GUIDE FOR
LAUNCHING
INNOVATION
FELLOWSHIPS

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for
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Table of Contents

1. INTRODUCTION

2. DEVELOPING AN INNOVATION FELLOWSHIP

3. PLANNING A FELLOWSHIP

4. BUILDING SUCCESSFUL GOVERNMENTAL PARTNERSHIPS

5. COMPARATIVE CASE STUDIES

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1. INTRODUCTION

The popularity of innovation fellowships has never been greater. Around the globe, enterprising, civic minded individuals seeking to increase the capacity of civic organizations to operate and of citizens to engage with them are designing fellowship programs to support their goals. Yet to date, little formal documentation has been collected about the functioning of these fellowships.

This report is an attempt to share insight into the design of innovation fellowships. Rather than attempting to be comprehensive or didactic, it is meant to stimulate the thinking of innovation fellowship administrators by sharing some of the tactics other fellowships have deployed, with weight placed on suggesting some considerations in translating existing fellowships to developing country contexts.

It is co-designed with the staff and mentors of Code for the Caribbean and Reboot, based on both direct experience and interviews with fellows and fellowship administrators past and present, as well as a literature review of the current public documents around innovation fellowships.
2. DEVELOPING AN INNOVATION FELLOWSHIP

About This Section

The purpose of this section is to recommend the types of inputs and timelines needed to prepare for the launch an innovation fellows program, along with some best practice guidelines for designing such a program. It includes guidance on program milestones and sample roadmaps; these are meant to help frame the kinds of information for developing an innovation fellowship. This section outlines key principles, recommendations and tips for the program design process.
Program Milestones & Roadmap

STAGE 1: RESOURCE TARGETING & PARTNER RESEARCH

Milestone: Internal agreements on goals and targets
Achieving internal consistency among the fellowship program administrators on goals is a prerequisite for reaching out to partners and funding sources. The process of documenting the goals and targets can help to make sure this consistency is achieved.

Milestone Inputs:

Program goals brief(s)
A high-level, two-page document summarizing the goals of the innovation fellowship program. It may be advisable to create multiple versions with different framing and language for different audiences: one for funding partners and one for government or host organization partners.

Program goals presentation deck
A presentation deck summarizing the goals of the innovation fellowship program. This will be used in helping further clarify the program objectives with host and funding organizations. Again, it may be advisable to create multiple versions with different framing and language for different audiences: one for funding partners and one for government or host organization partners.

Target host organizations list
A list of target organizations, as well as contacts who work at the host organization and/or can provide introductions to important individuals in the organization. This can be tracked either using a simple spreadsheet or a lightweight Customer Relationship Management (CRM) tool.

Milestone: Resource planning
One obvious but critical step toward launching a program is understanding and planning for the resources required. This should begin before any expenditures are allocated toward the achievement of goals outlined in the above step. Additionally, sharing this information with the host organization can demonstrate the value of the
program to their organization, providing leverage to secure in-kind donations from partners that are not contributing monetary resources.

Milestone Inputs:
Supporting Structure
While this document cannot prescribe the supporting structure for the organization without an in-depth understanding of the goals, capacities and context, there are several essential functions that should be performed. Many of these functions will likely not require full-time support, but can rely on part-time support a lot more for the pilot year. A smaller-sized cohort with only one project will require less support.

Essential Functions
• **Executive Direction**: Provide final sign-off and overarching organizational direction;
• **Fellowship Management**: Recruit, evaluate and guide fellows through the process;
• **Government Coordination**: Recruit, evaluate and guide government partners through the process, from application to launch;
• **Fundraising Support**: Find financial support for the organization and the organization’s initiatives. This role will likely involve the executive;
• **Communications & Marketing**: Tell the story of the fellows and organization. This function helps bolster the impact of the activities the fellows undertake.

Other Important Functions
• Formal financial management;
• Formal human resource management;
• Technology coordination;
• Orientation planning.

Resource requirements checksheet
A precursor to a formal budget, this document helps lay out the probable resources that will be needed by the program and its fellows (laptops, internet, workspace for fellows, etc).
Formal Budget

An obvious part of any program, the budget is a formal, operational encapsulation of the program’s objectives as described by the resources that will be required to execute them.

STAGE 2: ALIGNMENT WITH HOST PARTNER ORGANIZATIONS

During the alignment stage, program creators should focus on identifying need - or areas for improvement—within the organization, and on establishing alignment between all organizations involved. This lays the foundation for developing formal contracts in the following stages.

Milestone: A Formally Documented Partnership

As conversations with the partner organization progress and move closer towards a mutual understanding of the engagement and its potential outcomes, begin to capture the details and specifics of the partnership. This is where the nuances of the agreement are worked out. Formal documentation provides a point of reference to which all parties can refer back over the course of the engagement.

Milestone Inputs:

In-kind contributions

Recognize early on what is needed from the government for the program to be successful—whether the inputs are office space, laptops for fellows, or any other infrastructure the government can offer to make the program effective. These contributions should be informed by the resource requirement checksheet and included in the formal contract or memo of understanding.

Work contract or memo of understanding

This is a formal document establishing the terms, roles, and resourcing of the relationship. The process of coming to agreement on this document often involves substantial bureaucratic maneuvering, and can consequently prolong the overall process. Decide how much flexibility you want to allow for in the engagement and start elaborating this document with the partners early in the process. This document at a very minimum should finalize the structure of the partnership and of the fellowship program.
Identifying the host organization liaison

The liaison is a critical individual who will serve as the primary coordinator between the program and the partner organization. They should have access to the diversity of inputs needed from the partner. Find them early, and make them a great ally. Secure commitment from them in the form of a contract. Additional compensation might be necessary, but this should be negotiated with the partner.

**Milestone: Public Commitment of Partnership**

Publicizing the commitment of the partner organization is beneficial on multiple fronts, but is most important in that it creates public accountability. This may be difficult to achieve, and will take time to gain the trust of the organization in order to secure this.

**Milestone Inputs:**

**Branding**

Discuss and establish with the partner organization how the program should be branded. What benefits does the partner organization want to capture from the program from a public relations standpoint? Although the program is a partnership, think about how to create a brand for the program that establishes it as its own entity. This could include creating logos, a website, business cards, etc. Identify who will be responsible for producing these outputs.

**Host organization program brief**

A 1- or 2-page overview of the program and relationship, specific to the host organization. This document should be suitable for external communications, and be circulated by that department or the innovation fellowship coordinators. This document should include the goals and objectives of both organizations and be promoted widely by both organizations.

**STAGE 3: FELLOWSHIP CANDIDATES & COMMUNITY PARTNERS OUTREACH**

Once the government engagement has been finalized and documented, outreach efforts for recruiting fellow candidates and community partners can begin.
Milestone: Candidate Outreach Strategy
Finding the right candidates is critical to the success of the program. Transitioning from an entrepreneurial work environment to one where rules and regulations dictate can be frustrating. It is important to find candidates with enough motivation, skills, and expertise to work under oftentimes frustrating and difficult circumstances.

Milestone Inputs:

Candidacy description
Put a fair bit of effort into the requirements, application process, and portfolio you’re asking of applicants. These components will help to draw as much information about their character, working styles, background and skills out as possible.

Host innovators criteria
Establish a list of criteria to seek out “host innovators,” the individuals within the partner organization who will provide support and knowledge sharing for the fellows. A talent-seeking survey tool or questionnaire could be developed to assess character, working styles, aspirations, and backgrounds of employees in the partner organization. The host innovator(s) is discussed in more depth in section III: Structuring Government Partnerships, but in brief, the host innovator(s) should be involved in the partnership talks as soon as they begin to include staff below the highest levels of the organization.

Milestone: Community Outreach Strategy
This should seek to garner support and excitement from the following communities and should be strategically timed. Beginning this process early will help to streamline the engagement process by accumulating a base of interested groups from which to draw inputs during the operational project design phase.

Milestone Inputs:

Community groups and stakeholder organizations index
From conversations with the partner organization, develop an index of relevant beneficiary and community organizations to target outreach efforts towards. As these organizations are the ultimate end-users of the program outcome, their support is critical. To gain support of user communities, these groups should be engaged throughout both the program design and prototyping process. Identifying these groups and assessing their relationship with the partner is therefore of vital importance.
Understanding this dynamic will reveal cues for how to structure the community engagement process.

Like-minded civil society database
Develop and maintain a parallel database of like-minded groups to engage throughout the program roll out. Lessons drawn from previous cases have demonstrated that community cultivation is an important outcome of innovation fellowship programs. Creating sub-sectors of interested and engaged actors within existing technology circles helps to continue momentum after the initial engagement. This community can also provide accountability mechanisms to ensure that the tool is operationalized. Understanding who these potential players are and facilitating engagements with these groups is important to cultivate a sense of community. Opportunities to scale dialogue and knowledge sharing at a regional level will stem out of strategic outreach efforts and media exposure.

Identify government outreach coordinator
To move forward with outreach efforts, a position should be created to facilitate external communications. Begin by outlining specific roles and responsibilities required for the position to create a description. Ideally, this person would be a representative of the host organization and would work closely with the innovator teams. Most likely, this is a staff member in the organization’s communications department, but regardless, develop a set of criteria required for the coordinator and begin recruiting from within the partner organization.

STAGE 4: CONSENSUS ON SPECIFIC OPERATIONAL PROGRAM OBJECTIVES
After having defined the partnership’s initial alignment and accumulating a reasonably-sized candidate pool, program objectives can be refined. This process should examine the interests and talent available in the pool of potential candidates and match this with the capacities available within the host organization to develop an optimal set of operational objectives. This will also facilitate the structuring process, as understanding the capacities and personalities on both sides of the table will help the teams fall into place. This follows the line of thinking that the best decisions are made when all inputs are in place.

Milestone: Clarification of Program Objectives
Using the mutually-determined goals outlined in the first phase and working with the fellowship talent pool, refine the goals into more detailed program objectives. Setting
these objectives after establishing your talent pool will ensure that objectives are realistic and achievable.

Milestone Inputs:

Program objectives documentation

Work with the host organization to construct operational project objectives from the high-level goals established in the first phase. Document these discussions to begin to build a plan for how best to achieve the goals and identify the limitations and constraints to this. The program objectives document may also help maintain balance between quick wins and larger organizational goals. Recognizing that fellows’ work plans should be dedicated towards realizing the broader objectives, adequate room should be left in their schedules to pursue quick opportunistic victories rather than the broader goals.

**Milestone: Determination of Fellowship Structure**

Once objectives have been further elaborated and defined, a fellowship engagement structure will be easier to elaborate. Document the roles that will be needed to achieve the outlined objectives as they are understood. Solidify how the fellows are embedded within the host organization, as well as the meeting and information sharing schedules.

Milestone Inputs:

Fellowship Structure

A document that matches fellows, roles, host organization contacts, and their relationship to the objectives.
Sample Roadmaps
The ‘roadmap’ structures the milestone and component inputs in a logical order for sensible execution. Roadmaps also attempt to estimate, at a high level, the amount of time each input may take to deliver. Every host organization is likely to be quite different in terms of its capacity to reach consensus and move forward on any given deliverable, and much will depend on resources available. For example, the memo of understanding requires government sign-off, which will likely be time-consuming to obtain. Sample roadmaps for Stages 1 and 2 are included below.

SAMPLE ROADMAP, STAGE 1:
RESOURCE TARGETING, HOST & FUNDING PARTNER OUTREACH
Weeks 1–5
SAMPLE ROADMAP, STAGE 2:
ALIGNMENT WITH HOST PARTNER ORGANIZATIONS
Weeks 6–11
Program Design Principles & Best Practices

PROGRAM DESIGN PRINCIPLES
Defining core principles to guide the innovation fellowship can help to inform all aspects of the planning and work. Below is a short list of high-level principles that can serve to drive the program design. Again, this list is not comprehensive as others certainly apply, but is drawn from lessons learned in previous fellowship engagements.

Human-centered
The fellowship should strive to understand and further the specific goals of individuals involved at every level: inside host organizations, the fellows, and community members.

Nurturing
The fellowship is about learning and teaching, for both the fellows and the host organization partner(s). The structure of the fellowship should encourage the growth and expand the capacity of both.

Relying on Local Expertise
Relying on local experts to provide insights relevant to the program can help to contextualize the design.

Other Principles
• Integrated with the community and context;
• Embracing an open in approach to the fellowship;
• Building within reasonably scoped expectations;
• Experimenting, opportunistic and flexible;
• Solutions-oriented.
3. PLANNING A FELLOWSHIP

About This Section
This section describes key elements to consider when developing a fellowship program. These suggestions are based both on a survey of relevant fellowships as well as direct experience and can serve as guidelines on the fundamental building blocks of working innovation fellowship programs. They are, however, not exhaustive: there is no defined structure that all fellowship programs should conform to. Most importantly, the program’s design should fit its context and overall goals. Fellowship program administrators should consider how to adapt the fellowship not only to their specific context, but also to each specific class of fellows: no two classes of fellows are likely to have the same set of talents and capabilities, or face the same problems.
A. Recruiting

Recruiting a class of capable, energetic and good-spirited fellows is necessary for a successful fellowship year. Put plenty of care and thought into your approach to recruiting and assessing prospective fellows.

1: OUTREACH TO PROSPECTIVE FELLOWS

Milestone: Internal agreements on goals and targets

Tailor outreach to prospective fellows according to your program goals and your applicant pool: a general call for candidates on major media sites is potentially less effective in attracting the kinds of candidates desired than a carefully directed recruitment process based on the kinds of projects likely to be undertaken. For instance, if a government project is likely to involve legal technology, some outreach should be aimed at reaching candidates through blogs, schools and websites that draw audiences interested in legal issues.

While outreach to prospective fellows can take many forms, the tactics below are useful options to consider:

- **Make outreach appearances at relevant conferences and hackathons.** Engage prospective fellows through conversation and presentations at events that relate to the fellowship.

- **Create a recruitment website.** This can be quite simple for the beta test year: at minimum, indicate the relevant dates and attributes of the fellowship, and be sure to mention the program’s funders and other supporters in order to establish credibility.

- **Network through former fellows, program staff and advisors.** Previous and current fellows provide an excellent pipeline to prospective fellows. Throughout the fellowship year, consider building in activities to enable fellows to promote the fellowship externally; actively encourage past and current fellows to reach out to interested friends and colleagues.
2: BUILDING AN ASSESSMENT PANEL
Forming an external candidate assessment panel to help vet fellowship candidates can improve the recruitment process, decreasing the time it takes to find the most promising potential fellows, as well as increasing the perceived status of the fellowship among both candidates and external audiences. Besides the obvious benefit of drawing on available expertise to identify the strongest candidates, inviting elite practitioners from the social, government, design and technology fields to participate as panelists offers a concrete yet lightweight means to build out your organization’s relationships, and may feed into a board of advisors for the program as well.

One consideration, however: incorporating an assessment panel during the beta test year of Code for the Caribbean may be unnecessary, given the small number of fellows planned for and the relatively short timeframes.

3: CANDIDATE ASSESSMENT
For the first year’s smaller class, tailor the candidate screening process to the specifics of the project. Having successfully scoped the project while building the government partnership, you should be able to clearly identify the needed roles for fellows to fulfill. For instance, since RADA is seeking a mobile tool, candidates with the following mobile experience would be preferred:

- Designers with experience designing responsive applications for both mobile web and native applications, with an understanding of the balance between engaging design and bandwidth constrained mobile experiences.
- Developers with experience developing for the responsive mobile web, as well as Android (and/or possibly iPhone, depending on it’s market share among the class of potential users) and SMS based systems such as RapidSMS, Ushahidi, etc.

Along with technical skills and experience, consider the personal characteristics and other qualifications that will make a fellow a successful addition to the team. The fellowship class will need strong cohesion in order to be successful, and finding individuals that are team players is of paramount importance. Successful fellows will also be able to cope with the inevitable delays and setbacks that come with government work. Ability to independently manage work and seek help when needed is also critical—as is a sense of humor.
While the importance of these characteristics are somewhat obvious, they can also be difficult to assess. A few tactics can help:

- **Video:** have the fellows respond to questions on video, as well as in text.
- **Levity:** prompt the applicants to reveal aspects of their personality, perhaps by asking them to tell a joke or humorous anecdote.

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**Recruiting Case Note: Use a Wide Funnel**

The U.S. Presidential Innovation Fellows (PIF) program application process demonstrates the usefulness of casting a wide net for potential fellows.

The first stage of the PIF application process requests only a very small amount of information from potential candidates.

This low threshold for applications at the initial stage increases the number of applicants applying, and with it the apparent selectiveness of the fellowship, and therefore, the fellowship’s brand.
B. Fellows Orientation & Training

The design of the orientation and training process for new fellows is crucial: training must be fast-paced and hands-on, but also in-depth enough to give fellows with different levels of experience a sufficient skill set to use within days of starting the program. The training sessions must therefore be creatively designed to balance pace against fellows’ capacity to absorb new information. As a general note, to keep fellows’ energy and creativity levels up, consider ways to retain elements of play and levity throughout the training.

1: BEFORE KICK-OFF

Once you have a new crop of fellows ready to dive into the program, there are several things you can do to help transition them into the program. Ideas include:

- Provide a platform for fellows to create and share profiles on, and encourage them to use it to network with each other before starting the fellowship.
- Set up time for fellows to ask questions, coordinate and plan among themselves (via a Google group or similar means).

2: TRAINING

The training program for a short fellowship will almost inevitably be shorter than that of longer fellowships in order to give the fellows sufficient opportunity to research, design and build solutions. The adverse effects of this may be mitigated by focusing the training on the specific agency and problems the fellows are endeavoring to solve. While this guide will not provide a complete training framework, it may be useful to consider the following content areas.

Training Topic Areas

Design the training to be hands-on and strongly tailored to this year’s specific challenges. In general, some tools that fellows will likely need to be equipped with include:

- User Research
- Agile Software Methodology
- Minimum Viable Product
- Innovating in Government Contexts
- Principled Negotiation
3: OTHER ACTIVITIES
Throughout the program, enrich the fellowship experience by organizing or linking to informal, fun activities, such as hack-days, social events and competitions. Building some of these energizing activities into fellows’ training will boost morale from the start and help with team cohesion. Providing fellows with an outlet for their work stress can go a long way towards helping solve the inevitable team problems that crop up.

Examples of “Extracurricular” Activities to Consider:
Design the training to be hands-on and strongly tailored to this year’s specific challenges. In general, some tools that fellows will likely need to be equipped with include:

- **Dinners with a staff member or mentor:** Organize one-on-one sessions with each fellow to give them an opportunity to discuss the fellowship’s progress, and to get advice;
- **20% Time:** Set off 20% of training time for the fellows to learn or hack on anything they desire. Prompt them a few days before this free segment to think of what they want to hack on and pitch it to the group;
- **Catered lunch lectures:** Organize a series of weekly lunchtime lectures on related topics of interest, complete with catered lunches (these may be valuable enough to continue after the training program concludes);
- **Potluck lunches:** Provide a budget for the raw ingredients and allow the fellows to cook a lunch for their peers, rotating through all the fellows, alone or in groups, on a regular basis;
- **Others:** Team dinners, outings to sporting or cultural events, local pub outings, and team game nights are all good ways to keep training fun, social, and effective in building a successful class.

These activities do not all need to be planned in advance: set the ball in motion and encourage the fellows to come up with their own ideas, but step in and organize events yourself if necessary. When planning such activities, remember that corporations and local businesses interested in supporting the fellowship and associating themselves with the brand can be good sources of sponsorship.
Case Note: Friday Hack Days

Every Friday morning for the first few months of Code for America, fellows were given space to pitch ideas they wanted to help build, form teams and work on the project. These projects ranged from the whimsical to the substantive, and became important contributions to the fellowship overall:

- Code Notifier: an application that triggered a personalized sound clip to play over the office speakers whenever a fellow submitted a change to one of the CfA code repositories.
- 311 Dashboard: provided a new way to visualize requests sent to cities 311 system. This project, like many other hack day projects, became a full-fledged CfA project as the fellowship progressed.
C. Engaging Fellows with the Government

EMBEDDING BASICS
The process of embedding fellows is perhaps the most critical component of change: it allows the innovative change-makers inside and outside a partner organization to share knowledge, best practices, and leverage their extended capacity to experiment with innovative forms. The fellows have a few goals: they need to develop a strong understanding of the technical and organizational infrastructure they are designing and building for, they should begin to look for small projects that can be turned around quickly to build trust, and to begin opening the organization by sharing knowledge back and forth with their government counterparts. Embedding serves a few core functions:

- **Community & knowledge building.** The embedding process builds a bridge between the technology innovators outside and the host innovators inside that allows the organization to open up.

- **Design research.** One of the fellows’ core activities throughout his or her embed is conducting design research within the institution. During this time they have unprecedented access to the government workers who they are trying to help. Without this access—and the insight into the institutional context it affords—the application requirements gathered will be surface level.

- **Empathy development.** Ideally, fellows will perform some nominal roles related to the project (with oversight) in order to best develop empathy for the internal users and stakeholders. At the very least, fellows should engage in shadowing of actors critical to the system they are building.

- **Trust building.** While embedded, fellows will be able to establish rapport and trust much more effectively through daily interactions with the government staff. This is also the best opportunity to identify “quick wins”, small projects that address specific acute pain points the staff are experiencing.

EMBEDDING CONSIDERATIONS
The following are some simple considerations to take into account when planning the embedding period.

- **Expectation setting.** Much of the success of embedding comes from expectation setting done during institute- and government-partnership creation. Similarly, designing the role government staff will play in the fellowship should happen long before the fellows arrive.
• Challenges mitigation. Inevitably, problems will arise throughout the fellowship. It is critical that both fellows & government staff be adaptable and have support from the program in order to deal with them. Thorough risk mitigation strategies and backup plans should be created ahead of time. See below for a list of some possible challenges and corresponding mitigation strategies.

Embedding Activities

A non-exhaustive list of activities that fellows should undertake follows:

Before Embedding:

Create an interview guide.

Develop an interview guide, establishing research targets and question themes during design research training.

Fill in the first week’s schedule.

Create the first week’s schedule of meetings, shadowing, and work during training, with support from their government host.

Establish a check-in schedule.

Establish a system for sharing regular updates and knowledge between themselves, the Code for the Caribbean staff and government partners. This is a simple but necessary step to keep everyone up to date and to get problem issues addressed early. While the exact schedule should be determined based on project risks, a good rule of thumb is to establish weekly check-ins and reduce the length or frequency if they prove more numerous than strictly necessary.

During the Embed

Public meetings.

Hold public meetings with the organization’s elite.

Shadowing.

Conduct interviews and shadowing with frontline staff affected by the project. For a brief overview of the shadowing process and other research methods, see Ideo’s Human Centered Design Toolkit or Reboot’s Research Field Guide.
Community outreach.
Conduct interviews with community potentially affected by the project.

System mapping.
Create system maps of the technology and business processes relevant to the project.

Quick wins brainstorming.
Hold regular meetings with government hosts to find simple and effective ways to improve processes with small technical investments. These may not always involve code or apps: brown bags and knowledge sharing may be more appropriate in some situations.

Synthesis sessions.
Analyze and synthesize meetings, interviews, and shadowing shortly after they occur.

**After Finishing the Embed**

Conduct synthesis.
Work together with staff to combine the fellowship’s findings into a cohesive artifact (or artifacts) that allows them to report back to government what was learned. This can take many forms depending on the project and timing, but should provide the human-centered evidence for the product inception workshop.

Product inception workshop.
Conduct a facilitated session including staff and critical government stakeholders to develop a shared understanding of what was learned throughout the fellowship and which lessons are most important, and critically, engages the government stakeholders in feature and priority setting for the build phase that follows.
### EXAMPLE: EMBEDDING CHALLENGES AND FELLOWSHIP PROGRAM ADMINISTRATORS MITIGATION STRATEGIES

<table>
<thead>
<tr>
<th>CHALLENGE</th>
<th>MITIGATION STRATEGY</th>
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<tbody>
<tr>
<td>Bureaucratic processes slowing progress.</td>
<td>Engage organizational elites to help find paths forward</td>
</tr>
<tr>
<td></td>
<td>Launch and outreach strategy should be part of partnership discussions. Program administrators should consider helping to coordinate outreach.</td>
</tr>
<tr>
<td>No government outreach strategy.</td>
<td>Find relevant external community organizations to assist.</td>
</tr>
<tr>
<td>Waning or inconsistent organizational support.</td>
<td>Engage organizational elites to help find paths forward. Engage organizational middle-management catalysts for advice.</td>
</tr>
<tr>
<td>CHALLENGE</td>
<td>MITIGATION STRATEGY</td>
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</tr>
<tr>
<td>Lack of data.</td>
<td>Secure data first. If data is not readily available, engage data owners face-to-face to understand and alleviate concerns over sharing. Engage elites to help find paths to collaboration.</td>
</tr>
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</table>
D. Product Development: Synthesis & Iteration

After fellows have completed the bulk of the initial research phase, they should begin the design and prototype development in earnest. Fellows should take an iterative approach to design, yielding progressively richer prototypes for testing.

Consider the following activities as components of a successful design and prototype development phase:

- **Synthesis & findings reporting**: Immediately after the embedding, fellows (and possibly external partners) conduct a final synthesis session to extend and finalize the interim synthesis sessions that took place during the research. This session should produce reportable findings in a cohesive narrative that can inform product design.

- **Product inception workshop**: Fellows, staff and relevant government partners convene a hands-on workshop that allows important stakeholders to transform the synthesized, reported findings into a ranked set of features that developers and designers can begin developing against.

- **Development & iteration cycles**: Fellows undertake iterative cycles of building, testing and incorporating feedback to build increasingly high-fidelity prototypes which are then systematically tested for fit and usability with the relevant users and stakeholders.

- **Launch event**: The formal product launch should occur as early as possible after the critical features of the prototype are developed. This is especially critical for applications that require significant community building around them that can only take place after the application is released.
E. Fellowship’s End & Beyond

As the fellowship year approaches its conclusion, with the next program year’s fellows and projects already identified, the focus should be on the next steps for both the fellows and the applications they have created. Not every application’s fate or fellow’s next step must be fully articulated, but these are two important fellowship outcomes that can help boost the program’s allure for funders, governments, and potential fellows. A fellow who creates a funded civic start-up based on the work started during the fellowship is a very strong advertisement for future fellow candidates interested in doing the same.

Some example activities bringing a fellowship year to a successful close may include:

• Put fellows in touch with connections who can offer career advice and professional development opportunities;
• Aggregate and distribute fellowship “lessons learned” from both fellows and partner institutions;
• Organize a fellowship graduation party to celebrate the class’ achievements over the year.
• Engage fellows in evaluating future cities and fellows
4. BUILDING SUCCESSFUL GOVERNMENT PARTNERSHIPS

About This Section

This section provides recommendations for finding and working with visionary government partners who will open their agencies to fellows, coaching them on the inner workings of government, and helping them find points for successful intervention.

When designing a partnership, local context is king, and that it is not possible to anticipate all of the issues and complications that may arise over the course of working with a partner agency. The guidelines provided here represent key insights and best practices pulled from a diverse set of innovation fellowships that can act as a starting point and helpful reference for future fellowships.

It is of critical importance not to think of the government partner agency as a client: while this framing may be necessary in the procurement and contracting process, the government-fellowship relationship is not that of a service provider to a client. Both parties must be fully invested partners—the program will be successful only insofar as this is true. While a fellow’s personal and professional growth is an important program outcome, the goal of the fellowship organization is to positively impact the partner agencies’ processes and functioning. The fellowship’s government partners are therefore simultaneously co-implementers and beneficiaries of the innovation program.
A. Recruiting Government Partners
Recruiting a class of capable, energetic and good-spirited fellows is necessary for a successful fellowship year. Put plenty of care and thought into your approach to recruiting and assessing prospective fellows.

1: FINDING AND ASSESSING CANDIDATE PARTNERS
Finding and selecting the right government partner is critical to the success of an innovation fellowship program. While the process is as much art as science, expressed commitment, capacity, leadership, and adequate available resources are essential elements in a potential partner.

Commitment
The first quality to identify in a potential government partner is the agency’s willingness to host a fellow. Willingness to commit can be deceptively difficult to diagnose: remember that organizations represent multiple interests, and it is therefore critical to look past initial excitement of an agency’s point of contact to gauge a partner’s buy-in in pragmatic terms, such as program inputs offered during the planning process.

Some possible criteria follow:

• **Look for leadership support for the program.** Commitment to the fellowship’s goals among top-level staff, both within the partner organization and its parent branch(es), will provide the innovation team with the executive level sponsorship needed to operationalize their ideas. Leadership support will also increase the potential for organizational change to take hold as a result of the fellowship.

• **Assess high-level response times.** Commitment of actors within the partner organization to provide rapid and high-level responses and approval processes to the innovation teams is an important requirement. Examine the leadership structures in place to help assess whether or not the partner will be able to respond rapidly to needs throughout the program.

• **Consider any potential risk to the partner.** A common obstacle to the successful institutionalization of innovation is the perceived risk that this innovation brings to government actors. Assess the level of such risk the fellowship creates for the potential partner agency, and the agency’s willingness to assume it. See section B.2. for a list of government commitments that, if present, should act as a proxy for willingness to engage with an experimental approach. Additionally, a SWOT analysis
exercise undertaken with the partner may provide insight into the risks and mitigation strategies.

- **Evaluate non-monetary contributions.** Consider the non-monetary inputs that the partner is willing to provide to create mutual value. Securing such contributions from the partner is important to both gauge their level of commitment and ensure the partner will value the work and outputs of the embedded fellow. Contributions can be in terms of resources (human or educational), equipment made available to the innovation fellow, or time inputs to secure external funding.

Once willingness seems present in sufficient quantities to merit a partnership, specific requests can be made. Examples of such commitments are included in the following section (Securing Government Commitments, b.2).

**Capacity**

Government bodies are often operating at or beyond their capacity: delivery of core services sometimes leaves little room for dedicated innovation units. Otherwise-willing partner agencies may lack the fiscal or human resources to bring on a fellow and to carry out the project.

The following are useful questions to begin an assessment of a partner’s capacity to support a fellow:

- **Can the partner provide a key contact to help fellows coordinate their efforts?** For the engagement to be successful, a staff member should be available to assist the fellow as a key contact providing necessary introductions and insight into the organizational context. Having a designated key contact to contribute contextual knowledge can help the fellow to learn the ropes quickly and focus his or her efforts on more critical challenges.

- **Are there talented employees on staff with the flexibility to act as host innovators?** Seek out potential collaborators who have relevant backgrounds and will be able to aid the fellow in creating a product with maximum potential for impact. These individuals are key to helping the innovation fellows ensure that the solutions they create are transferable and adaptable in the organization. Ideally, they will also play an active role in guiding organizational change during and after the fellowship.

- **Does the organization have the capacity to operationalize and scale the project?** Assuming that the goal of the fellowship will be to pilot and scale an application, platform, or process, the ability of the agency to run a project after the fellowship
ends and potentially scale it should be assessed. For more on sustainability, please see Section 4.D.

Past fellowships have identified three important types of roles that the partner organization may be expected to contribute to the project:

• **Host innovator.** An individual with on-the-ground contextual knowledge of the critical challenge the fellowship seeks to address and the mandate to dedicate a significant portion of their workload to the project.

• **Program champion.** A high-level official that can advocate for the program and navigate bureaucratic hurdles.

• **Project liaison.** An individual responsible for organizing meetings and interviews and managing and coordinating the fellows from an administrative perspective. This role may overlap with that of the host innovator, but likely not of the program champion.

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**Capacity Case Note: U.S. Presidential Innovation Fellows**

The U.S. Presidential Innovation Fellowship utilizes a partner system in which external fellows bringing an entrepreneurial perspective are paired with a ‘host innovator’ (a talented internal staff member) who provides contextual knowledge. This collaboration provides the fellow with a better sense of existing processes and systems while allowing in-house learning to take place so that the solution is transferrable to the partner organization. The host innovator can help focus the fellow’s efforts around relevant known issues within the partner organization. In turn, having a sharp guide teaching the fellow the ins and outs of the system will contribute significantly to the teams’ ability to implement a solution.
B. Designing an Effective Government Partnership

Positive, fruitful interactions between fellows and government partners depend heavily on the thought and care devoted to designing the partnership before its launch. For the partnerships to begin on firm footing, government partners and fellowship program administrators should take time before the program start date to develop a set of common goals for their specific fellowship.

1: SETTING COMMON GOALS

Successful partnerships are built on clearly articulated and agreed-upon goals. Major goals should be documented in a formal contract; others will be part of a shared understanding. Some sample goals follow.

Goals for Governments

- Seed and grow capacity of government staff to innovate;
- Encourage government openness and external data sharing;
- Find and foster visionaries within the organization;
- Develop innovative solutions to existing problems;
- Maintain budgetary targets and reduce costs.

Goals for Fellows

- Enhance technical skillset and grow professionally;
- Deepen fellows understanding of government functioning;
- Develop positive working relationships with government organizations;
- Build relationships between governments and local communities;
- Identify and pursue opportunities for fellows career growth.
- Find ways to use their skills to make meaningful impact on their world.

Goals for Community Partners

- Develop and sustain positive relationships with government agencies;
- Increase government understanding of community priorities.

2: SECURING GOVERNMENT COMMITMENTS
Successful partnerships require fully engaged and invested partners. The fellowship model offers a lot to governments; it also (sometimes less explicitly), asks a lot of them. Past fellowships have seen initial enthusiasm of their government partners decay as the demands on them grow. This experience suggests that simply stating the necessary investments at the outset of a partnership may not be enough to avoid this pitfall: excitement over the prospect of receiving free or reduced-cost technology assistance may cause the partner organization to disregard the costs of the program. It is important to recognize this potential threat to a sustainable partnership and take steps to mitigate it.

**Top Level Commitments**

Innovation fellowship programs typically enroll fellows for less than a year, making research, development and deployment schedules compact. This short time frame helps define a tight project scope and demands quick releases of minimum viable products. Unfortunately, it also means that the inevitable problems that crop up may have outsized impacts on project success. Problems that take a few weeks to settle may be handled successfully in longer-term projects, but can seriously threaten the success of an entire fellowship project. To reduce the risk of such threats, it is important to have full buy-in from top-level project champions who have the authority to reallocate resources and level administrative hurdles as needed.

**Requests for Commitment**

Securing the following types of commitments can help ensure the government partner is on board. This should be considered a list of possible commitments to seek; the specific inputs requested will be based on the needs of the fellowship and their relevance to the partner.

**Funding:**
- Cover or defray the cost of the fellow’s stipend directly from partnership funding or;
- Work with external funders to cover or defray the cost of the fellow’s stipend.

**External Publicity:**
- Help arrange press coverage of the fellowship, including photo-ops of the fellows and key internal staff with high profile government actors;
- Help arrange public meetings with community groups and the fellows;
- Express commitment to the project through various public channels.

**Internal Publicity:**
• Raise awareness and support of the project among all potentially relevant staff, including top-level staff. Partners should be able to provide contact information for anyone else that should be involved; those contacts should have heard of the project when followed up with.

Time:
• Commit operational staff to the project. Designate a project liaison with a mandate for a near full-time commitment (for a full time fellowship);
• Commit a number of hours each week that a relevant top-level government partner will spend supporting and troubleshooting inevitable problems.

Effort:
• Articulate the solution’s premise and function, as well as its potential impact, along with a well-defined plan for supporting the solution going forward;
• Help draft a job description for potential fellows and assist in the process of interviewing and evaluating fellowship applicants. This effort will help identify desired qualities of the fellows, which may in the process yield clarity on unspoken goals.

Space & Support:
• Dedicate space in the agency for the fellows to work alongside other relevant staff.
• Develop a clearly-articulated plan for how the agency will support those staff given their new responsibilities.

Data:
• Commit to make relevant data sets available through a public API (application programming interface - a machine query-able and readable data source).

While implementing all of these commitments is likely not feasible, not one of the commitments on its own is sufficient to ensure the strength of the partnership. Partners will likely be less capable to undertake some of these commitments than they will others. For example, clear, granular public commitments of support and resources are likely to be quite powerful, but also may be difficult to obtain due to inherent riskiness of the projects.
3: UNCOVERING PARTNERS’ INTERESTS & CO-CREATING THE FELLOWSHIP’S COMMITMENTS TO GOVERNMENT

No fellowship is likely to be successful without first developing a firm understanding of the needs that the partners are expecting the fellowship to fulfill. To elicit these needs, conduct normal product scoping with special emphasis on identifying achievable goals given the fellowship timeline and fellows’ skills.

However, it is important to leave space here: the fellowship model is different from the standard government contracting model in at least two important ways:

1. Fellows embed in order to determine the features and functions of a solution they will develop. Exact terms of the fellowship must therefore be able to adapt according to an evolving understanding of the partner organization’s needs. Maintain flexibility in the contract while allaying government fears of under-delivery by including specific contract terms around
   a. the nature of the research-based, agile development process,
   b. inclusion of a minimum, high-level feature set definition, with the provision that these features must first be vetted by research, and
   c. inclusion of an explicit feature brainstorming and prioritization workshop to include fellows, program staff, and key government and community stakeholders.

2. Fellows will embed to find opportunistic “quick wins”, small projects that they can implement quickly to solve well-defined acute needs. This may be as simple as some training on how the partner’s existing software could operate more effectively.

Case Note: Adopta

One of the most successful applications developed during Code for America’s first year was Adopta. Following a discussion of the damage to city infrastructure caused by an intense snowstorm that pummeled Boston, one of the fellows developed a simple platform that allowed citizens to volunteer to shovel out (“adopt”) fire hydrants near their homes. Despite being developed as an opportunistic side project, Adopta was the most widely shared and extended application developed that year. This application’s existence, and benefit, is predicated upon Code for America’s flexible model of engagement.
Developing the Contract

While standard contract negotiation practices apply here, it is useful to note that the contract presents the best opportunity to encode commitments that government has made. It is also helpful to remember that procurement processes are often slow. It can be difficult for governments to make purchases and may take considerably longer than anticipated.

Contract Content

Individual contracting practices vary, especially in cases where no monetary exchange is involved. That said, it may be useful to include requirements from the following categories of content:

Possible Agency Responsibilities:

• Overhead support, such as desks, meeting space, and internet;
• Executive-level staff support, including explicit requirements regarding the people power, specific tasks and time dedicated to the fellowship;
• Operational staff support, including explicit requirements for people, tasks and time dedicated to the fellowship;
• Data such as APIs necessary to have available;
• Data liaisons who can help open and configure APIs;
• Plans for maintenance and sustainability of the solutions;
• Guidance for fellows in discovering the agency and its challenges;
• Coordinated outreach to media and community organizations;
• Coordination of an early-stage meeting to ensure that all actors are aligned on priorities around the fellowship program, particularly the need to facilitate knowledge transfer between senior staff and mid-level managers;
• Coordination of educational workshops in advance of the fellows’ arrival to familiarize staff with the technical aspects being addressed by the program.

Possible Agency Roles:

• see above Section (1.a) for a list of possible agency roles.
Other Potential Content Areas

- Copyright and code open source requirement;
- Possible fellow roles and responsibilities.

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**Case Note: Code4Kenya’s Host Contract**

The program administrators of Code4Kenya included many of the commitment areas listed above in their partnership contract. Specific examples of contract commitments included:

“You will appoint a senior executive as a project liaison for both the C4K Fellow and the external project support team. Your project liaison should have the necessary authority and operational insights to instruct compliance as appropriate, to avail resources and to guide deployment of the project.”

The administrators noted that senior management in the host organizations were presumed to be on board, as was stipulated in the contract, but that in some cases these managers were “insulated from the program and critical resources could not be assigned until they were brought up to speed and approvals sought.”

While this may be to some degree inevitable, securing public, individual commitments from these actors before developing the contract may go a long way toward avoiding this undesirable insulation. Facilitating alignment between mid-level operational staff and senior staff will create cooperative interaction within the partner organization and prevent confusion between actors.
C. Organization & Project Sustainability

Although innovation fellowships should focus on driving organizational change within partner organizations, in resource-scarce environments, the credibility of a fellowship organization relies upon the outcomes and technology it produces and sustains. Given this, innovation fellowship programs should plan for the sustainability of their model considering: 1) the business model of the organization itself; 2) the operationalization of products and applications generated through the engagement. Strategizing for both the long-term management of program outcomes and for continued engagement with government agencies is critical to the sustained success and credibility of the fellowship.

POSSIBLE ORGANIZATIONAL SUSTAINABILITY MODELS

This guide cannot practically propose an organization sustainability model for the Code for the Caribbean Jamaica pilot without an in-depth understanding of the context and culture of both the community and the organization. The unique fundraising, business and government procurement environments must be well-understood to design an effective business strategy. That said, three different organizational tactics may have relevance:

- **Alignment with traditional budgetary and procurement processes.** Partner outreach should broadly align with the normal timing and processes of government procurement cycles. Funds are typically allocated early in the year, and then spent late in the year.

- **Alignment with grant funding priorities.** Grant funding represents a large proportion of the sustaining force driving innovation fellowships. Keeping track of funders’ broad objectives and finding overlapping initiatives may be an effective strategy for sustaining the organization.

- **Government service provision.** It is widely understood that government is not currently capable of designing and building the innovative technology tools it needs. This unmet need has clear market potential. That said, becoming a fully-fledged provider of government services may move the organization away from its core service as an innovation fellowship and cloud the program’s intentions in the eyes of government.
FELLOWSHIP APPS & PROJECTS SUSTAINABILITY

Resource-scarce government partners may not have the necessary means to independently operate applications derived from a fellowship program. There are a number of possible paths that fellowship projects can take to ensure their continued viability and impact after the fellowship is complete. A non-exhaustive list of these models follows.

1. Spin-off Product Companies

One proven way to support fellowship projects after the fellowship’s end is to help fellows launch independent product companies to support, maintain, and scale their projects. Ideally, part of the fellowship will entail start-up incubation, helping the fellows to understand the market and business models and make connections with possible funders. Minimally, this process can begin with ideation support and mentoring.

Case Note: Local Data & Textizen

The Two examples of this model developed out of the second year of the Code for America fellowship are Textizen and Local Data. In the case of Local Data, the fellows applied for a Knight Foundation grant to launch the product developed through the fellowship. They formed a civic startup, Amplify Labs, to target “civically driven institutions,” for example, by connecting grassroots organizers to city officials in cities across the US.

2. Fellowship Alumni as Service Contractors

It is advisable for software-based fellowships to publish the applications they produce as open source projects that any individual or organization could implement and develop further. That said, the technical competency of many government organizations limits their ability to take direct advantage of this. Bringing a fellow on as an independent contractor after their fellowship ends can be a mutually beneficial way to work with someone who knows the software and the organization.

3. Government Staffing Pipeline

Fellowship models can also be an effective strategy for government organizations to attract and beta-test the fit of talented individuals for their organization, as well as
for those individuals to gauge their desire to work in these organizations. In this way, the fellowship shares some aspects with an internship, but fellows are generally more seasoned and goal-directed than typical interns.

4. Internal Staff Growth
An internal staff growth model should cater to the development needs of the partner organization’s staff. This type of fellowship would focus on the needs of internal employee’s and identify and build upon their existing skill sets.

5. Non-profit Application Inheritance:
An alternative to the above models is to involve not-for-profit groups or large intergovernmental organizations to operationalize and manage products resulting from the fellowship. This model may be more suitable under fixed resource constraints than some other models, and where there is a lack of other identifiable support inside or outside the partner organization. During Code for America’s first year, fellows joined forces with Local Projects, an organization building a civic engagement tool called Change By Us. The application was substantially improved by the fellows over the course of the year, but Local Projects retained source control after the fellowship.
5. COMPARATIVE CASE STUDIES

Innovation Fellowships Case Studies
1. UNITED STATES PRESIDENTIAL INNOVATIONS FELLOWS
2. ENTREPRENEURS IN RESIDENCE (EIR) PROGRAM: FDA AND USCIS
3. CODE4KENYA
4. CODE FOR AMERICA

Government Engagement & State Uptake
1. TECHNOLOGY TRANSFER AND THE STATE: CASE STUDIES FROM HAITI
Innovation Fellowships Case Studies

What follows are selected case studies of existing innovation fellowship programs. Each case gives an overview of the objectives and information about the particular fellowship along with a description of lessons learned that can be put toward new fellowship programs being developed.

1: U.S. PRESIDENTIAL INNOVATIONS FELLOWS

Finding and selecting the right government partner is critical to the success of an innovation fellowship program. While the process is as much art as science, expressed commitment, capacity, leadership, and adequate available resources are essential elements in a potential partner.

Overview

The U.S. Presidential Innovations Fellows program brings expert ideas and thinking from the private, non-profit, and academic sectors to the public sector. To achieve this, external innovators are paired with top government innovators concentrated in a centralized location, Washington, DC. The inaugural fellowship term was launched in August 2012. Over the course of the six-month fellowship term teams worked towards developing solutions to different challenges through the predetermined projects described below. Their efforts were supported by a community of like-minded and engaged citizens through an online platform that provides an outlet for community preference, opinions, and feedback.

The fellowship put its inaugural class to work on the following project areas:

My gov:

This project aims to prototype increasingly streamlined and user-friendly web systems to provide citizens with easier-to-use information and an outlet for feedback directly connected to the federal government.

Open Data:

Fellows focusing on the Open Data area work across multiple federal departments to make government and voluntarily-contributed corporate data open with the hopes of fueling entrepreneurship and creating jobs. The hope is that entrepreneurs will utilize data to create tools that help Americans more easily find the best services to fit their health, education and other needs.
Blue Button for America:
This project aims to provide citizens with easier access to their health records and works to spread voluntary implementation of the tool by the private sector.

RFP-EZ: RFP-EZ:
An online platform for streamlining the government’s procurement process, aiming to make it easier for small businesses and startups to gain access to government services.¹

The 20% Initiative:
This project works with host countries in promoting electronic payments to achieve development outcomes like financial inclusion and reduced corruption, as well as generate cost savings for US taxpayers and companies abroad.

Program Specifics

Timelines:
- The completed fellowship term consisted of a six-month engagement broken into focused sprints.
- The program is, as of writing, still in progress and plans for scaling up projects or supporting future fellowship classes have not been discussed publicly.

Stakeholders:
Target Institutions
- U.S. Small Business Administration
- U.S. Department of Energy
- U.S. Department of Education
- U.S. Department of the Treasury
- White House Office of Social Innovation
- United States Agency for International Development (USAID)
- U.S. Department of Health and Human Services
- U.S. Department of Veterans Affairs

Backers

• U.S. Chief Technology Officer
• U.S. Chief Information Officer
• White House Director of Digital Strategy
• USAID (for the 20% Initiative only)

Team Organization:
• Eighteen fellows and twenty-one in-house government employees were dispersed onto 5 different project teams, one for each of the target initiatives described above. Each team consisted of a designated number of fellows, hosts, and an advisor for support. The ratio of fellows to hosts varied depending on the team.

Program Takeaways

Pairing
Each fellows in the program was paired with a host fellow, or talented staff member within the government department or agency the fellow joined. Technical advisors from within the same department or agency supported the teams. This is a useful model, as in-house support provides fellows with a better sense of existing processes and systems. It also helps keep them from reinventing the wheel, as supporting staff can advise fellows on what has been tried before and why it was or was not successful.

TIP: Fellows should ask their host fellows what platforms similar to the one they are working on already exist within the government to see what aspects of the platform are working and what is lacking. Finding an opportunity to build off of the existing system, this presents a better alternative to starting from scratch, as it requires less work from the innovation team and will require less training and orientation when being deployed.

Citizen Engagement
The program leveraged twitter and an online platform to crowdsource ideas from interested citizens. Both platforms have been relatively active and have received a great deal of attention. These platforms provide a base of citizen (or “user”) input towards specific ideas to improve governance. These platforms also open the innovation fellowship process to the public.

TIP: Early deployment of a citizen engagement platform or initiative is needed for it to take effect during the initial assessment and project design, rather than just in the testing stages.
Failing can be good

The innovation program employed an iterative and agile approach during the program period: projects were divided into phases and rapidly tested out. This strategy allows teams to uncover where the “failures” in the designed tool lie and quickly correct them.

TIP: Rolling out the project in modular components to run rapid testing helps to isolate core functions and makes it easier to identify and fix problem areas. This iterative approach should be encouraged early in the process and should be tested against user feedback.
Overview

The Entrepreneurs-in-Residence program recruits entrepreneurs and innovators to partner with talented internal government staff to work on solutions to challenges in health innovation. The program’s goal is to “deliver transformational change by combining the best internal and external talent applying the principles of lean engineering and rapidly testing, validating and scaling new approaches”. The engagement lasts for six months and is supported by federal policy as a component of the Obama Administration’s Strategy for American Innovation.

The U.S. Food and Drug Administration’s (FDA’s) first round of EIR lasted from October 2011 - April 2012 and focused on reviewing policies, business processes and tools helpful in bringing innovative and safe new products to the U.S. market. Another round of the program was launched in October 2012. The current program, which will last until April 2013 and has recruited new fellows, is focusing on the following challenges:

- Streamlining clinical trials;
- Streamlining FDA approval to reimbursement;
- Striking the right balance between pre- and post-market requirements.

The U.S. Citizenship and Immigration Services (USCIS) program began in April 2012, and delivered its first round of deliverables in November 2012. Rather than launching a second round and hosting new fellows, the initial group has extended its contract and is now expanding its focus, launching a series of regional engagements with the entrepreneurial community. These efforts have primarily focused, and will continue to focus, on the following:

- Assessment of current policies, practices, and training across a range of existing nonimmigrant visa categories used by entrepreneurs;
- Identification of existing immigrant visa pathways that might allow foreign entrepreneurs to start a business and seek permanent US residency;
- Identification of existing pathways or develop pathways that are clear, consistent and aligned with business realities.
Program Specifics

Timelines:
- Phase 1: 6-month cyclical engagement.
- Phase 2: Opportunity for 6-month contract extension.

Stakeholders:

Host Organization
- Center for Devices and Radiological Health (CDRH) at the U.S. Food and Drug Administration (FDA).
- U.S. Citizenship and Immigration Services (USCIS)

Backers
- White House Office of Science and Technology Policy

Team Organization:
- **Tactical team:** The core programs team charged with identifying solutions to the challenges defined by the host organization. Essentially, these are the external innovators (FDA/USCIS).
- **Strategic team:** An advisory team that serves as a sounding board for the tactical team members. Strategic team members have a very limited role (expected time commitment is only 3-hours per month).<sup>2</sup>
- **Host team:** The internal staff assigned to work with the tactical team to develop solutions.

FDA
- 20 external experts were recruited from industries within academia, venture capital and research. 15 of these were housed on the strategic team while 5 served on the tactical team.<sup>3</sup>
- The team composition was restructured for the second round of the fellowship, with 10 FDA employees being added to the program. This may indicate that more internal support was needed for the external fellows.

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<sup>3</sup> [http://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDRH/CDRHInnovation/InnovationPathway/ucm286138.htm](http://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDRH/CDRHInnovation/InnovationPathway/ucm286138.htm)
USCIS

- The tactical team is comprised of 16 members, including both startup experts from the private sector (external innovators) and immigration experts from USCIS (internal change agents).

Program Takeaways

Organize a ‘virtual lean startup team.’

The FDA’s EIR program grouped 3 to 5 people at Human and Health Services (HHS) who had ideas on how to improve government (ideas which they likely began thinking about long before the program began). In general, such problem solvers have more contextual knowledge and experience with the problem at hand, and understand why changes weren’t made before. If given the support they need, these are the people who can make change happen.⁴

IDEA: Talent-seeking is an important activity that must occur early on to identify these change agents and support them. These individuals can be drawn out through polling strategies that assess the capacity, talent, and motivation of in-house staff. Ideally, this would be done in tandem with recruitment of the external innovation fellows to allow for personality “matchmaking.”

 Employ a “lean startup” model.

The FDA’s EIR program used a lean startup model that engages ‘customers’ (i.e. citizens and stakeholders) early and rapidly prototypes solutions in collaboration with them. This allows the team to understand what customers want and develop a solution that delivers on this desire.

IDEA: Training is important to ensure that in-house employees or hosts are familiar with this operating model and are prepped to begin working with the entrepreneurs. While the innovation fellows will likely have a grasp on this model, it may be necessary to include them in the training so that all players are aligned on workflow and process.

Handle workplace culture conflicts effectively.
EIR found that entrepreneurial, creative types are often times frustrated by bureaucracy, inefficiencies in government and slow response times. Employing a lean start-up working model can help circumvent these frustrations, rapidly iterating solutions with ‘customers’ so that the process occurs over a period of days or weeks rather than months. Also, pairing fellows with complementary host innovators whose working styles closely match theirs is important in creating an effective team.

IDEA: Recruit external innovation fellows with an eye to bringing in backgrounds that complement those of other fellows and their host partners. In addition to competencies and experience, personality indicators should be considered when selecting the fellows.

Secure high-level commitment.
Direction and commitment must start from the top. In the case of the FDA program, President Obama acted as the champion for open innovation in government and public-private partnerships in driving it. Setting a “fertile ground” for innovation requires high-level commitment and understanding to accommodate an innovation team.

Because the EIR initiative was born out of high-level leadership and policy, it enjoyed greater room to work and quicker response times. Leadership structures must be configured early in the planning phase to streamline the process once the fellowship takes effect. A mutual understanding must be reached about leadership’s role in providing “air cover” or space for innovation teams and providing high-level responses to adhere to the rapid prototyping model.

IDEA: Seeking out the high-level leadership and “gate-keeper” actors to garner backing and support is a critical early step to ensure that there will be no blockages in information or approval processes.
3: CODE4KENYA

Overview

Code4Kenya (Code4Kenya) was an experiment engagement with organizations working in media development in Africa that sought to identify opportunities for innovation with open data and identify technology solutions. The goal was to open data for public consumption and analysis that would enable engagement around critical public issues. The first phase included the research, analysis, building and testing of solutions: developing a model to be used in a broader two-year Incubator effort. The longer effort would be endorsed and supported by the high levels of government and led by public mobilization agents with support from the technology community.

Timelines:

- Phase 1: 6-months period to experiment and test the model.
  - Outcomes:
    - Develop 1 app/service/platform per team;
    - Develop use cases, recommendations, toolkits, and critical analysis of process;
    - Create an advisory board to formalize incubation processes.
- Phase 2: 2-years period of incubation.

Engagement Milestones

Month 1:
- Select fellows, developers, host organizations, and the incubation facility.
- Educate potential host organizations and community about the program.

Months 2-6:
- Conduct weekly meetings in which:
  - Fellows note exchange and feedback on progress with the host organization and thematic expert engagement;
  - Developers share progress;
  - Fellows, developers, and the project manager discuss individual projects and the Code4Kenya program overall.

Stakeholders:
Target Institutions
- Kenya ICT Board
- iLabAfrica
- iHub Research

Backers
- Africa Media Initiative, Digital Projects Division
- World Bank, Innovation Fund and Governance Partnership Facility

Team Organization:
- **Fellow team**: 4 fellows were embedded in 1 civil society organization and 3 media organizations. Fellows worked to innovate and develop the programmatic elements with the in-house hosts.
- **Developer team**: 4 developers
- **Project manager**: The project manager provided oversight and support to the rest of the team.

Program Takeaways

Create a wide-reaching presence.
Code4Kenya’s model spanned across multiple organizations: the program embedded a fellow in each organization while maintaining an external developer team. This is a more cost effective model than those that fund disparate teams within each organization, and should be explored as a way to scale efforts for innovation across a sub-sector or industry.

Build a multi-disciplinary fellow team.
Because the projects spanned different thematic areas, a diverse set of fellows with different specializations and skill sets was recruited. This allowed for successful cross-pollination of ideas between different organizations and the different specializations.

IDEA: Recruit fellows from different thematic backgrounds and sectors, including academics, entrepreneurs, non-profit professionals, etc.

Use external developers.
Housing developers externally succeeded in insulating the development team from host organization pressure to develop tools beyond the scope of the work. This was helpful for avoiding work overload for the Code4Kenya team and subsequent shortcomings in meeting timelines.

**IDEA:** While Code for America’s model employs a model wherein innovators are encouraged to pursue endeavors beyond the initial terms of reference, considerations should be given for where to draw boundaries and how to define how much is too much.

**Work around bureaucratic constraints.**

Although commitment by host organizations was assumed to be high during Code4Kenya’s inception, in actuality it ended up falling short. In-kind contributions and additional resources from the host organizations were delayed by internal approval processes. This affected project timelines (especially given the brevity of the engagement). In one case, an intern was needed to begin conducting groundwork for a data desk, but the process for recruitment and hiring took two months.

**IDEA:** Encourage host organizations to expedite resource requests for the program, or modify program timelines to account for delays in resource mobilization. The Code4Kenya experience suggests that a future fellowship program to be at least 9 months to allow enough time for engagement with host organization and thematic experts.

**Work within capacity limits.**

The team members’ technical capacity presented challenges to successful management and implementation of the program design. Assumptions about the technical skills of team members were made during the design-thinking process, resulting in some desired solutions being outside the capacity of the team to deliver. As a result, deadlines were not met. This also resulted in an inequitable distribution of work, as team members with the desired skills were required to carry out the brunt of the work.

**IDEA:** Insulate highly-skilled innovators from playing the role of software developers (if these two functions are separate in the fellowship program design).
Boost flagging fellow commitment.
Towards the end of the engagement, fellows became distracted from the program as they turned their focus towards planning for their next source of income.

IDEA: Offering an incentive such as severance pay might help to reduce distraction from the program.

Set appropriate application metrics.
Ideally, the application created during a fellowship will be useful to other organizations and stakeholders. However, Code4Kenya had no way to assess whether or not this was true of their projects. For example, user traffic might be an appropriate metric in one application of the tool, but this might not be the case in another application.

IDEA: Metrics for the application should be devised to measure its value-added to other tools in other partner organizations.
Overview

Code for America (CfA) launched its first class of fellows in 2011, and has expanded its offerings include several other programs, such as an incubator for civic technology startups, a volunteer brigade, and a civic peer network. The program has worked with over 20 cities, and is on its third class of fellows as of this writing (2013). The program works almost exclusively with local governments such as cities and counties.

Program Schedule

January - March: Cities application period.
January - July: Fellows application period.
April: City applications reviewed.
May: CfA meets with city representatives to confirm support and funding.
June: City finalists announced.
October: Cities and fellows announced.
January-February: CfA fellowship begins with month-long training.
February - mid-March: Fellows begin residency in host cities.
Mid-March - August: Development and iteration occur.
September - October: Fellows Team Product formal Launch, CfA Yearly Conference.
November: Hand-off and maintenance occur.

Organizational Structure

Code for America supports several different initiatives and employs a staff that has grown rapidly to accommodate the increasing demand for the program’s work. While the bulk of this case study will focus on the fellowship, a breakdown of the different CfA initiatives follows.

Initiatives:

- Civic start-up incubator: Launched in 2012, the incubator hosts and provides resources and connections for seven civic technology oriented start-ups.
• **Brigade:** Launched in 2012, Brigade is a volunteer network of meet-up groups and forums interested in using technology to improve government and governance.

• **Peer network:** A network of local government actors sharing information and best practices.

• **Others:** In 2013, Code for America will be launching Code for All, an initiative aimed at providing a network of resources for innovation fellowships around the world. They also maintain the Code for America Commons, a catalogue of civic technology.

**Positions**

The current roster of staff at Code for America is perhaps less important to a new innovation fellowship than those the organization launched with, which are indicated below.

• **Executive Director:** Set the overall organizational direction; secured foundation support, partnerships, voice.

• **Director of Strategy and Marketing:** Forged media relationships; handled communications, branding, campaigns; advised on fellows projects, technology, partnerships.

• **Director of Finance:** Maintained company budgets, books and human resources. This started out as a part-time position, as some of the HR administration was outsourced.

• **Director of Government Partnerships:** Recruited government partners; helped connect fellows with hosts in government and provided.

• **Fundraising & Strategy Consultant:** Assisted the Executive Director in fundraising; assisted the Director of Strategy in establishing communications plan.

• **Chief Technology Officer:** Managed the organization’s technology; helped coordinate and advise on both technical and process aspects of fellow’s projects.

• **CfA Institute Director (Consultant):** Planned the institute’s content and speaker series.

Additionally, Code for America maintained two boards, which were both very active:

• **Board of Advisors:** The board of advisors was active in the recruiting, evaluating, advising and mentoring of fellows.

• **Board of Directors:** The board of advisors was active in supporting the organization directly and assisting with fundraising and partnerships.
Notably, all above positions were involved in recruiting, evaluating and managing the fellows and the fellowship.

**Early Lessons Learned**

Many of the challenges Code for America faced in year one were not unique—contracting issues, unclear or unset processes and similar are widespread among new organizations. That said, the unique nature of working with a cohort of fellows and government partners did entail some challenges.

**Contracting**

Code for America’s first year provided ample lessons in the difficulty of contracting with governments, both local and national. One city’s funding source fell through just prior to the start of the fellowship. In two other cases, contracts signed by the governments were not fully executed due to political environments that shifted after the fellowship began. Taken together, these anecdotes illustrate the difficulty of securing willing government partners, and also for the need to have well-articulated mitigation strategies. Code for America was able to adapt and launch one of the projects without the city’s support.

**Team dynamics**

One challenge Code for America encountered in the first year was its unclear team conflict resolution and reporting structure. Teams were encouraged to solve their issues internally, and this was largely a successful strategy. However, in some cases it was unclear how to elevate issues that arose within project teams and required mediation. In some cases, this was handled by the CTO, in others by the Director of Communications; there was no pre-ordained final voice on internal conflicts.

**The Fellowship Experience**

One of the successes of Code for America’s first year was building a cohesive cohort that was largely able to adapt to unwieldy government processes and maintain good humor and productivity throughout. Two fellows have publicly described their first year experiences:

Erik Michaels-Ober

“For as long as I can remember, I’ve been interested in addressing the problems of government, but I couldn’t stand the idea of being a cog in the bureaucracy. Code for America provided a safe haven to work on interesting social problems without capitulating to the structure of the system.

I strongly recommend the Fellowship to every idealistic technologist or designer that I meet.”
Michael Bernstein

“The experience was mostly positive for me. Working within a large group of extremely talented and committed people (the Fellows and CfA staff) was exhilarating, I learned a lot (though not necessarily what I expected to), and given the opportunity I definitely would do it again (though I would do some things differently). I would recommend applying for the program to anyone who is considering it.

As for the parts of the experience that weren’t positive for me, I must stress that as the only Fellow who didn’t complete the 2011 program, as the oldest Fellow that year by a rather wide margin, and working as part of the only team that was slammed with a change-of-regime in their host city and then shifted to work on another non-profit being incubated inside CfA, my experience was far from typical.”

source: Quora

Compiled Case Notes

These notes also appear in the relevant sections of the report, but are compiled here for ease of reference.

Case Note: Adopta

One of the most successful applications developed during Code for America’s first year was Adopta. Following an intense snowstorm that pummeled Boston and a discussion of the resulting problems to city infrastructure, one of the fellows developed a simple platform that allowed citizens to volunteer to shovel out (“adopt”) fire hydrants near their homes. Despite being developed as an opportunistic side project, Adopta was the most widely shared and extended application developed that year.

The Adopta Case note appears in the Building Successful Government Partnerships Section.

Case Note: Friday Hack Days

Every Friday for the first few months of Code for America, fellows were encouraged in the morning to pitch ideas they wanted to help build, form teams and work on the project. These projects were both whimsical and important, encompassing everything from a code push announcement application that allows fellows to associate a sound clip to play over the office speakers whenever they pushed a change to one of the CfA code repos, to a 311 Dashboard that
provided a new way to visualize complaints; this project, like many hack-day projects, became a full-fledged CfA project as the fellowship wore on.

The Hack Days Case note appears in the Planning a Fellowship Section.
Government Engagement and State Uptake

TECHNOLOGY TRANSFER AND THE STATE: CASE STUDIES FROM HAITI

About

While they are not fellowship programs, much can be learned from precedent cases on technology transfer in nation-states with limited capacity. A study conducted on the ability of state institutions to use, adopt, and adapt new information and communication technologies provides lessons on sustainable technology development in host countries. This study focused in particular on ICTs that were developed in Haiti during the emergency response to the 2010 earthquake. Three applications/platforms were used as case studies:

1. Noula, a privately and endogenously developed crisis mapping application;
2. WASH/SISKLORR, a platform developed exogenously by and for the relief effort to streamline data collection; and
3. OpenStreetMap, an open source map application co-developed (both exo- and endogenously) for public use.

Cases and Stakeholders

Case 1:
Noula: Ushahidi, Direction de la Protection Civile, Government of Haiti.

Case 2:

Case 3:
Humanitarian OpenStreetMap Team: Comite OpenStreetMap d’Haiti (C-OSM.HA), USAID, Ministere des Travaux Publiques.
Challenges and Lessons Learned

Avoid path dependencies and promote knowledge transfer.
Technologies that were developed without drawing on institutional knowledge were less likely to be adopted by state entities. Certain agencies were reluctant to adopt new technologies due to unfamiliarity with new technology. In one case, a data collection and monitoring system for water and sanitation was developed in tandem with a Haitian technologist working for the relief effort under the United Nations. After the relief effort, the staff member was then transferred to work for the state agency where the technology was being deployed. This helped smooth the knowledge transfer for operationalizing the technology.

TIP: Co-designing will help to increase ownership of the tool by the host organization from a programmatic standpoint. Including internal government technology agencies, particularly in the build-out phase, will help with the long-term upkeep, maintenance, and possible adaptation of the tool. To reinforce this ownership, secure dedication and commitment of resources (even if they are in-kind) from the host organization. Increasing the investment made by the host organization into the platform/program also increases the host’s stake in the outcome and the likelihood that they will follow-through with operationalizing the tool and scaling it. Co-designing also will increase the in-house knowledge of the purpose of the tool and how to operationalize and use it.

Encourage adaptability.
Technologies will need to evolve with demand and internal process changes. Another goal of technology introduction is that there will be subsequent adaptations or spin-off applications that could prove useful in other governmental operations. For instance, the SIS-KIORR system was in the process of being repurposed to streamline data collection for another federal level department. However, applications or platforms developed without an in-house developer who can alter the structural components of the technology will render the state agency dependent on external parties for adaptations. In the worse-case scenario, the technology will cease to be relevant or functional.

TIP: For effective technology transfer, make sure that there is an in-house developer who can alter source code to make the technology adaptable to changes in conditions, demand, and circumstances. Training should be a component of the fellowship program so the tool does not become static or render the host organization dependent on external consultants. In other cases, consideration of hiring an in-house developer should be encouraged.
**Promote accountability.**

Certain applications (crisis mapping) were not institutionalized by state agencies because of the accountability that the technology would bring. Many state agencies are stretched thin to deliver their core services, and many operate without enough resources to deliver these services. Incorporating a technology that would demonstrate the state’s difficulty in delivering services or acting on the information being surfaced and/or publicized, would make the agency accountable. Thus, many agencies are reluctant to adopt applications that would highlight their operational inefficiencies.

**TIP:** A better approach might be to focus on a program that would allow the state to streamline their processes and enhance their efficiency. By focusing on programmatic areas where support and enthusiasm from the partner organization already exists, there will be greater momentum to create change if these interests align.

**Undertake iteration.**

Testing an application for a short-term program will help to work out kinks with the application and maximize its integration with internal state operations and procedures. Such was the case for Noula, which tested its crisis mapping hotline with the police department to expedite emergency response to criminal acts during a festival weekend. This was found to be successful in reducing street violence though the team was planning for a longer-term engagement.

**TIP:** Short-term engagements work best as both a test for the tool itself and to introduce the benefits of technology to the host organization. As hosts begin to see the utility in the application, they are more likely to accept it.

**Ensure scalability.**

Technologies work best when developed at the federal level, particularly in the Caribbean, where resources are concentrated primarily in cities. Scaling a technology becomes difficult when it must be operationalized at regional or local levels, and there is less capacity and fewer resources to manage technology.

**TIP:** Designing a program with this in mind is important when thinking about how the tool will be used at local levels and how to bridge the gap in capacity.
Effectively use staff capacity.
Government agencies are often already stretched thin to perform their basic functions and deliver core services. Thus, they might not have the capacity necessary to divert critical time and resources from core operations to the research and development of a new tool. Dedicated even one staff member might be a significant strain on existing capacity.

TIP: Consideration should be given in advance for how the host will mitigate this. Perhaps this requires an extra intern while the program is being launched. Education should also be provided on the long-term benefits of a short-term investment in the form of time, human, or other non-monetary resources.