

On Nafundi

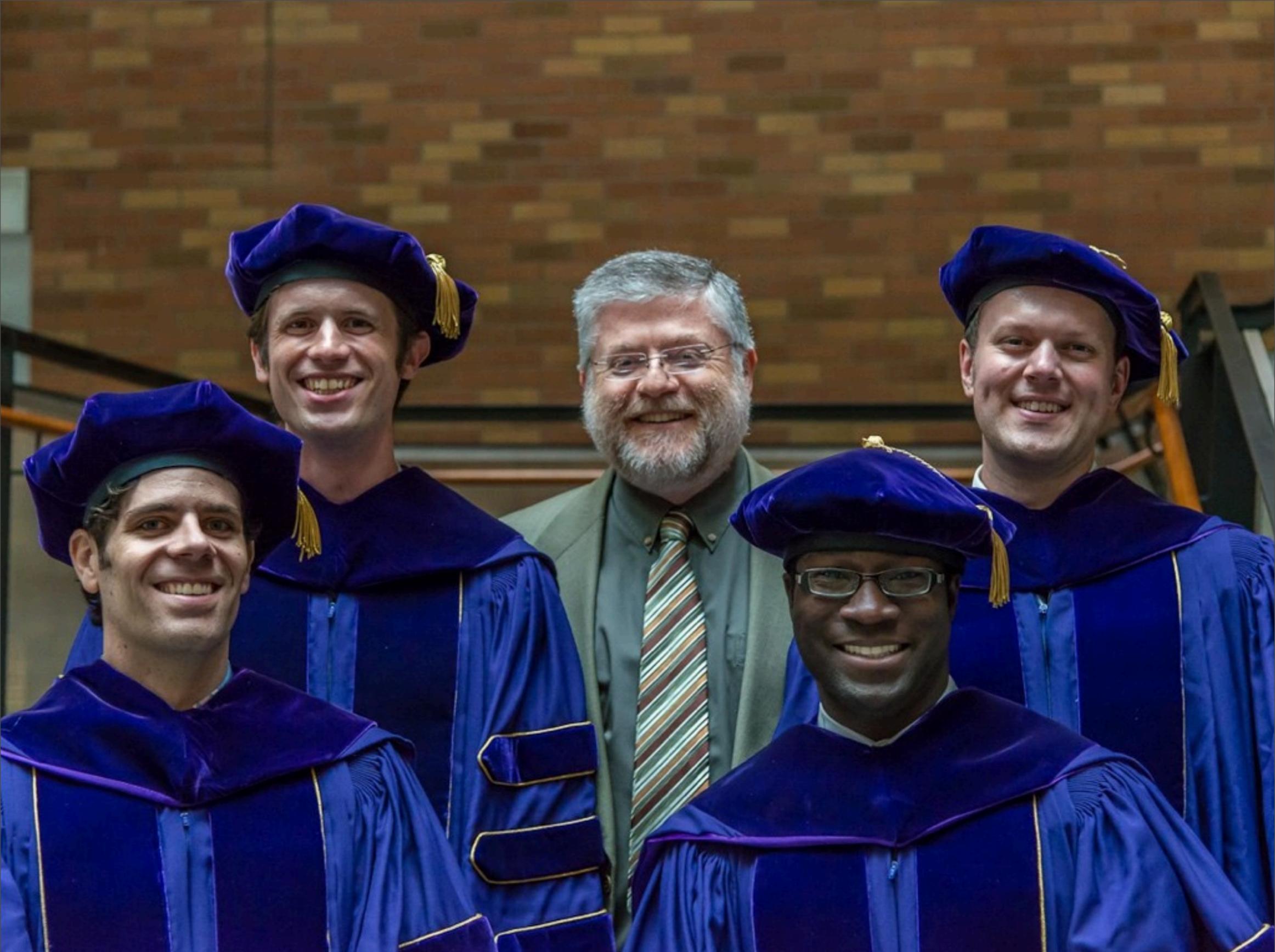
Yaw Anokwa (CEO), Carl Hartung (CTO)

<http://nafundi.com>

Hi, I'm Yaw. Carl isn't here, but this is very much his story as well.

In this talk, I want to talk about how we transitioned our Ph.D. work building software used to help underserved populations into Nafundi, a sustainable software company which pretty much does the same thing.

I have very few slides and I wasn't sure what you guys wanted to hear about so please just ask questions along the way.



Last June, Carl and I finished our PhDs in Computer Science at UW with our advisor, Gaetano Borreillo.

As part of that work, we helped to create Open Data Kit (ODK), a set of tools which replaces paper forms with smartphones and the Internet.

Nafundi really started with Open Data Kit, so let me start this talk there.

ODK replaces paper forms with phones and the Internet

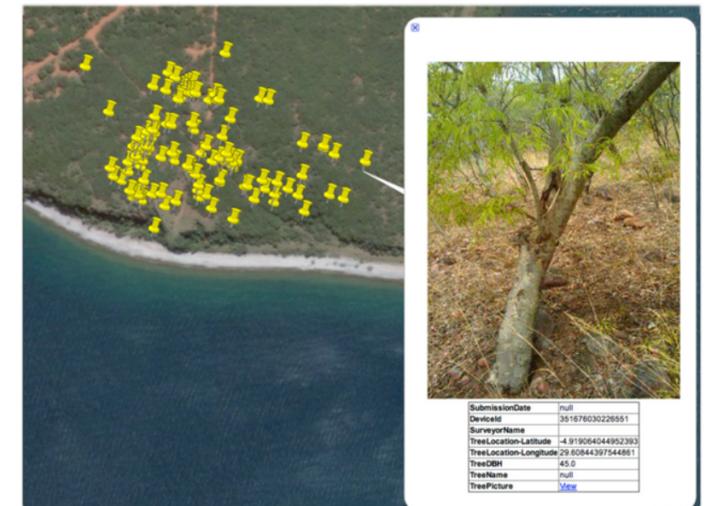
1. Build form

The screenshot shows the ODK form builder interface. The main area displays a form titled 'Untitled Form' with four fields: 'First name' (text input), 'Please record your location' (location input), 'When is your birthday?' (date input), and 'Please take a picture of yourself' (image input). A right-hand sidebar shows the 'Properties' panel for the selected field, including options for 'Data Name', 'Caption Text', 'Language', 'Hint', 'Read Only', 'Required', and 'Kind'. At the bottom, there are buttons for 'Add new' and a list of field types: Text, Numeric, Date, Location, Media, Choose One, and Select Multiple.

2. Collect data

Three screenshots of a smartphone displaying ODK data collection forms. The first screen shows a 'First Name' field with the value 'Jo'. The second screen shows a form titled 'ASK: Child's problems' with checkboxes for 'Cough or difficulty breathing', 'Diarrhea', 'Fever', 'Ear problem', and 'Other/None of the above'. The third screen shows a 'Survey Location' form with a 'Replace Location' button and coordinates: Latitude: N 35°16'21", Longitude: E 0°30'0", Altitude: 2036m, Accuracy: 6.0m.

3. Aggregate results



ODK is a free and open-source platform.

Open Data Kit (ODK) replaces paper forms with smartphone and the Internet. It's great for mobile workers (e.g., community health workers, census takers, forest monitors) who need to collect data quickly, accurately, off-line, and at scale.

ODK provides an out-of-the-box solution for users to:

1. Build a data collection form or survey;
2. Collect the data on a mobile device and send it to a server; and
3. Aggregate the collected data on a server and extract it in useful formats.

Besides collecting text and numbers, ODK can be used to take pictures, capture GPS location, scan barcodes, and even play videos. ODK tools are used by tens of thousands who have collected millions of forms and it's free and open-source platform.

And surprisingly, it's because it's free and open-source that Carl and I were able to create Nafundi.



NAFUNDI

Nafundi is a software company with expertise in building software, like ODK, for environments. Places with unreliable connectivity, very little power, and novice users. Places like the backcountry of Montana, the battlefields of Afghanistan, and the dense canopy of Amazon rainforest.

Half of our business is in providing services around the ODK platform. Everything from custom development, form design, implementation support, and user training for ODK. We are usually brought on as projects start, but we also do a fair amount of work on rescuing failing projects. This is only possible because ODK is free and open source.

The other half is building mobile and server apps that will work well in these environments. We work with everyone from large technology companies that you've definitely heard of to very small NGOs that you've never heard of. And this is possible because our work on ODK serves as marketing and proof of our abilities.

It's two guys and it has only been ten months



<http://www.flickr.com/photos/7721207@N07/4683973064/>

Nafundi is two guys who have only been doing this for 10 months.

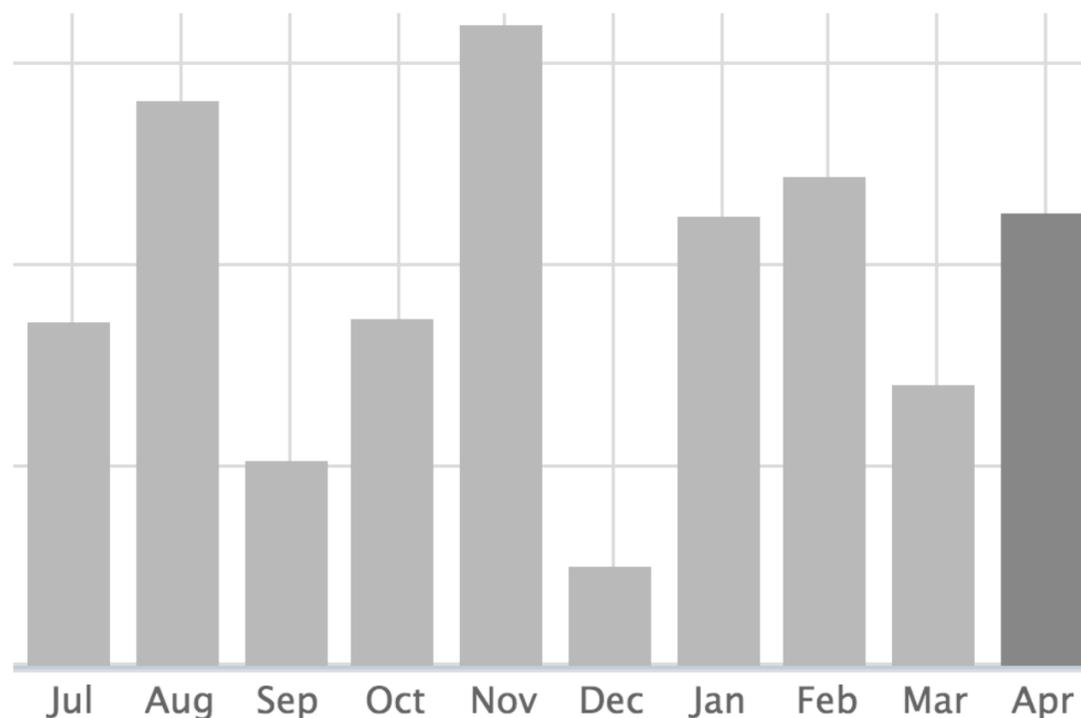
Also, I ran a consulting company through high school and college so I sort of know what I'm doing.

Also, all this is low risk. If it all falls apart, Carl and I have Ph.Ds in computer science. I can sell. He can code. We are very employable.

All that said, we've been profitable since day one and revenue is growing.

We survive the same way other consulting companies

- Manage cash flow obsessively.
- Sell. Sell. Sell. Always be closing deals.
- Show your clients how you provide value.
- Get higher quality clients by charging more.
- Scale by process or by productizing.



Nafundi is a business and it's our livelihood and so we take the business part very seriously. We do pretty much the same things that other consulting companies do.

We manage cash flow obsessively. We sell our time for enough money to live a good life. We make what most software developers in Seattle make and we probably have more fun and work a whole lot less.

How we are different from other software shops

- Software is a creative endeavor and we optimize for our happiness and a flexible lifestyle.
- Our work over the last few years means we don't have to go searching for clients.
- Continuing to participate to an open source community gives us a technical and marketing advantage.
- We have a deep understanding of how the social enterprise industry works.



I counted and I've sent about 2500 email messages on the ODK list. Mitch is my closest competitor. He's sent 1700. And that doesn't count all the talks I've given around the world, and all the blog posts, and YouTube videos and tweets.

How we compete with free and open source

- Marketing. Not everyone knows their problems are solvable with software.
- User experience. From app interfaces to the language we use in docs, we optimize for the client.
- Support. We provide fast and high quality advice and support over phone and email.
- Efficiency. We get everything that needs to be done quickly and on a predictable schedule.

The first is marketing. Clients have problems. Software solves problems. Clients do not know that their problems are sometimes solvable with software. That's a lot of my job. Educating the market place that we exist and that these options exist.

The second is user experience. Every interaction with our company and software is designed to be as user friendly as possible. Our clients don't care about what is novel and the architecture we use. They care about the problems we can solve and we use language that reflects that.

The third is support. If we take a client on, we'll go out of the way to make that client happy. That means we are super fast with support over email and over the phone.

The last is efficiency. We get whatever the client wants to get done done. We do it quickly. We do it predictably. We don't do less and we generally don't do more. We don't do it for free, but that's the tradeoff.

Things that keep Yaw up at night

- ODK, the brand, is a large part of our business that we don't directly control.
- Software development is a commodity. Always on the lookout for markets where we can succeed.
- Scaling by process or by product is hard because we know how to execute our current model very well.
- We tend to say yes more than we say no. So far it has worked, but will it always?

Random bits of advice

- Customer acquisition is not so easy, but open source communities are a great way to bootstrap.
- Programming is a commodity. What you want to do is solve someone's business problems.
- If you don't deal well with uncertainty, starting a company might not be a great life choice.
- Fake it 'till you make it is a reasonably good strategy as long as you can deliver.



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We are hiring! Send your resume to jobs@nafundi.com.