Case Study: Code for America

michiganbenefits.org

Summary

Cylinder Digital partnered with [Code for America](#) to help people in Michigan simultaneously enroll in many government assistance programs for the first time.

The required information to apply for both Food Stamps (also known as [SNAP](#)) and [Medicaid](#) overlap considerably, so we designed and built a web application to help people sign up for both at once.
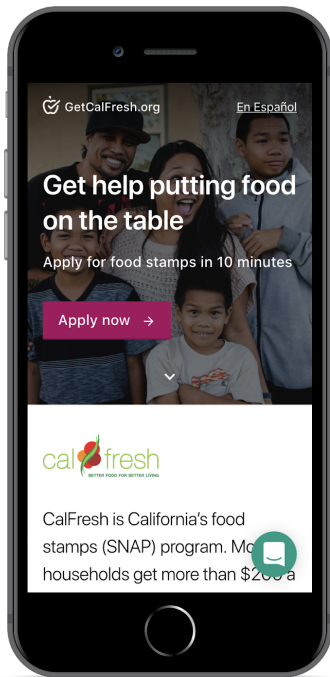
- The existing legacy web signup form took >45 minutes to fill out for SNAP.
- Our first webapp version took people about 20 minutes to complete for SNAP.
- People using our second iteration signed up for either SNAP or Medicaid in 6.5 minutes.

By the time Cylinder finished, visitors to the [Michigan office of Health and Human Services (MDHHS)](#) chose to line up behind our single iPad to use our app instead of the legacy software built by Deloitte, which was available on dozens of computers in the lobby.

You can read more press here:

- http://www.crainsdetroit.com/article/20180311/news/654891/civilla-code-for-america-team-up-to-improve-public-benefits
- https://medium.com/civilla/project-re-form-one-applications-journey-so-far-2e3a6e96e262
- https://drivenxdesign.com/NOW/project.asp?ID=16435&Category_ID=9131

Code for America

We partnered with Code for America because they have been working to help people get access to government benefits, which aligns with our company values. From their mission statement, "Code for America uses the principles and practices of the digital age to improve how government serves the American public, and how the public improves government."

For several years, Code for America has been helping California residents with food security by helping people sign up for Food Stamps, a program known nationally as SNAP (Supplemental Nutritional Access Program) and called CalFresh in California.

Code for America has built a digital signup assistance web application called GetCalFresh to make signing up easier and faster using modern web best practices like mobile-responsive design, shorter forms, and clearer language. The application supplements the existing web form by simplifying the experience and bringing the modern web to government assistance signup forms.

The existing legacy web signup form is difficult to use on a mobile device, asks way too many questions, and document upload from a mobile device is difficult. As a result, California has one of the lowest SNAP participation rates, which ends up hurting vulnerable people and reducing the impact of the taxpayer-funded assistance program.

The Multi-Benefits Hypothesis

Code for America sought to advance the ideas behind GetCalFresh and test a new hypothesis:

> *If the the required information for applying to two government assistance programs is very similar, perhaps we can ask one set of questions and sign people up for two (or more) assistance programs at once.*

Code for America looked at this and set a big goal:

> Imagine people filling out a shorter (but still lengthy) form to get SNAP and seeing a button saying "Click here to also get Medicaid."

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A modern government uses human-centered technology to integrate the many health and human services which help Americans in times of need. In this vision, everyone motivated and eligible for benefits should be able to successfully complete the process with the minimum amount of burden and delay possible — even when they are seeking more than one benefit.

The State of Michigan saw the success of GetCalFresh and was eager to test something similar for their own citizens. In Michigan, the sign-up information required for an application to SNAP and Medicaid was about 90% similar, so we were in the right place to test the hypothesis.

> The Topline Goal: When applying for benefits, people need to get benefits as quickly as possible, so they can avoid foregoing food or medicine, depleting savings or going into debt.

Who We Serve

Residents that use SNAP and Medicaid in Michigan represent a huge cross-section of American life that experience significant challenge. They include seniors and the infirm, people that have just experienced the shock of job loss or family trauma, as well as working adults who need help supporting young families.

As a group though, these Americans and immigrants earn less half of the median income in their communities. Their incomes are volatile. Among those with a bank account, their median balance is $5 at the moment they apply for benefits. A third of SNAP participants nationwide are employed and 75% of households include at least one child. 35-40% of households include at least one person that is disabled.

1.47M Michigan residents received SNAP at some point in 2016 — or 1 in 7 residents. Many of them are among the 2.5M Michigan residents are enrolled in Medicaid or CHIP. Every month, around 900,000 unique Michigan residents visit MiBridges, the official Michigan Department of Health and Human Services (MDHHS) citizen portal.

> *"I have no transportation or driver's license so for me to be able to do it right here <points to phone> is great" - Michigan Resident*
>
> *"It's hard with two kids, getting on the bus and bringing them to the office. A lot of times they will interrupt. I could do this at home whenever my kids are sleeping" - Michigan Resident*

Michigan residents that we have served, interviewed, and observed in MDHHS offices are disproportionately women. Most households include at least one dependent. About a third of households applying for SNAP include at least one person currently working.

Existing Technology

The existing application for signing people up for benefits is MIbridges. When we started work in late summer 2017, the site was:

- Not mobile responsive (read: optimized for use on mobile devices
- Difficult to upload documents without a desktop computer
- Very long in number of questions and pages

75,000 unique Michigan residents visit the state website for SNAP & Medicaid every month. More than 25,000 arrive via Google searches from mobile phone.

The current service falls short of being able to reliably provide self-service to Michigan residents. Trips to the MDHHS office are still the only reliable way to meet many needs residents have.

> *"When applying for benefits, I need to get things done on my own time and on my own computer, so I don't have to manage getting childcare or missing work in order to visit the office.*

We heard anecdotal reports of applicants regularly taking over 45 minutes to sign up at one Michigan HHS office, usually with several return visits to submit the correct documentation. The residents of Flint (our pilot location) typically come into the office to fill out the web application because they find it confusing and have a lot of questions for the lobby ambassadors, extremely helpful guides who assist applicants in the office.

It's also very expensive technology- as of March 13, 2018, the total cost of the legacy application was $168 million, funded by federal and state taxpayers, so we worked to offer a solution resulting in a significant savings for the taxpayer.
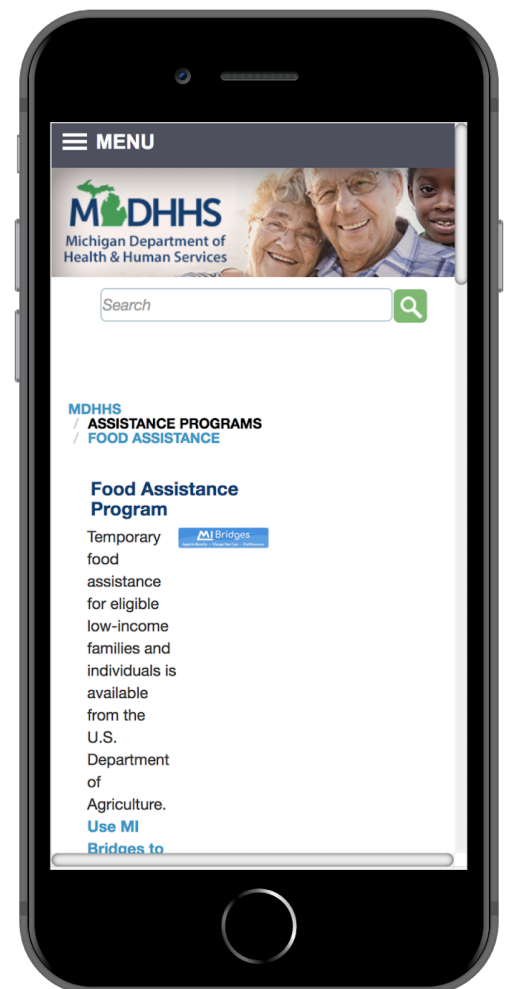
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The work started with Code for America developing a great working partnership with the MDHHS based on a demonstration application. Officially, they were acting as [Community Partner of the Michigan Department of Health and Human Services](#).

Next, our Detroit-based design partners [Civilla](#) conducted extensive research in the Flint office, observing and interviewing people as they applied for benefits. Using this rich research and GetCalFresh as a template, we built the first version of the web application.

> By focusing on the applicant's job-to-be done, aggressively prioritizing, iterating quickly, and continuously deploying working software, we were able to process our first SNAP applicant 4 weeks after starting the project.
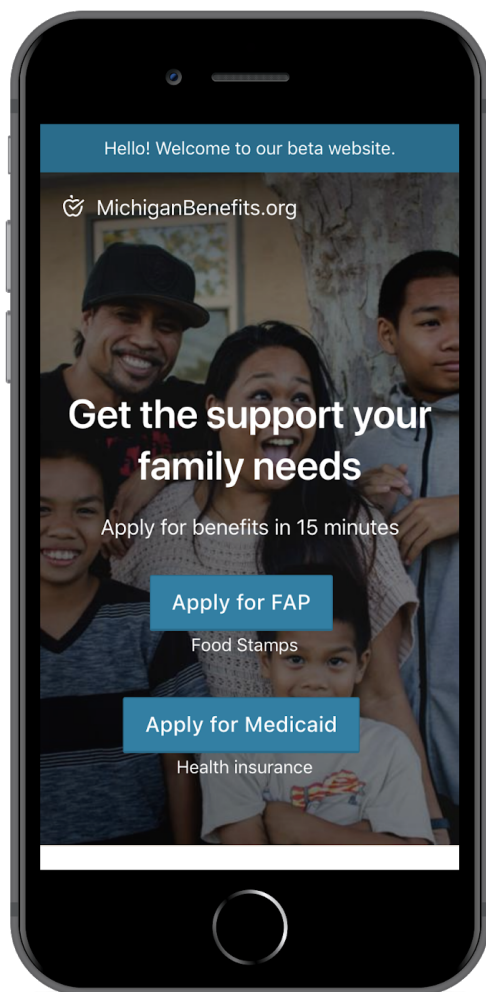
Our first version only covered SNAP, in an effort to ship something which works and iterate toward multiple benefits. **Our mobile-responsive application form had far fewer questions than the legacy application and took about 20 minutes to complete.** To be sure, this is an improvement but we still felt there was room to improve.

We also worked hard to reduce the number of web form questions, based on the premise the more questions a web form has, the more likely people will not complete a signup process. When we began implementing the Medicaid flow, we redesigned the application to ask a series of Yes/No questions, using the answers to eliminate unnecessary form fields. [You can read more about this work in our article](#).

This new Medicaid flow of almost the same questions got the application process down to about 6 minutes. This, coupled with ease of use on a tablet or mobile device, meant we could help more people get access to benefits and help them retain their dignity.

Cylinder's Role

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Our role in this project was to augment product design and take on all of the engineering as Code for America slowly hired full-time teammates to take over. We took the amazing primary service design research from Civilla conducted in the Flint office and turned those into actionable changes for a better application to insure we were addressing user needs directly.

Engineering

We build out the first version of the website are using Ruby on Rails. Technologically, Code for America believes in using well-worn or "boring" technology to minimize risk and we heartily agreed. Cylinder worked to keep the technology stack a simple as possible so that anybody could be on-boarded easily.

To reduce the cost of implementation, build credibility, and minimize the cost of change, the code was open-sourced (check it out here!).

In doing so we were able to ship the first the first SNAP application via fax or email to the Michigan Department of Health and Human Services within four weeks of initiating the project. This was an exciting time for the team where we felt we were directly benefiting people in Michigan.

Design

The most interesting piece we worked on was a redesign of the flow to reduce application time down from 30 to 6 minutes. We did that using an information design exercise where we grouped questions by situation (e.g. "this block of questions is for someone who is pregnant"), then frontloaded Yes/No questions to determine if those blocks should be asked (e.g. "Have you or anyone in your home recently been pregnant?"). If "no", we could cut out a big chunk of irrelevant questions and speed up the whole process. As a result, application time dropped, saving users over 20 minutes on average to complete the application.

To read more, check out teammate Rachel Cope's awesome deep dive into the design work for this project.

Outcomes

- By the time we finished, visitors to the Michigan office of Health and Human Services lined up to use our application instead of the legacy application built by Deloitte.
- Anecdotally, we heard a lot of high-fiving and compliments "This is like Siri!".

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- We shaped the future path of benefits enrollment systems in Michigan.
- [Civilla won a design award](#).
- The multi-benefits project is expanding to 5 new pilot states in 2018, [supported by the Chan-Zuckerberg Foundation](#).

Notes and Acknowledgements

This is a radical simplification of a lot of very hard work on the part of Code for America, Civilla, and the MDHHS in the name of readability and spreading the word. For more detail, send us an email at hello@cylinder.work.

Deep thanks and appreciate go out to Cylinder teammates who did all the hard work ([Joel](#), [Zee](#), [Jessie](#), [Rachel](#)) and those who provided helpful edits and feedback on this document ([Alan](#), [Rachel](#), [Rudhir](#), [Joel](#)).

You can read more about our work flow and values [here in The Cylinder Way](#).

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About Cylinder Digital

How We Can Help You

We design and build custom web and mobile applications to help businesses achieve their goals. If an off-the-shelf solution fits your needs, we will strongly recommend it over custom software.

1. We start by understanding the problem through structured research.
2. Then, we quickly build lightweight prototypes and test them with real people.
3. Finally, we build on the best prototype and continuously refine it through user feedback and research to ensure a successful solution.

We will communicate frequently and clearly. We will adjust our process to fit your business and context. We will help transition the solution to full-time staff once implemented. We address and resolve ambiguity. We do our best to make our time together hassle- and headache-free.

We will make you look good in front of your boss and let you take the credit.

The Cylinder System of Software Design and Development

Over the years, we have developed a specific process for building software which keeps costs down, allows teams to move quickly, and build the most useful software for our users.

We do this by focusing on high-level planning for the short term, short feedback loops, automating best practices, high-quality communication, and continuous improvement of our process.

Our Way is a form of [agile software development](), drawing from [Kanban]() and [The Agile Manifesto]().

It is the best way we know to build great products for users and have happy clients.

Guiding Principles of Cylinder Development

- New features start from conversations with users
- Everyone works toward a few big weekly goals set by the Product Owner
- Focus on clear, high-level, short-term plans
- Continuous daily planning and reprioritization

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- Continuous communication and problem-solving
- Everyone owns the project management process, but one person leads it.
- Simple, low-feature project management tools like [Trello](#) or yellow stickies

Our Firm

Company Values

- We work to live, not the other way around. Friends and Family First.
- We only work on things we are proud to put our name on.
- Organizational change should also be prototyped - propose small changes, try things out, and evaluate how it works as a group.
- Start with the end in mind. Plan toward that goal.
- Software is a human-centric process. People build software for other people to use.
- Communication is the cause of, and solution to, all of our work problems.
- Invest in business relationships, which take a long time to build. Trust is slowly built and easily lost.
- An inclusive team builds better software.
- Shipped is better than perfect. Deploy every day, all day.
- All of our tools are open-source - we need to contribute back to pay down the debt.
- Start somewhere immediately and iterate frequently
- There are no opinions, only hypotheses in need of testing
- Small teams are better than big teams.
- A few high-level goals are better than lots of detailed plans.
- Implementers should have a lot of autonomy. They are experts.
- Time is precious. We should not spend it commuting to work unless we decide doing so makes the best sense.

Working Norms

- We have a distributed team intentionally. This takes work to get right and it works well for us. Read here for more.
- We keep regular working hours, Monday-Thursday or Friday depending on your personal needs. No weekends, no all-nighters.
- After a fire drill, we should pause and ask what happened and how we can prevent this kind of urgency in the future.
- Our company should reflect the world we want to live in. If your work is disrupted by extreme weather, we support paid time off as you cope. Read more here.