

## **Executive Summary**

Miti Health improves distribution of pharmaceutical medication in Kenya by developing and implementing a technology platform that supports pharmacists (called chemists in Kenya), nurses, and other healthcare providers to manage their business and make better choices as they reorder medication. Supply of pharmaceutical drugs can be difficult in Kenya, as distance to suppliers and intermittent communication pose challenges for the distribution of medication. Furthermore, with an estimated 1/3 of medication in East Africa being sub-standard or counterfeit, uncertainty about quality of medication supply chain creates additional complexity for providers hoping to stock high-quality medication.

Our technology helps providers overcome these barriers to providing high-quality, affordable, and consistent treatment for patients. The system includes the following components:

- (1) Android-based system that tracks sales, manages inventory, and automates reordering to streamline supply chains and optimize business practices
- (2) Technology systems and random spot-checks to monitor and provide information on quality of medication throughout the supply chain

In our first year, with funding from Stanford University, we have built a team of strategists, technologists, and implementers focused on building systems for scale; and we have conducted extensive market research on the technology needs of the health sector in East Africa. Using the information from this market research, we have developed an Android-based application, and we have begun testing it in chemist shops in East Africa. This testing has helped us to identify bugs in the application and focus on the functionality that is most important and relevant for the daily functioning of these small businesses.

Once we have conducted extensive testing and refined the application, we intend to conduct two small-scale pilots. First, with funding from Stanford University, we will pilot the Android-based technology in 15 chemist shops in Nairobi. Second, with funding from the D-Prize, we intend to pilot the cost-recovery sales model that we hope to use at scale, as well as test and refine our quality-control component in partnership with 3-5 small-scale distributors of medication in Kenya. This model will include a monthly subscription service to pay for the tablet, application, stand, data plan, and warranty, as well as ad sales integrated into the application to partially fund management and overhead cost for the organization.

After piloting and refining the technology and business model, we will begin to scale the technology by conducting a concerted 2-year national sales and distribution push in each target country, in which we will attempt to sell the system to all chemist and providers operating in that country, with a target of 25% adopting our system. After five years, we intend to be operating in 15,000 chemist shops and clinics and serve over 200 suppliers in five countries. Our network will serve more than 10 million patients a year and significantly impact both the business practices of the providers we serve and the health outcomes of their patients.

## **Introduction**

### ***The Problem***

In Kenya, a network of over 8,000 private clinics and pharmacies distribute essential medicines like antimalarials and antibiotics throughout the country.<sup>i</sup> These private providers serve as a stopgap for the public system, which faces stockouts of essential medicines 68% of the time.<sup>ii</sup>

Within the private healthcare system, inefficiencies exist that drive up the price of medication for consumers and make distribution difficult. Private providers often feel that they must be physically present to oversee sales and prevent employee theft, constraining entrepreneurs in the number of shops that they can operate.<sup>iii</sup> These providers spend precious time looking up prices and ordering medicine from many different suppliers, with an average provider sourcing from 5 suppliers an estimated 2-3 times per week.<sup>iv</sup>

Furthermore, because providers order from so many different small suppliers, they often lack information to ensure the medicine they sell is high quality. Counterfeits have become an increasingly large problem in Sub-Saharan Africa in recent years, and it is estimated that 20-45% of medicine sold in Sub-Saharan Africa is counterfeit or substandard,<sup>v,vi</sup> resulting in an estimated 700,000 deaths and \$438 million of lost revenue/year.<sup>vii</sup>

### ***The Solution***

We are building an integrated system that includes (1) an Android-based platform with tools for healthcare providers to improve sourcing and distribution efficiency; and (2) regular and random testing of medication at multiple steps in the supply chain to gather and provide information about medication quality.

#### *(a) Android tablet and smartphone-based system*

Our Android-based platform facilitates prescribing medication, managing inventory, and reordering supplies on low-cost smartphones and tablets. Our software was designed to address the primary concerns raised by Kenyan healthcare providers:

- (1) Point-of-sale record keeping to improve oversight and prevent petty theft by employees. Analytics and reports will also improve business management
- (2) Inventory management to both track levels of essential medicines and automate reordering by integrating with reliable suppliers

#### *(b) Supplier quality control*

As we work to improve the efficiency of sourcing and distribution, we will also address the *quality* of the supply chain by both transmitting the real-time results of Miti Health conducted tests to verify that the medication contains sufficient levels of the active ingredient, and by introducing basic technology and processes to the distributor and end chemist. The random drug-quality testing will be performed with the GPHF-Minilab,<sup>viii</sup> which includes all necessary supplies to test 63 different essential medicines in minutes, and is proven and simple to use in the field. We believe that distributors and providers that can verify that they carry high-quality medication would have an advantage over

competitors because patients value access to efficacious medication, as indicated by the wide adoption of SMS systems like Sproxil that validate the authenticity of medicine but only after purchase. Furthermore, as a longer-term strategy, we can offer distributors basic tools on the Miti platform to improve their receiving, storage, and distribution processes.

We are still assessing the best method of implementing this quality-control system, but anticipate that we will test 2-5% of medication that comes from unverified sources. We will then transmit this information through our tablet-based system to providers to help them understand which suppliers are most likely to supply them with high-quality medication and then track medication as it moves through the supply chain.

We plan to scale this system through a network of private providers, generating revenue via a monthly subscription service, ad sales, and a flat fee for suppliers and other interested parties to access the network for streamlined communications.

## **Operational Model**

### ***Business Model***

Miti Health plans to leverage a hybrid business model, incorporating as a nonprofit in the United States and a for-profit in Kenya. Revenues will cover the cost of selling, distributing, and maintaining the Miti Health system, though there will be a significant gap in the first few years in overhead, R&D and management costs, which will be funded through the nonprofit organization in the US. This model will allow us to receive grant support for the first few years of Miti Health operations as we develop and refine our model, while building our East Africa operations into a self-sustaining business.

### ***Revenue***

The three sources of revenue from our platform are:

1. Payment for the tablet, software, locking stand, setup and support, and data with a 2-year contract. Although we plan to experiment with different pricing levels, market research indicates that providers would be willing to pay as much as \$25/month for our system, generating \$600 in revenue over two years for Miti Health against \$400 in unit costs. We anticipate that our unit costs will decrease over time as tablets become less expensive and our organization becomes more efficient. We are currently in conversations with Kiva to have them finance this up-front cost and have providers repay loans directly to them, which will reduce the financial risk we carry.
2. Banner ad sales to providers placed strategically throughout the application. This is a common method of generating revenue for health technology companies in the US, and we have been encouraged by the success of Practice Fusion's free, ad-supported electronic medical record system.<sup>ix</sup> We think there is significant potential for Miti Health to generate revenue from advertising, and strategic partnerships with IBM Research and other ad-sale focused companies in East Africa would allow us to do this cost-effectively.

3. Flat fees to suppliers and distributors to integrate into our system in order to streamline communication with their customers. We anticipate that suppliers will be keen to leverage our tablet network to push price lists or to allow suppliers to receive orders electronically.

***Cost Structure***

Our unit cost structure for the tablet is as follows:

<b>Cost</b>	<b>Product component</b>
\$200	7" Android tablet and warranty
\$24	Custom designed tablet stand and lock
\$29	Two years of 3G data delivered daily or weekly to the tablet
\$18	Tablet distribution and transport costs
\$71	Initial system setup and training costs
\$30	Sales commission and incentive
\$28	Ongoing system support over two years
<b>\$400</b>	<b>Total Unit Costs</b>

This cost structure does not include management or overhead time. We also anticipate that tablet costs will decrease significantly over time.

***Sales and Distribution***

Each member of our sales team will target a specific region in Kenya and will be responsible for contact with all providers in that region. Sales team members will work on commission to successfully deploy Miti Health systems to as many clients in their focus region as possible. Once the sales team has identified a client, a team member will work with the provider over a 1-3 day period to operationalize the system. This includes entering existing inventory information and training employees to use the software.

We will identify future target countries using a mix of indicators related to political and economic stability, size of the private healthcare sector, number of small private providers and chemists operating in the country, and percentage of the country with regular 3G data connectivity. We will likely begin expansion with countries that are geographically near and culturally similar to Kenya, and will explore the potential for expansion in Uganda, Tanzania, Ethiopia, and Malawi.

For each country of operation, we will stagger focused sales and distribution over a 2-year period. During the first year, we will pilot the strategy in test markets, then will hire and deploy a national sales team over the second year to reach national coverage, with the objective of having the system adopted by 25% of private providers in each country. The sales team in that country will operate for only one year (or until sales to all providers nationwide have been attempted), at which time a skeleton team will remain in the capitol city to handle all new system sales.

Our pilot for D-Prize will be run using the pilot strategy outlined above, in which we will identify target regions and attempt to sell to all providers in that region.

In addition, we will leverage the following routes to our customer to achieve efficient sales:

1. Partnerships with Pharma Suppliers – they maintain regular contact with a large number of providers and may be keen to streamline communications and ordering
2. Google Play Store – we will make the software available for download to providers who have purchased their own hardware
3. Government partnerships – There are many government groups that interact with private sector providers regularly, including District Public Health teams and the Pharmacy and Poisons Board, and we might try to leverage their vast network.

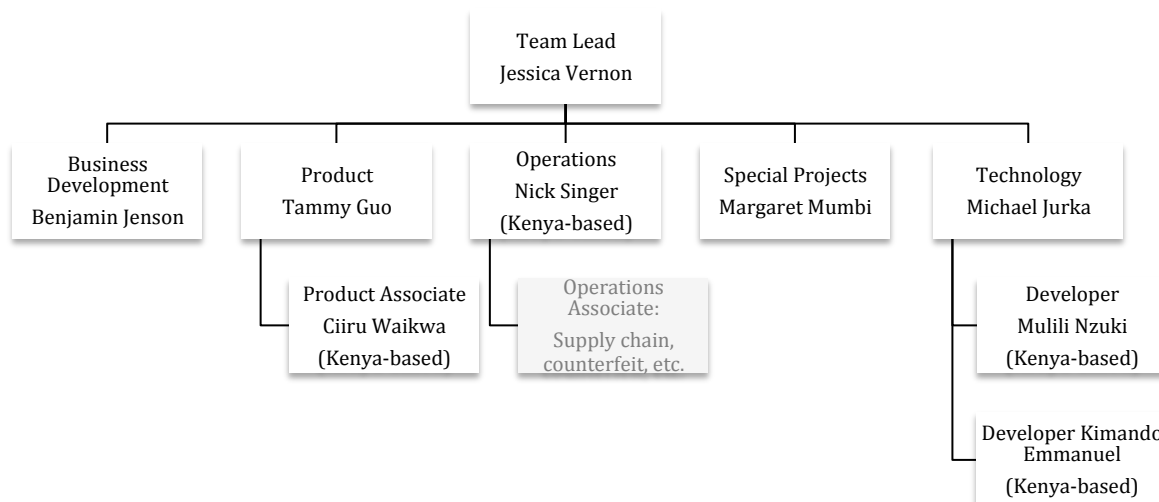
### ***Suppliers and Partnerships***

To effectively scale this system, we will look to secure the following partnerships:

- Google and Samsung – we have already initiated relationships with these organizations to procure tablets at cost, and we are also interested in using in-kind donations of Google software engineer time to refine our technology systems.
- Kiva – We are already in discussions with Kiva to forge a funding partnership in which they would make a loan to individual providers to finance the up-front cost of the tablet, which would reduce our risk and need for up-front financing.
- IBM Research Africa – They have done significant work to build a local ad sales network for deployment in East Africa, and we are hoping to use their systems to operationalize ad sales through our system.
- GPHF MiniLab – They manufacture the testing kit that we will use for spot checks, and we will work with them to source the kits at a low cost.
- MEDS – This nonprofit organization can provide us with valuable feedback as we develop a quality-assurance system for suppliers.
- Governments – We are interested in partnering with government agencies that work directly with private healthcare providers in East Africa such as the Pharmacy and Poisons Board and District Health Management teams, though we are less keen to scale our technology through the public health system.

### **Team**

#### ***Current Team***



*An Operations Associate will be hired prior to pilot launch to assist with both an assessment pharmaceutical supply chain and counterfeiting and the setup of core operations and revenue-generating functions.*

### ***Biographies of Key Personnel***

#### *Team Lead (Jessica Vernon):*

Jessica is a medical student at Stanford School of Medicine. Previously, she served on the leadership team of the Dispensers for Safe Water Program at Innovations for Poverty Action as the program expanded from a pilot to serving almost half a million people in Kenya. She also worked with a UCSF-affiliated cervical cancer screening program to build Android systems that subsequently scaled throughout Southwest Kenya. Jessica graduated from Stanford University Phi Beta Kappa with honors in Economics, and she worked with an innovative chronic disease clinic in South Africa as a Fulbright Scholar.

#### *Business Development (Benjamin Jenson):*

Benjamin is a student at the Stanford Graduate School of Business. After graduating from Pomona College in 2007, he spent a year in Hong Kong as a Fulbright Scholar and then spent a second year abroad volunteering in Asia and Latin America. Benjamin spent the next three years building a crowd-funding platform for international NGOs called SeeYourImpact.org, where he traveled extensively to evaluate hundreds of NGOs in more than 20 countries. At SeeYourImpact.org, he led the design and implementation of a mobile application that was used by non-profits to collect information about their impact.

#### *Product (Tammy Guo):*

Tammy is an MBA/MPH student at the University of California, Berkeley – Haas School of Business and School of Public Health. She previously served as Finance Director of Jacaranda Health, a chain of high-quality mobile maternal health clinics in Kenya, where she provided financial and organizational guidance, launched the pilot mobile clinic, and managed the mobile clinic operations. Tammy graduated from Stanford University with a degree in Human Biology and Earth Systems and subsequently spent two years at the Boston Consulting Group working on a range of technology and social impact projects.

#### *Operations (Nicholas Singer):*

Nicholas leads operations at Miti full-time for six months based in Nairobi. Before joining the team, Nick led the supply chain for Mobius Motors, a low cost automotive manufacturer based in Nairobi, Kenya. He also worked with Technoserve in Swaziland where he developed and implemented cost reduction and market linkage projects for rural farmers. Nick graduated from the University of Maryland with degrees in Marketing and Supply Chain Management (Summa Cum Laude) and spent two years at Deloitte Consulting working on a range of supply chain and lean operations projects.

#### *Technology (Michael Jurka)*

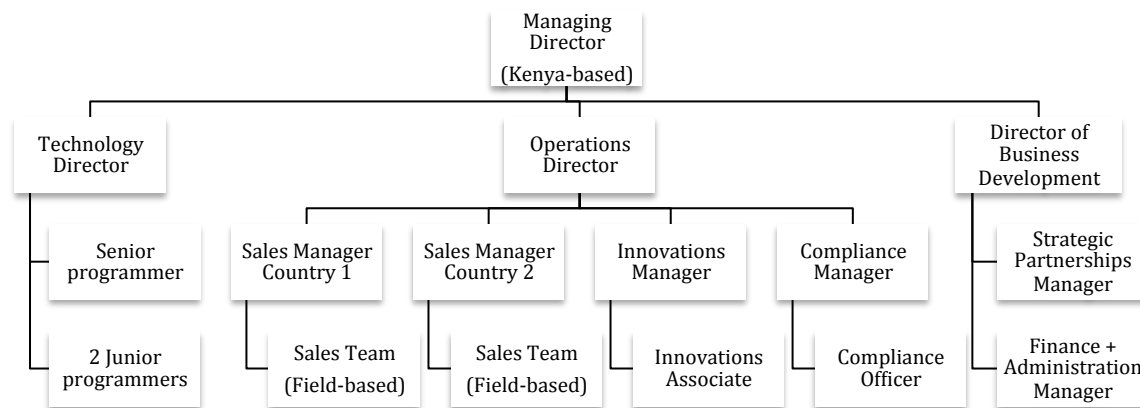
Michael leads technology development for Miti Health with support from two additional developers. Michael is currently a software engineer at Google, where he works on the team that builds and maintains the Android operating system. Michael has experience in

interaction design and bioinformatics. He holds a BS in computer science + electrical engineering from UC Berkeley and an M.Sc in Computer Science from University of Toronto.

### *Special Projects (Margaret Mumbi Mongare)*

Margaret is a medical student at the Stanford School of Medicine and holds a degree in Biochemistry and Economics from Smith College. She previously investigated the role of tumor microenvironment on cancer treatment as a researcher at the Broad Institute of Harvard and MIT. Margaret has also worked with Dalberg Research, where she led research in Ghana and Nigeria to assess the role of management education in inspiring local entrepreneurship. Margaret cofounded the grassroots non-profit Masomo Mashinani, which provides academic support, mentorship, and scholarships for students in Nairobi.

### **Two Years After Launch**



*These roles will be full-time and based in either Kenya or the country of roll-out as much as possible.*

Our operational rollout plan includes a staggered sales and business development push by country over a two-year period. We believe that we can reach and attempt to sell to the majority of the total addressable market in that time. After that time, sales operations will be shifted to a new country of interest for a large-scale sales push in that country, though we will continue to both support existing operations and follow up on new leads in existing countries of operation.

### **Location**

We have chosen to commence operations in Kenya because many members of our team have previous work experience here and we are leveraging our knowledge of and contacts in the Kenyan healthcare system to test and pilot the technology. Furthermore, Kenya leads the region in technology adoption and distribution of data connectivity, and regulation of the healthcare system is relatively straightforward. Our team has experience in both Nairobi and Western Kenya, and we intend to pilot in both regions to gain a diversity of perspectives.

Our customer research, which has formed the basis of our product development and initial prototype, was with stakeholders throughout the supply chain, including private chemists, public chemists, suppliers, distributors, and government officials. We conducted interviews in Nairobi, peri-urban Nairobi, Kisumu, and more rural areas of western Kenya. Operations in peri-urban Nairobi, Kisumu and more rural areas of western Kenya were similar, although the number of linkages in the supply chain grew with distance from the city center of Nairobi.

Our initial pilot will be in Nairobi and peri-urban areas outside of Nairobi. 10-15 chemists will be selected to represent a cross-section of lower-income and mid-income levels, proximity to city center and transportation, and sophistication of business owners. We will randomly select providers within specific regions and attempt to sell the system to each of them following the sales model that we intend to use at scale, which will provide us with data on demand for the tablet among different market segments. We currently are conducting extensive user-testing and iteration of the technology by working with two providers, one in Kibera and the other in Kayole (Eastlands). We are also in the process of identifying additional providers as we lay the groundwork for the official pilot.

Once we extend our pilot beyond 50 providers, we will expand our focus to include western Kenya, allowing for a greater emphasis on more rural, private providers. We still plan to randomize our rollout to ensure that we can collect data from a pilot that most closely mirrors our organization’s operations at scale.

## **Budget & Financials**

### **PILOT BUDGET**

#	Item	Budget request
1	GPHF MiniLab System (includes equipment and reagents)	\$4,000
2	Spot-check assistant (full-time for 4 months in Nairobi)	\$2,000
3	2 trips to support pilot	\$4,000
4	Additional purchase of 10 Nexus 7 tablets	\$3,000
5	Developer time to integrate information flow from counterfeit spot checks into existing application	\$5,000
6	Misc operating expenses (server space, designer time, etc.)	\$1,000
7	Kenya domestic travel and expenses for interviews	\$1,000
		<b>\$20,000</b>

### **TOTAL BUDGET**

	Year 1	Year 2	Year 5
<b>Revenue</b>			
Tablet Sales	\$x,000	\$x,000	\$x,000
Tablet Lease	\$x,000	\$x,000	\$x,000
Advertising Revenue	\$x,000	\$x,000	\$x,000
Gross Revenue	\$x,000	\$x,000	\$x,000



<b>Expenses</b>			
Personnel	\$x,000	\$x,000	\$x,000
Office staff	\$x,000	\$x,000	\$x,000
Sales staff	\$x,000	\$x,000	\$x,000
Employee Travel	\$x,000	\$x,000	\$x,000
Product Inputs	\$x,000	\$x,000	\$x,000
Contracted Services	\$x,000	\$x,000	\$x,000
Equipment	\$x,000	\$x,000	\$x,000
Total Expenses	\$x,000	\$x,000	\$x,000
<b>NET INCOME</b>	<b>\$x,000</b>	<b>\$x,000</b>	<b>\$x,000</b>

### **Project Milestones**

To effectively track our progress, we will monitor a variety of key metrics. These are related to both operational targets for growth and coverage, and to impact targets related to high-quality medication distribution and cost-effectiveness of treatment. To measure impact targets, we will construct a control group of providers with a similar profile by randomly selecting providers to not use our system for the first year of operation in each country. We will collect information about how those providers fare compared to our pilot group.

Operational targets are as follow:

- # of tablet sales
- # of active leases
- # of active providers (25+ transactions/week)
- # of active distributors (fulfilling medication through Miti at least once a week)
- # of active countries
- % financial sustainability of Miti Health network

Our impact targets will remain consistent across the 5 years of operation. Preliminary impact targets, measured relative to a control group, are outlined here:

- 50% reduction in sales of counterfeit + substandard medication
- 20% increase in profits for each provider
- 20% increase in customers monthly
- 50% reduction in days stocked out of a portfolio of essential medicines

- 4 hours saved in business administration time

Given that our providers and distributors will all be entering information using the Miti Health application, we will be able to track these metrics on a daily basis. As our network builds, our data collection will become more sophisticated as well, allowing us to further extrapolate the ways our technology improves the financial success of providers as well as the health outcomes of the individuals they serve.

Below is a selection of high-level operational goals for the next two years.

	3 Months	1 Year	2 Year
# Providers	20	200	1200
Sales	10	100	600
Lease	10	100	600
# Distributors	2	10	30
% Medication Tested	0%	2%	5%
% Sustainability	5%	10%	40%
# Countries	1	1	2

### **Future Envisioning**

Over the next five years, we plan to expand our operations into five countries, serving 15,000 providers and more than 200 suppliers. This network will serve more than 10 million patients a year and significantly impact both the business practices of the providers we serve and the health outcomes of their patients. With a network of this size, the power of Miti Health becomes truly transformative. We will be processing thousands of transactions each day and will have access to real-time information on disease and counterfeit prevalence by geography. This information may be valuable to policymakers, pharmaceutical manufacturers, or microinsurers like Linda Jamii. At that time, we will evaluate the value of the data in our system and try to use it to improve healthcare delivery and optimize efficiency.

We will need to build both the operational and financing capacity to support this level of growth. We have been fortunate to receive approximately \$50K in funding from the Center for Innovation in Global Health, the Biodesign Global Exchange Program, and the MedScholars Program at Stanford University, as well as the Rashell Young Fellowship from UC Berkeley. Looking forward, we are planning to raise resources through a combination of grant funding, convertible debt financing and tablet sales. Five years after launch, we anticipate that 25 full time employees and 60 sales staff will be required to manage this network, and we anticipate needing to raise an additional \$2M over the first five-year period. As our network grows in size, revenue from ad sales will increase significantly, which will allow us to be self-sustaining by year five.

We intend to use grant funding to cover our overhead and R&D costs over the next few years, and will be approaching Stanford University, USAID, the Gates Foundation, and a number of smaller family foundations to cover this gap. We have also already begun

conversations with Kiva to provide debt financing to providers to cover the cost of the tablet. Once we have shown early success with our pilot, we also plan to investigate Silicon Valley sources of convertible debt financing to accelerate our growth.

### **Risks**

With the rapid growth we have predicted, our organization will have to confront a number of different risks. We have listed a few of these risks below, and our plans for mitigating them:

#### *Consistent provider usage and lack of retention*

We need to maintain focus on building an application that is easy and intuitive to use. Our sales team will need to play an active role in the first few months to ensure providers aren't discouraged by problems in our control.

#### *Insufficient demand and lack of provider retention for subscriber model*

We intend to conduct a great deal of market research around pricing and demand for the system to ensure that our projections are in line with what is possible. If we determine that there is insufficient demand for this system, we will refocus efforts on delivering a system at a price point and with features that will be more valuable to providers. However, extensive market research indicates that we are addressing a significant pain point and that sufficient demand exists for this system.

#### *Difficulty confirming the accuracy and consistency of Minilab results across supply chains*

We'll start by tagging medication authentic/counterfeit with each quality check we perform, while randomly testing drug quality at other stages along the supply chain. Improving this process is a crucial part of our pilot scale up.

#### *Inappropriate or illegal usage of the Miti Health system*

As our network builds, we will need to invest in security and encryption to ensure that a small percentage of people do not compromise the integrity of the system as a whole. We have also invested time in building a tablet locking mechanism, to minimize the likelihood of tablet theft, and we will give providers the option of purchasing insurance against theft for a small additional fee.

#### *Political instability and lack of security in Kenya*

We understand that there is risk of political instability in Kenya and that rising crime in Nairobi has made work in Kenya more difficult. We will be piloting in Nairobi, but will be diversifying operations by expanding to a new country in each additional year of operation to make us less dependent on the political and security climate in Kenya. If we feel that Kenya is not secure enough to serve as our first country for scale, we will begin operations in Uganda or Tanzania instead, as they are culturally similar, politically stable, with high rates of data connectivity and a robust private sector for healthcare.

## **Candidate Statement**

Our team consists of members who have successfully launched and managed social ventures in other sectors in Kenya, including a large-scale safe water program, a crowd-funding platform for non-profits, a chain of maternal health clinics, an education scholarship fund, and a car company for the bottom of the pyramid. Over the time we have spent working in Kenya, we have been surprised to observe friends and colleagues bypass the long lines, pharmaceutical stockouts, and varying quality of service in public clinics by receiving the majority of their care from the ubiquitous licensed chemist shops that operate in every village in Kenya.

Furthermore, we noticed that if those friends and colleagues had the money to do so, they would always drive across town to the upscale chemist shop with the goal of purchasing medication that they knew to be genuine rather than the potentially counterfeit version found in other shops. Observing this, we wondered what people did if they lacked the money or know-how to travel to the chemist shop in high-end malls and hospitals and felt the inherent cruelty in a system that discriminated not just on ability to pay, but on ability to even gain access to a high-quality system.

We began to realize that while many international non-profits and funders were wholly focused on improving government-provided healthcare, it was actually these small private providers that had the most significant daily impact on health for people at all income levels, and that by improving the services that these chemists provided, we could possibly affect the lives of millions.

We set out to assess how we could help them improve their services. Our first idea was to build clinical decision support systems that would allow chemists to make a diagnosis based on symptoms that were entered. Since so many people bypassed the government hospitals and clinics in Kenya, we thought that improving diagnostic quality would improve health outcomes. However, as we conducted interviews with chemists and providers across Kenya, it became apparent that the issue was not with their diagnostic prowess, but with their ability to manage complex distribution networks, and that technology could play a vital role in helping them to do this. We worked closely with these providers to build the systems that they most needed to ensure that they did not face stockouts and that their time was spent providing care rather than managing inventory.

Our focus on private health systems and understanding of how Kenyans receive care will allow us to succeed with this system where other health technologies have failed to achieve significant scale. In addition, our team thrives on new information, iteration, and constant interrogation. We realize that the business model outlined here will likely go through many more rounds of revision and reflection before we arrive at a concept that can scale cost-effectively while providing the most significant value to providers and patients. This challenge excites us greatly, and we can only hope to make a dent in the 1/3 of medication sold in East Africa that is sub-standard or counterfeit. It is ultimately this potential for health impact that drives us, though our passion for transformational product and robust scalable systems unite us around this goal.

## **Appendix**

### *Major Activities in 2013*

We have spent the past few months working with developers and our operations research team to refine an application based on the specifications outlined in the above application. We intend to begin piloting this application in chemist shops and small private health facilities in February 2013. However, this pilot is not designed to test our operation and distribution model— since we will be using the pilot to detect bugs and issues with usability, we will not be asking these shops to pay for the technology. Because we are now just in the early stages of building a quality-control system to detect counterfeit and substandard drugs, this component of the technology will not be included in our initial pilot. D-Prize funding would be invaluable to help us pull these pieces together into one integrated pilot to test the full concept.

### *Previous Year's Budget*

In 2013, we raised \$36,000 in funding from Stanford, of which we have spent roughly \$22,800. This money has been used as follows –

- \$10,000 – Payment for technology development
- \$5,400 – Android tablets for a pilot of the technology
- \$4300 – Salary for team in Kenya to conduct market research
- \$600 – General program cost including website, system server, google accounts
- \$2,000 – Housing and travel for market research in Kenya
- \$600 – Program-related travel in the US

### *Other Financial Support*

Support for this technology thus far has come from Stanford University and UC Berkeley in the following amounts:

- \$5,000 – Stanford CIGH Bridge Grant
- \$25,000 – Stanford Biodesign Grant
- \$6,000 – Extension on Stanford Biodesign Grant
- \$10,000 – MedScholars travel for Jessica Vernon for summer 2013
- \$5,000 – Rashell Young Fellowship for Tammy Guo for summer 2013

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<sup>i</sup> World Bank Private Health Sector Assessment Kenya 2010

<sup>ii</sup> World Health Organization Access to Essential Medicines

<sup>iii</sup> Results from in-depth interviews with pharmacists in Kenya summer 2013

<sup>iv</sup> Results from in-depth interviews with pharmacists in Kenya summer 2013

<sup>v</sup> [http://www.thelancet.com/journals/lancetid/article/PIIS1473-3099\(12\)70064-6/abstract](http://www.thelancet.com/journals/lancetid/article/PIIS1473-3099(12)70064-6/abstract)

<sup>vi</sup> [http://onlinelibrary.wiley.com/doi/10.1111/j.1365-](http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2710.2005.00685.x/abstract?deniedAccessCustomisedMessage=&userIsAuthenticated=false)

[2710.2005.00685.x/abstract?deniedAccessCustomisedMessage=&userIsAuthenticated=false](http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2710.2005.00685.x/abstract?deniedAccessCustomisedMessage=&userIsAuthenticated=false)

<sup>vii</sup> <http://a-capp.msu.edu/sites/default/files/files/AFRICABACKGROUNDfinal.pdf>

<sup>viii</sup> <http://www.gphf.org/web/en/minilab/index.htm>

<sup>ix</sup> <http://www.practicefusion.com/pages/pr/can-ad-supported-emr-fuel-healthcare-technology-revolution.html>