solutions to a select group of judges in Nigeria in May 2022. One of the solutions was selected to receive technical support for development, while the unselected team continued to build theirs without support from MIT and partners.

In this Learning Case we ask: Why did the team that was not selected to receive post-ideation support go on to implement the solution, while the selected team that did receive post-ideation support ran into repeated delays and eventually paused development at the wireframe stage? What can it tell us about the value of design by itself versus design plus urgency when designing governance innovations? What can it tell us about the catalytic potential of accelerators in public sector innovation?

Collaborators: This project was undertaken in collaboration with Gatefield, a Nigerian public policy and strategy firm; Co-Creation Hub (CcHub), a Nigeria-based African innovation center that provides tech design support to start-ups and governments; and Ekiti State's Ministry of Health.

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Two teams pitched their solutions to a panel of judges from the private and public sectors as well as to a crowd of community representatives and public health leaders. Photo via: Ministry of Health and Human services

Learning Cases at MIT GOV/LAB: The aim of the learning case series is to bring in voices from the field and the

The Governance Innovation Learnings Cases:

academy that we can listen to and learn from to improve our approach to practitioner-academic research collaborations and ultimately contribute to theory-building and change on the ground.

In international development, there is often pressure to report positive results and change. Yet there is no single pathway or easy fix for improving governance and, particularly, advancing tenets of transparency, accountability, and participation. Improved governance outcomes depend on us building robust evidence and learning from failures and false starts as well as successes.

Governance Innovation Learning Cases: At the MIT GOV/LAB Governance Innovation Initiative, our engagement with partners is driven by the need to learn together. We document every step of the governance innovation design process to understand the opportunities for and challenges and pathways to innovation in bureaucracies in the Global South. To do so, we work with reformminded leadership who are interested in understanding the intricacies of governance innovation in their contexts.

We define **governance innovation** as a new solution to a complex problem in public services, products, or processes leading to a more accountable, responsive, and transparent relationship between citizens, government, and civil society.

The learning series "Designing Governance Innovations in Resource-Constrained Settings" includes:

- / Executive Summary: A compilation of the learning case series findings
- / Case 1: Building the runway for governance innovation to take off in Sierra Leone
- / Case 2: Who has the itch? Sparking governance innovations in the health sector in Nigeria
- / Case 3: The tradeoff between sparking and sustaining innovation
- / Brief: Building an minimum viable product with Lean Governance Innovation Design

We acknowledge that every context is different (city versus national government, innovation lab versus tax authority, etc.), and yet within those differences we found commonalities in the challenges of designing governance innovation.

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Takeaways Summary

There must be an itch and that itch must be urgent: Having an itch is an aphorism often used in entrepreneurship to refer to a problem that is so pressing that whoever is experiencing it will want to address it, or scratch it. Two teams, selected from within the Ministry of Health, designed solutions to pitch to a panel of judges. The selected solution received support from the partners to produce a minimum viable product in the form of a wireframe.

One team, EpiSurv, developed a solution that tracked the spread of diseases. The other team, Qualicare, designed a communication tool to improve the patient intake experience in public health facilities. EpiSurv, the team that was not selected to receive technical support, was able to deploy a solution within two months of designing it at the design sessions with the partners. It had an itch that was urgent: tracking the spread of the pandemic. The other team was addressing a chronic issue, which was unable to generate enough momentum from leadership and thus fell short of becoming more than a wireframe. Design allows for a structure to develop solutions. But in this case, design with an itch catalyzed that structure to become a working product. Design with an itch is more likely to work than design by itself.

Teams need a place to build the answer to the itch: This was a learning from the boot camp approach we previously applied in Sierra Leone that is also part of this series of cases. This time around, we designed the program as a boot camp that also worked as an accelerator, providing months of support to the teams through a team of local partner designers from CcHub and Gatefield. Both teams designed solutions and were able to get them as close as possible to an MVP. Without the two-to-three months of support that the local design partners provided, we don't think it would have been possible for either team to develop an MVP that addressed the issues they first presented at the launch of the boot camp. One deployed their solution and the other made a conscious decision to pause development.

More than three months? Don't build it: When solving specific challenges in the public sector, a design process should take a few weeks at most, but definitely less than three months. Anything longer than three months is deprioritized during the intense competition for civil servant time in resource-constrained environments like Ekiti State.



Iteration with governance concepts can lead to practice: While some governance concepts may seem hard to explain at first, it's through the iterations of the solution that civil servants ask: What now? Or, why didn't it work? For example: one of the concepts that the participants understood during the boot camp but weren't able to apply to their initial design was responsiveness and accountability. The app was just a complaint box for patients until they realized how important it was for patients to receive a response and feel enabled to check in on the progress of a complaint resolution. This was only possible to grasp as the team iterated on the solution, not before, during the boot camp.

When designing in resource-constrained settings, design your solution for multiple needs from the start: When designing in resource-constrained settings, one solution should be able to cover other eventual needs so as to remain relevant and useful for the public. Can an app that crowdsources the geolocation of the spread of communicable diseases be used to report on other diseases? Can it be used to report on the availability of medical personnel? When designing solutions, designing for other potential uses can save resources later. It can also build trust by allowing users to rely on the same credible app that probably took significant effort to deploy through campaigns and other dissemination activities.

Background

Scoping the need for governance innovation

While the southwestern Nigerian state of Ekiti was one of the first in the country to form a taskforce to respond to Covid-19, the pandemic highlighted some of the structural weaknesses of the health system in the state. The government was concerned with health performance across different areas such as reproductive, maternal, and child and infant health and made a commitment to innovation to improve the quality of health care. "We have carefully assessed our health system and recognized gaps in service delivery that need to be addressed. In view of this, we decided to put innovation at the core of driving solutions in the health sector," Dr. Oyebanji Filani, the Ekiti State Commissioner of Health, told us in a meeting, at the end of 2021.

Partnerships:

CcHub and MIT GOV/LAB developed a specially tailored design framework we tentatively called the Governance Innovation Framework to drive the innovation process. It's a hybrid of learnings from design thinking, behavioral science, systems thinking, and entrepreneurial methods, to make the relationship between government and citizens more accountable, responsive, and transparent.

In December 2021, the teams participated in the Governance Innovation Bootcamp with the components described above. In January 2022, the Ministry of Health teams embarked on a series of design sessions with CcHub and Gatefield on the "align" and "learn" stages of the Governance Innovation Framework (see Image 1). By April 2022, about three months after starting the design process, teams had crafted a pitch that they delivered in mid-May with the first iterations of their MVPs. Thereafter, the selected team, Qualicare, worked with the local partners to finetune the MVP.

A challenge approach to develop solutions

The teams: The key support unit during the bootcamp was made up of CcHub, Gatefield, and MIT GOV/LAB. The Ministry of Health split into two internal staff teams tackling two different public health challenges.



MIT GOV/LAB GOVERNANCE INNOVATION METHODOLOGY (Image 1)

These two internal teams were selected by the Ministry of Health to develop innovative prototypes to address public health problems related to governance in Ekiti State, based on relevant competencies to the challenges they were attempting to solve.

The Qualicare team pitched a prototype that addressed issues in the quality of care in health facilities and the EpiSurv team pitched a solution to challenges in monitoring the spread of diseases both in urban and rural areas.

Ultimately, Qualicare's solution was selected by a group of judges from the private and public sector, as well as academia. The Qualicare team was led by the commissioner of health and other key individuals within the State's Ministry of Health: the deputy director of public health, a public health physician, a representative of the health care finance and equity unit, a member of the quality team at the ministry, and a member of the nursing service department.

The challenges and the solutions The teams focused on two different challenges identified through field research they conducted:

EpiSurv (not selected)

Challenge: How might we increase the cooperation of the community and their interests in surveillance to sustain the progress of health security?

Solution: Ekiti State started Covid-19 vaccinations in 2021, and post-vaccination tracking was done by the Epidemiology Team through calls to vaccinated clients. The responses were captured manually, through a Google Form. But this was done only for a few months as it was not financially sustainable for the team. After the MIT GOV/LAB pitch event, the EpiSurv Team decided to refine their solution to a post-vaccination tracking tool using feature phone code and leveraging on the LIMS tool. The tool was completed in October 2022 and handed over to the state.

As of December 2022, the team had trained and onboarded 72 personnel drawn from both state and local government by the state team. Each user was supplied with a username and password, while the dashboard was accessed by the state epidemiologist and three other users. In March 2023, the government reported to us that the app continues to track adverse

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effects resulting from Covid-19 vaccinations, although at a reduced rate. They are currently refining the solution to also report diseases. In the latest government update to us, the app had 37,884 clients with 2,544 total responses.

Qualicare (selected)

Challenge: How might we connect health care workers and the government with the feedback of patients about their experience across health facilities?

Solution: The team pitched a digital application and dashboard that transmits patient feedback on the quality of care to governance actors in health facilities. Key questions the team posed



Temi Fllani, of Cchub, presents some of the challenges and opportunities of collaborating with the teams throughout the design process. Photo via: Ministry of Health and Human Services

were how to make the platform efficient, user-friendly, and scalable. They also asked how to generate actionable interventions for facility managers from this feedback with limited human interference, in other words, how the facility managers could integrate this into their oversight routine without having to constantly interact with patients, which would add time and energy to their visits to the hospital. The platform directs patients' feedback to different levels of administrators in the health system, which enables a quick response to the feedback while the platform aggregates where the most issues are. The platform also offers the ability to rate and locate facilities, call an ambulance, and receive updates on public health issues. The platform (and the app) target all health service consumers in Ekiti State, the administrators of health facilities, and the actors in the governance structure of the health system.

It has a patient-facing interface and a health facility-facing dashboard, allowing the technology to be responsive to citizens' grievances while also allowing the facility to understand where to focus its resources.

As of March 2023, the Qualicare solution remains in prototype mode. Kome Sideso, user experience designer for CCHub, explains:

On our end, we saw a problem, we took a swing, and we don't mind if the ball keeps coming back."

Indeed, the itch to resolve some of the quality of care issues in Ekiti took a backseat to more urgent needs during the pandemic. We like to think this is a great example of innovation at work; the Ministry of Health identified a challenge, designed a solution, and seems keen on continuing to figure out the best way to address the problem, even though this experiment did not yield an immediately implementable solution.

The work:

MIT GOV/LAB co-designed a joint boot camp curriculum with CcHub and Gatefield, leading to the design sessions in December and the launch of the research phase in January 2022. Once the teams were up and running, MIT GOV/LAB moved on to coordinating all the parties to help them reach their deliverables, as well as providing technical advice on the more challenging parts of the design process, like integrating components of governance into their designs.

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Both the EpiSurv and Qualicare team members engaged in exploratory research visits to better understand and refine the problem statement. They created their research plan, identified research participants and questions, and decided on sampling methodology. They conducted desk research, created personas, used empathy maps, and collected data through interviews; all part of the amalgamation of the Lean Governance Innovation Design process with CCHub's local design approach.

In particular, Qualicare conducted user research in selected health facilities in one of the 16 local government areas (LGAs) to better understand health care seekers' pains. They were able to investigate the challenges of quality healthcare delivery in public health hospitals in Ekiti state through exit interviews. They interviewed a sample of 76 health workers, health care seekers, and hospital policymakers. They captured insights about the experience of clients in public facilities, the



Participants exchange ideas on what the cause of the problem is. Photo via: Gatefield

perception of the quality of care, the need for feedback mechanisms, and the feasibility of a phone-based platform for engaging users.

What we learned

We entered this collaboration understanding the challenge of doing so during the Covid-19 pandemic. Civil servants' time and pandemic-related priorities were competing with the drive to develop a solution to the quality of care experience in health facilities. Likewise, this propelled one of the solutions, the one connected with the pandemic, to be quickly designed and deployed.

Why did the team that was not selected go on to deploy the solution, while Qualicare's process ran into repeated delays? What can it tell us about the value of design combined with urgency and design by itself when designing governance innovations? Here are some learnings from our experience in Ekiti State:

There must be an itch and that itch must be urgent: Having an itch is an aphorism often used in entrepreneurship to refer to a problem that is so pressing that whoever is experiencing it will want to address it, or scratch it. In the public sector, given the competing demands, low resources and high stakes, having an itch seems necessary to achieve implementation. Few other things will get the attention of the government. Let's unpack further: In the private sector, the likelihood of that itch being significant enough to be pursued depends on how much revenue can be generated by solving it. In essence, a corporation will ask: How big of a market is this itch? In the public sector, the likelihood of pursuing an itch is more likely associated with how big of a political risk it is to not pursue it. In other words, the market is the

constituent base and the revenue is the political capital accrued as a result of resolving the itch. A government official might ask: How many people would like this itch to be resolved? Two teams, selected from within the Ministry of Health, designed solutions to pitch to a panel of judges. The selected solution received support from the partners to produce a minimum viable product in the form of a wireframe.

One team, EpiSurv, developed a solution that tracked the spread of diseases. The other team, Qualicare, designed a communication tool to improve the patient intake experience in public health facilities. The team that was not selected to receive technical support was able to deploy a solution within two months of designing it at the design sessions with the partners. It had an itch that was urgent: tracking the spread of the pandemic. The other team was



Design partners and participants brainstorm ideas to solve the challenge presented. Photo via: Gatefield

addressing a chronic issue, which was unable to generate enough momentum from leadership and thus fell short of becoming more than a wireframe. Design allows for a structure to develop solutions. But in this case, design with an itch catalyzed that structure to become a working product. Design with an itch is more likely to work than design by itself.

Take the EpiSurv challenge: How do you create a tool that allows the state to monitor the spread of disease in a context with poor access to the internet and remote populations far from health care facilities? The itch affected everyone in the state, and it did so under a pressing timeline whereby infection rates were climbing over time.

As the commissioner of health put it to us in a recent conversation: "Even before the accelerator began, the environment for the EpiSurv technology to take off was already sort of created. For example, the meetings that we had every evening during the initial phase of deploying the Covid-19 vaccine. Those meetings were catalytic because they highlighted the need and use of data in resolving real-time issues. It also brought different pillars/ workstreams together to brainstorm, provide solutions quickly and deploy those solutions the next day. In hindsight, that was an 'innovation sprint' of sorts. It helped plant the seed. So even without winning, the EpiSurv team in my opinion were more motivated to continue because they had sort of started the journey before the accelerator and could see how their solution could solve real-time problems. There could even be a merger between Qualicare and EpiSurv because they are both community-facing products."

A solution to address this was more likely to benefit from the rigorous design process we developed than a solution that still needed an audience, a market. EpiSurv needed the track and engineers to develop the best possible version for a market that was waiting for it outside the track. Enter the accelerator approach:

Teams need a place to build the answer to the itch: When the MIT GOV/LAB team co-designed the Governance Innovation Lifecycle Accelerator, it did so to support the design of solutions to two tough challenges in public health through an experimental set of design and social science tools. In the <u>public sector, accelerators</u> are vehicles that serve to catalyze innovation by minimizing the risks. It's a bit like designing a car with the appropriate resources and the testing space needed to make mistakes. Then we can learn as much as we can from the car's performance, as quickly as possible, before driving it on the road.

Both teams were given the space and time to experiment and design, a rare experience in the public sector. This situation was only made possible by our unorthodox partnership with Gatefield, Co-Creation Hub, and a reform-oriented Commissioner of Health.

More than three months? Don't build it: When solving for specific challenges in the public sector, instead of macro challenges like building extra hospitals for a growing demand for services, a design process should take a few weeks at most, but definitely less than three months. We planned this project to last more than three months because of the difficulties of operating during the pandemic. In any other scenario, we would advocate for a three-month design approach, where the teams would be presenting a solution to their leadership by the end of the sixth week, with a chance to iterate before deploying a pilot. Anything longer than three months is deprioritized during the intense competition for civil servant time in resource-constrained environments like Ekiti state. This is explained in the Don't Build it Guide (p.29), where MIT GOV/LAB practitioner-in-residence Luke Jordan discusses a good and a bad timeline, whereby a good timeline is a two-month process to MVP.

Proof of this was the urgently needed EpiSurv solution. It was designed and deployed after about two-to-three months of work. It was the combination of urgency and how quickly the team was able to design it that kept the momentum going. Urgency doesn't always mean building quickly. There are plenty of examples of solutions taking too long in contrast with how urgent they are, and oftentimes bureaucratic delays are to blame. In the EpiSurv case, as the commissioner highlighted, the Ministry had already been thinking about the need to build something that allowed them to hit the ground running

Iteration with governance concepts can lead to practice: It's when things don't work that civil servants ask: What now? Or, why didn't it work? The idea of responsiveness built into tech was not immediately understood during the design sessions but later emerged as a key part of iterations of the solution. In a future iteration of this co-design experience, we plan to use prototyping as a way of reinforcing concepts.

In one of the design sessions of the bootcamp, we explained the importance of governance solutions being responsive and making the government accountable. Just enabling citizens to complain about their grievances can lead to frustration if there isn't a response, and if citizens can't hold the government accountable for not delivering on that response. When the first prototype of the Qualicare solution was ready, the team identified a one-way system between patients and the health facility where patients communicated problems with the quality of care but would not know if their message was read, could not nudge the care facility to respond, and would not have a way to expect the facility to address their grievance. We were not clear enough about responsiveness and accountability during the design sessions. Not to worry — the team recognized the gap after the first iteration.

The second prototype moved from just a patient app interface to integrating a care facility dashboard which could acknowledge the patient's message and allow the staff to respond to address the patient's issue. There were discussions about how to have the ability to respond to a lot of grievances and how to respond to them. There was a possibility of developing one version that aggregated grievances and allowed the facility to channel resources to the recurring grievances. It completely changed the focus of the team from a "complaints app," as they first referred to it, to a "communication app" that started a dialogue with health workers.

We think reinforcing learning through iteration rather than through lectures or design sessions is a key change in the way we'll co-design with the government in the future.



User interface wireframe of the quality of care application. Illustration via: Cchub

When designing in resource-constrained settings, design your solution for multiple needs from the start:

We're still learning from this project even though our participation concluded. As recently as April 2023, the government told us that the EpiSurv team pivoted from a vaccine uptake monitoring solution to a solution that allowed people who received a vaccine to report side effects and contact health workers if they experienced health issues. It's currently going through an overhaul to potentially make it available for real-time reporting of non-Covid-19 diseases so health care workers can directly follow up on cases. Developers are struggling to incorporate this feature, maybe because it wasn't originally designed to address more than the initial challenge.

When designing in resource-constrained settings, one solution should be able to cover other eventual needs so as to remain relevant and useful for the public. This strategy can also save the state resources and build a core team around the proliferation of services delivered under one solution.

Essentially, a Covid-19-tracking app will cease to be useful once the pandemic is over. But the architecture of the solution can be used in other contexts and can continue to serve as a resource that is maintained by a team that continues to learn how best to deploy the solution. This isn't something that we had ever considered including in our approach, but will do so moving forward. For instance, the app can be used to monitor post-vaccination tracking for other routine antigens apart from Covid-19 vaccination. The state is also considering adapting the app to reporting diseases as initially designed by the EpiSurve Team and also link it with the Event-Based Surveillance System, which the State is developing in collaboration with the Nigeria Center for Disease Control and Prevention.

It's a common strategy in business, and one can see it when tracking the design history of products or service delivery solutions: If a factory produces milk, can it also manufacture butter and sell it to the same market it has built around its milk products? In essence, when designing a governance innovation, that innovation will not only solve a problem. It can also build a market that trusts the product. This takes time and resources to build. When corporations, for example, design their first product or service, they outline their market strategy so that if they first capture the market for digital music, they'll next be able to capture the movie streaming market, podcast market, and so on. A governance innovation is likely to have the potential to address a multitude of needs or populations in need.

One of our governance innovation advisors, a former civil servant in the Indian government, once remarked that designing a strategic pivot within the architecture of the public facing applications they were developing meant that the state could leverage the tech to reach the same or a bigger proportion of the population for other purposes. For example, moving from a Covid-19 vaccine tracker to track other inoculations, could be done by using the same Covid-19 vaccine tracker that millions of people were already using, saving the state a lot of time and money.

Reflections for practitioners and their partners

Working in Ekiti State was a learning experience for all the collaborators involved in the project. In particular, partners learned to manage the flux of changes and priorities as a result of pandemic. Both teams dealt with the immediate implications of the pandemic for public health. When Covid-19 infections surged, the teams, understandably, had to deprioritize their projects. Several of the team members worked in the Ministry of Health's epidemiological unit, for example.

Most of the learnings of this collaboration are not specific to Ekiti State but reflect the context in which we work: heavily constrained (resources, capacity, time) environments where a lack of systematic ways for resolving challenges make design ever more necessary to deliver solutions that are accessible to as many people as possible.

As a lab, we were able to provide the Ministry of Health a place to do rigorous user research, test assumptions, and work with design partners to develop solutions to two clearly coidentified challenges. We learned quickly that our assumptions about what makes the government sustain an innovation in resource-constrained settings during a crisis were wrong. We set ourselves up to support the Qualicare app thinking it would be sustained, but it was the urgent app, EpiSurv, that received the attention to sustain it. We confirmed that having a design team in place throughout the accelerator, and having an accelerator itself after the bootcamp, allowed for the momentum to continue until MVPs were produced. Unlike in the Sierra Leone case, we cleared the runway and those MVPs were designed. There was no waiting around to hire talent or iterate on the prototypes. Finally, we learned that in future iterations of our work to co-design governance innovations, a key component must be to continue to reinforce complex concepts through the questions that arise in the prototyping stage. We also must make sure that we build adaptability into the core design of the solution. This saves time and money later by enabling the solution to serve other purposes.

Ultimately, most of what we learned was related to the question of whether design by itself achieves anything. At least in a resource-constrained environment like Ekiti state, it doesn't. The likelihood of implementation following a design process is much higher if there's a burning itch and a catalytic environment to design the solution.

We later learned how much the EpiSurv app would be missed when the Gene-54 partnership ended and the government was left without a way to upload their results on the LIMS. While EpiSurv was developed to track the spread of diseases, tracking vaccinations became an easy pivot. Resources and training were immediately channeled to pivot EpiSurv to fill that gap. In the end, as Dr. Filani pointed out, "We prioritized the app because of the Covid-19 vaccines and because we had the resources to move it forward."

As for the more chronic quality of care challenge, we think trying to address the problem and strategically pausing to prioritize other challenges is not failure. In fact, our local partner CcHub delivered a plan to the Ministry of Health for full app development, including the design of a tech admin team, metrics for policy changes, and a plan for maintaining the product with appropriate funding.

As Kome Sideso, CcHub's Lead User Experience Designer told us in a recent <u>interview</u> after the project ended: "The overall sentiment I get from this experience is 'we had an itch, we scratched it, and we had a good scratch.'"

References

- 1. A wireframe is an image or visual that allows designers and users to see the functional aspects of an app or website.
- 2. A Minimum Viable Product (MVP) is a version of the product that has enough features for designers and users to provide feedback. A wireframe is a great MVP for resource-constrained settings as it doesn't require a lot of resources and visualizes features that can be tested by users.
- 3. This is explained in the "Don't Build it Guide" (p.29): https://mitgovlab.org/resources/dont-build-it-a-guide-for-practitioners-in-civic-tech/.
- 4. The app tracks AEFI resulting from Covid-19 vaccination, which is still ongoing, though reporting has reduced. The solution needs to be refined to also report diseases.