



Impact Report

Presentation and Analysis of Jibu's Community Impact, 2015-2017

Table of Contents

Water Consumption Habits and Health Implications	2
Environmental Impact	6
Job Creation	8
Empowerment of Women and Youth	10
Equipping Entrepreneurs for Business Growth.....	11
Conclusion	13





Water Consumption Habits and Health Implications

Since inception, Jibu has held dual goals of accelerating business in developing markets, and creating lasting community impact. With an anchor product of safe drinking water, a primary area of impact analysis is the water consumption habits of Jibu customers and the health implications of drinking Jibu water. Through interviews and general market research during our pilot phase, we understood that the typical source of drinking water in East African urban centers was tap water which was boiled at home prior to consumption. Boiling water, while safer than drinking untreated water, is an imperfect solution that does not remove all contaminants, is time-consuming and inconvenient, and expensive due to the fuel consumed during the boiling process. Consequently, Jibu's target market is low and middle-income urban households who know their local water source to be unsafe, but cannot afford bottled water and hence boil water at home.

To determine whether we were reaching our target market, we conducted a customer survey in Kigali in 2014, another in Kampala in 2016, and a third in Kigali in 2016. However in all cases, we learned after the fact that the results had been corrupted due to surveyors supplying false data or applying flawed survey methodology. For example, audits and comparisons with audio recordings revealed that during one survey, half of the enumerators filled in replies to questions without asking customers. As a result, in consultation with external consultants hired by the SPRING program, we developed new quality control measures and standardized quotas by franchise zone to arrive at unbiased results.

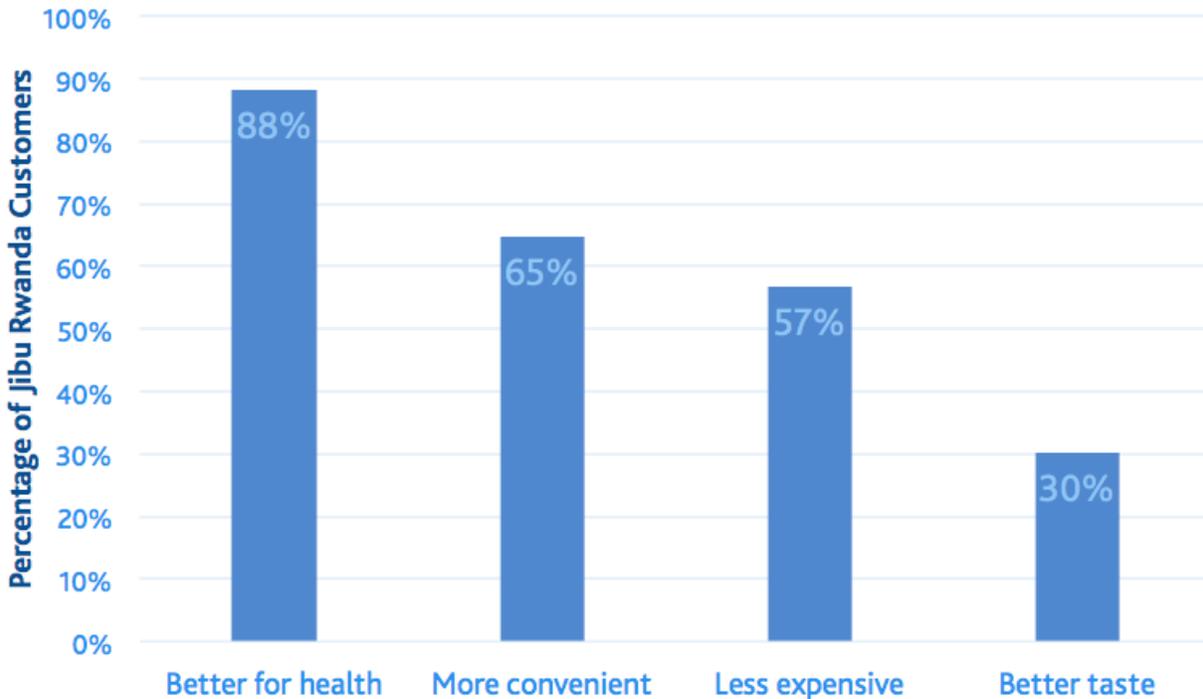
In December 2016 – January 2017, we conducted new phone surveys in Kampala and Kigali that yielded externally-verifiable data. With only two franchises in Kenya at the time, we did not have an adequate sample size to gather Kenya-specific data, but in total interviewed over 600 customers in Uganda and Rwanda, collecting basic information on household demographics, water consumption habits, purchasing patterns, and satisfaction levels. While the survey results confirmed many of our assumptions, they also revealed unexpected results, including the differences between our customers in each country.

In Rwanda, we are primarily reaching household customers who previously boiled drinking water. 94% of respondents reported drinking Jibu water in their household, with an average daily income of \$2.50 - \$5.00 and an average household size of 5 - 6 people. 78% of customers reported drinking boiled or



untreated water before switching to Jibu, implying that Jibu is not simply providing less expensive bottled water to the wealthy but rather converting the average household. Rwandan respondents cited health and convenience as the main reasons for switching to Jibu:

Why Switch from Boiled Water to Jibu?



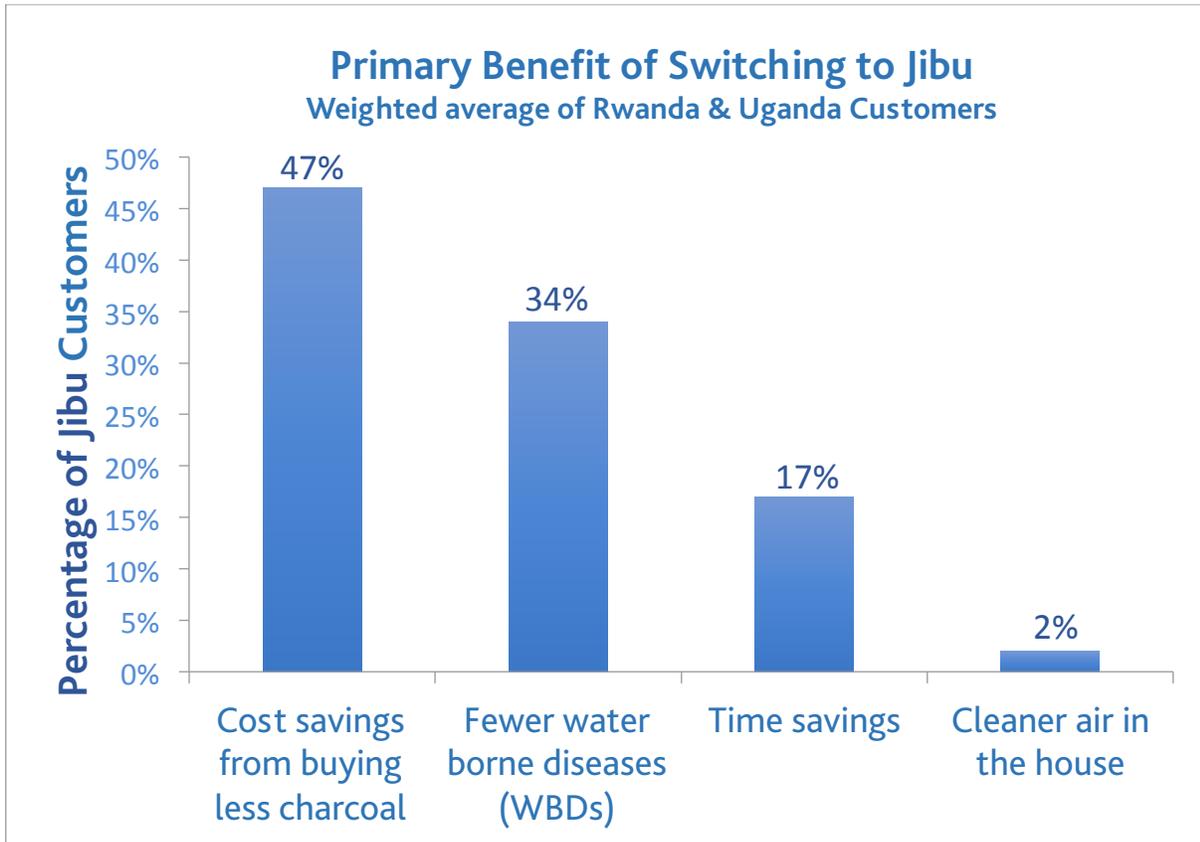
The customer profile of Jibu Uganda differs from Jibu Rwanda in several ways. First, 40% of Ugandan customers drink Jibu only at the workplace (in contrast with 6% in Rwanda), meaning that approximately 60% of Jibu Uganda customers fall within the target market of urban households (in contrast with roughly 75% in Rwanda). However, although Jibu has not typically considered workplaces to be within our target market, we estimate that 42% of workplaces were previously consuming boiled or untreated water and that Jibu is providing their first steady source of safe drinking water. We have drawn this estimate from the percentage of workplaces who purchase the 20L Tap Bottle, an indicator that they likely did not own a dispenser beforehand. This is a conservative estimate, as our franchisees have stated that standard business practice in Uganda is for employers to purchase unsafe sachet water for their employees, or to expect employees to bring their own water to work, and therefore that in the majority of cases, workers were not drinking safe water until their employer began purchasing Jibu water for the office. These results point to a clear opportunity: convincing workplace-only customers to drink



Jibu at home. To do so, we have engaged third-party marketing consultants to develop a strategic marketing plan and tailored messaging aimed at reaching new customers, increasing refill rates amongst our current customers, and converting workplace customers into household consumers.

The number one reason cited by both Uganda and Rwanda consumers for switching from boiled to Jibu water was improved health, but a difference between the markets is that 56% of household customers in Uganda were previously drinking boiled water, in comparison with 78% in Rwanda. While the most common income range amongst our customers in both countries is \$2.50-\$5.00 per day, the average customer household in Uganda appears a bit wealthier and smaller than in Rwanda, and thus more likely to have purchased other bottled water brands prior to Jibu's entry into the market. While only 5% of Jibu's customers in Rwanda drink other bottled water sources, 32% of Jibu's Ugandan customers purchase other water brands. 71% of these multi-brand users prefer Jibu, citing affordability, taste, and high quality as the factors differentiating Jibu from other water providers.

While the survey results confirmed our initial assumption that the majority of consumers in both countries were previously boiling water and that health improvement is the primary reason for switching to Jibu water, it is difficult to quantify Jibu's precise health impact. One reason for this is that nearly all customers reported continuing to use boiled water for cooking purposes, and we do not know the ramifications of eating food that has been cooked in boiled water. We have experimented with survey questions such as 'how many cases of diarrhea or other water-borne disease (WBDs) did your household experience before and after switching to Jibu water' but found that respondents were unable to quantify their illnesses. As such, we have not found a mechanism for evaluating the exact reduction in WBDs, but when asked the primary benefits experienced by the household since beginning to drink Jibu water, 32% of respondents in Rwanda and 38% of respondents in Uganda, a weighted average of 34% across the two countries, cited fewer WBDs.



While we do not have a large enough customer base in Kenya from which to gather insights, we plan to expand our presence there and have engaged a Kenyan marketing firm to focus on strategies for reaching low and middle-income urban households in the Nairobi area.

In light of customer survey replies in Uganda and Rwanda that increased convenience would lead to more frequent water refills, we are also revisiting our Point of Sale (POS) and customer relationship management (CRM) system to determine how we can better track, follow-up with and offer efficient customer delivery and ordering options in order to facilitate daily consumption. Our current POS system enables cloud-based revenue tracking and includes a basic customer database of purchasing history and contact details, but does not include options for mobile payments, delivery scheduling, or online ordering, all of which would increase convenience for customers. In partnership with dloHaiti and the Safe Water Network, we have submitted a funding proposal to develop an integrated POS and CRM system that would include detailed data capture of customer transactions, mobile-based ordering and payment functionality, and delivery logistics management.

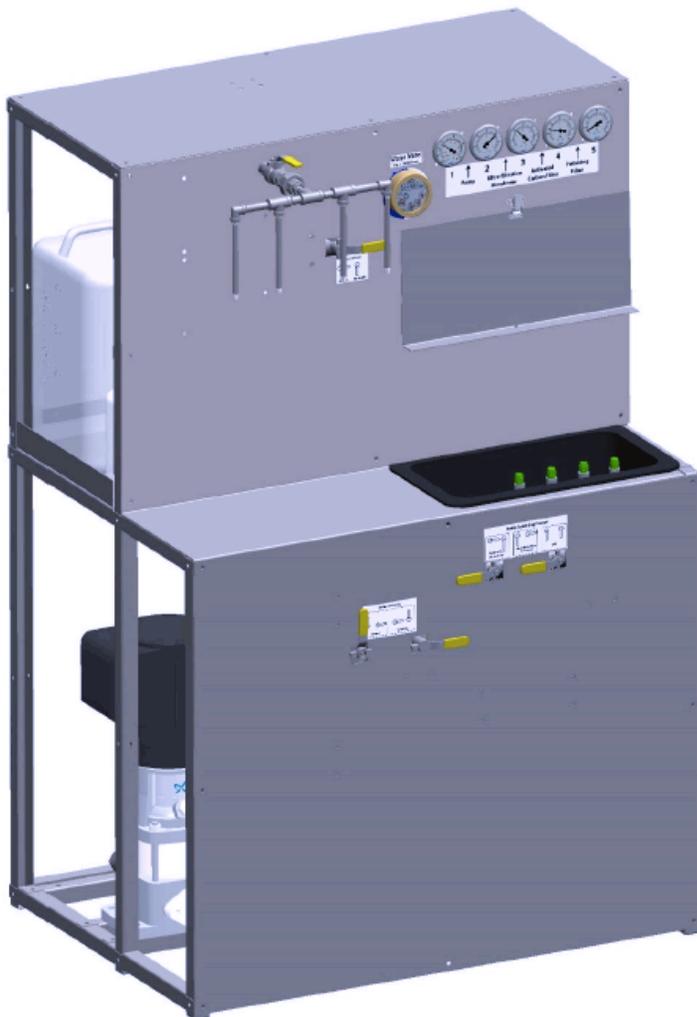


Environmental Impact

During Jibu's research, development and piloting phase from 2012 to early 2015, we identified the need for environmentally sustainable, solar-powered water treatment systems that would incur low operating costs and could operate off the grid. We partnered with Healing Waters International to design an innovative system capable of running entirely from solar power on as little as 200W. It's compact design and durable parts made the system a sustainable and eco-friendly solution, which we began installing in franchises in 2015.

SolarPure UF

A compact, high-efficiency, affordable water treatment and bottling plant designed for solar power.



▶ Innovative Design

High-quality components in a self-contained, compact design that weighs 450 pounds, measures 28" x 40" x 60" and can be shipped anywhere in the world.

▶ Bottle Sanitizing Station

An integrated bottle sanitizing station ensures that safe water isn't put into dirty bottles.

▶ Cutting-Edge Technology

The Ultrafiltration membrane treats more than 7 million liters and has an average life of 5-10 years before being replaced.

▶ Solar Powered

Able to run on as little as 200W, this high-efficiency equipment is designed specifically for solar power. The more power available, the faster it can produce.

▶ Sustainable Solution

A low operating cost and quality components, including stainless steel frame and plumbing, ensure a solution which will be sustainable for the long term.

▶ Safe Water

Removes parasites, bacteria, and viruses.



Despite the efficient design, we learned that the breakeven point at which the energy savings would exceed the cost of procuring and installing solar panels was 8-10 years, if franchisees were using solar 100% of the time. We further found that franchises preferentially chose city power when available, leading to a breakeven time of more than 20 years. Consequently, we began to explore more cost-effective options. Healing Waters proposed a comparably efficient but non-solar system that cost significantly less to manufacture and could be connected to the electric grid. We also found that due to our urban focus, electricity was readily available in our franchise zones. In light of cost effectiveness, we began introducing electric-powered systems, however wished to drive environmental responsibility by continuing to install solar-powered units whenever possible. We initiated a fundraising drive to raise donor funds to cover the costs of purchasing and installing solar panels. Through our newsletters, website and social media, we have driven several campaigns to raise solar funding, but have not received donor uptake. As a result, while we would like to propel environmental impact by universally introducing solar-powered systems, due to cost factors we are currently installing solar units in approximately 60% of new franchise build-outs.

While our environmental impact would be more extensive if our units were 100% solar-powered, nonetheless we estimate that we have saved 9,799 tons of CO₂ through the reduction of household charcoal use. This estimate is based on the following assumptions and data sources:

- 0.1 kg of charcoal is required to properly boil 1 liter of water. This is based on an internally-conducted boiling experiment, in which we weighed the quantity of charcoal needed to properly boil 10 liters of water at the 1-minute rolling boil recommend by the World Health Organization.
- The Department of Forestry at Eduardo Mondlane University reports that 1.59 kg of CO₂ is emitted for every 1 kg of charcoal that is produced (https://energypedia.info/images/4/4a/EN-Charcoal%2C_carbon_emissions_and_international_onventions%3Bprotocols-Almeida_A_Sitoe.pdf). They also report that 2.74 kg of CO₂ is emitted for every 1 kg of charcoal that is burned.
- Uganda customer survey data indicates that 56% of Jibu households were previously boiling their water for drinking.
- Rwanda customer survey data indicates that more than 78% of Jibu households were previously boiling water for drinking.



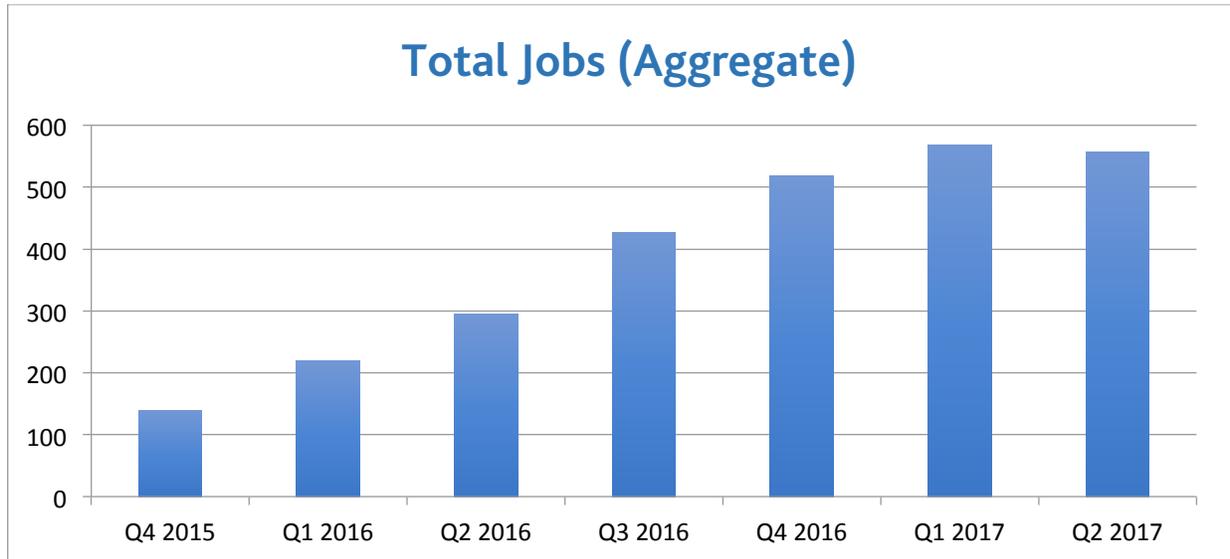
- This calculation assumes that all customers on average purchase the same volume of water. Therefore, the percentage of customers previously boiling water is equal to the percentage of water volume that was previously being boiled.
- This calculation does not take into account the amount of CO₂ generated through Jibu's operations. These baseline emissions, if known, should be deducted from the calculated total.

Based on these assumptions and the total liters of water sold in each country (Kenya was excluded due to lack of survey data), we arrived at an estimate of 9,799 tons through the following formula:

$$\text{kg of CO}_2 \text{ Reduced} = \text{Total Liters Sold} \times \text{\% of Customers Previously Boiling} \times \text{kg of Charcoal Used to Boil 1 Liter of Water} \times \left[\text{kg of CO}_2 \text{ Released per kg of Charcoal Produced} + \text{kg of CO}_2 \text{ Released per kg of Charcoal Burned} \right]$$

Job Creation

When we developed our concept of locally-owned businesses producing water for their communities, we envisioned franchises being highly involved in the daily operations of their businesses and hiring a few staff members to assist with water production and sales. We have been surprised to find that franchisees in fact hire 3-9 employees, including a store manager who oversees daily operations. Microfranchisees also hire employees to assist with marketing, sales and deliveries. In total, the Jibu network has created 557 jobs, with 10-40% growth each quarter until Q2 2017, during which period the number of microfranchises declined from 145 to 138, and existent microfranchises cut costs by managing leaner staffing. While microfranchisees were hiring 1-3 employees in 2016, by mid-2017 the average had declined to 0.6 microfranchise employees per microfranchise launched. This microfranchise decline is due to natural attrition as new franchises open, streamlining operations in previously unassigned zones. While the number of microfranchise employees has declined, franchises have continued to hire 3-9 employees, with an average of 5 employees per franchise.



Since successful franchising requires working capital, networking and business experience, our initial recruitment strategy was to identify community and business leaders. However we found that these franchisees, while instilling confidence in customers through their community status, did not remain closely involved with operations, were simultaneously involved in several ventures outside of Jibu, and delegated responsibility to store managers and other staff. On the one hand, this has created opportunities for franchise staff to learn valuable business management skills and to become franchisees themselves, but at the same time we became concerned by the level of disengagement and lack of strategic leadership on the part of certain franchisees. As a result, we shifted our recruitment practices, including formalizing a microfranchise program, whereby aspiring entrepreneurs resell Jibu water at a slight markup, enabling them to establish a customer base while earning the profits and business acumen to potentially mature into a full franchise position. Through this program, Jibu has provided business skills and training to over 138 microfranchisees, and 70% of our current franchise positions are filled by former microfranchisees.

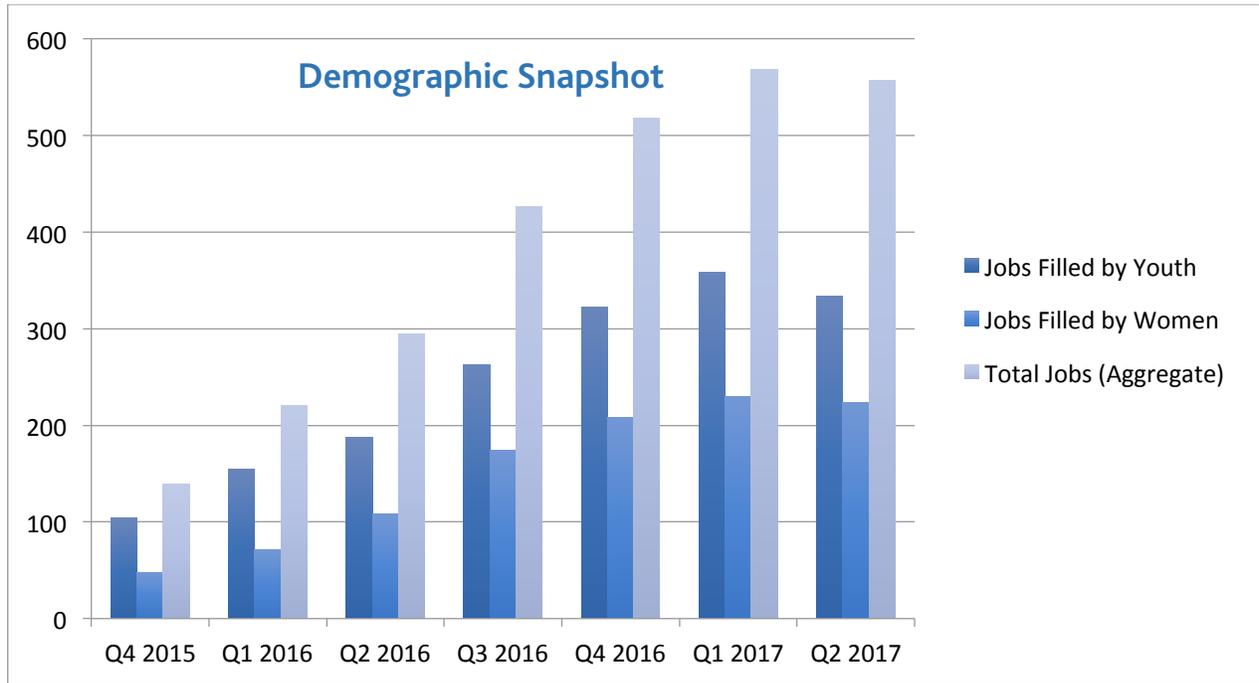
In addition to microfranchisee and store manager positions, common positions created by franchisees include sales associates, delivery managers & drivers, accountants, and production associates who run the water filtration system. Jibu Corporate offers direct training to the production team, providing the skills to ensure quality control and to trouble-shoot and perform basic maintenance when filtration systems malfunction. Jibu also offers group training sessions on Marketing & Sales, Brand & Service Standards, Inventory and Financial Management. In some cases, individual employees attend the



trainings in person, while in other cases the franchisee attends on behalf of their staff and conducts localized training on-site. In either case, franchise employees acquire skills and experience that can be applied at Jibu and beyond. Employees have included typing, record keeping, cash flow management, and use of technology as transferable skills acquired, with 38% of employees indicating on a Uganda survey that Jibu has provided their first long-term job.

Empowerment of Women and Youth

Since inception, one of our impact goals has been to empower disadvantaged members of the community. With high youth unemployment rates in emerging markets, and women in particular often excluded from the formal job sector, we set a goal of 50% of all Jibu jobs being filled by women and youth. In the youth category, we have easily met our targets, due in part to the rapidly growing urban population of educated, ambitious youth who have the soft skills and drive to succeed, and have been searching for an opportunity like Jibu. Recruiting women has been more challenging, in Uganda in particular. To address this challenge, we partnered with SPRING to develop our microfranchise program into a training ground for teenage women, and with Women in Technology and Akazi Kanozi, who provided referrals for young women who had completed soft skills and technical training programs. Through these efforts, in Uganda we grew from 0% female franchisees in 2015 to 24% of franchisee and 35% of microfranchisee positions in Uganda filled by women by 2017. Across our three countries of operation – Kenya, Rwanda and Uganda – our percentage of total jobs filled by females grew from 35% to 40% from 2015-2017, and from 31% of franchisee positions in 2015 to 35% of franchisee positions and 47% of microfranchisee positions by 2017.



Equipping Entrepreneurs for Business Growth

As mentioned in the Job Creation section, Jibu offers a suite of entrepreneurship training sessions – administered both at our head offices and on-site at franchises – covering the full range of topics key to running a successful business. We also offer the assets and equipment, including a water filtration system, iPads, software, inventory management, marketing materials and assistance with store build-out, to ensure that each franchise has the building blocks for business success. While approximately 50% of franchisees have reached high sales volumes of over 1,000 liters sold per day within 3-4 months of launch, the remaining 50% have taken more than 4 months to reach the break-even threshold. A theme we have identified amongst the successful is a willingness to conduct extensive door-to-door marketing preceding and following franchise launch, which translates into brand loyalty and repeat customers, as well as a willingness to take risk by initially offering low-cost or free samples in order to intrigue customers. However, we also realized that some franchisees did not have the initial working capital to offer promotional materials and to manage cash flow during their initial investments in start-up inventory. We subsequently made several pivots in our approach towards entrepreneurial recruitment and coaching.



One pivot was to migrate from our original emphasis on upfront training to an ongoing focus on recurrent coaching. We learned from our franchisees that upfront training is too quickly forgotten without repeated engagement and support. For example, while each franchisee agrees to a designated sales territory upon signing their franchise agreement, we saw that without reinforcement of the initial agreement, new franchisees often copied what they had seen in the commercial bottled water sector, such as delivering small bottles to upscale hotels and neighborhoods outside their assigned territory. We now have dedicated “coach” and “franchise support” roles that work individually with franchisees and microfranchisees to ensure compliance and to help implement the most effective business strategies for each sales region. As we have accumulated lessons learned, these coaches have been able to build new entrepreneurs’ confidence in our business model by offering real life scenarios illustrating how operating within the bounds of the franchise agreement grows long-term sales and aligns with our mission of providing a daily, affordable source of safe water. We have found that this coaching process not only helps our franchisees succeed but also helps us to more efficiently receive feedback from franchisees about how to improve day to day operations across the enterprise.

One of the operational issues that franchisees brought to our attention was the need for start-up capital dedicated towards initial inventory. Through experimentation we found that an average of \$1000 provided the adequate amount of inventory capital, but that some franchisees struggled to attain this amount. To help address this financial challenge, we implemented more extensive vetting to attract qualified candidates who had both working capital and the drive to actively engage in brand launch and expansion within their immediate neighborhood. However, we did not want to exclude qualified applicants simply due to a lack of capital, and so we partnered with Kiva to provide working capital loans to franchisees. In part to address the start-up capital challenge, we also developed what had organically started as a reseller system into our formal microfranchise program.

The development of our microfranchise program was a significant pivot, as it has allowed aspiring entrepreneurs without significant capital to earn profits as microfranchisees, and by saving their profits over 3-6 months, microfranchisees achieve adequate capital to qualify for a franchise. The microfranchise program has also enabled candidates without business experience to gain the hands-on financial management, marketing, and networking skills to become business leaders.

To gauge the effectiveness of our entrepreneurial approach, particularly amongst franchisee candidates, we conducted a survey of 100 microfranchisees. When asked an open-ended question about why they



became a microfranchisee, the most common reason cited was that "Jibu is a good business opportunity." Specifically, 93% reported making a profit from selling Jibu products, and 81% reported earning more than before they joined Jibu. The number one challenge cited was inconsistent pricing, with some stores undercutting others in order to gain a larger market share, and consequent confusion among customers.

Due to microfranchise and customer feedback, another pivot we implemented was to standardize prices across franchisees and microfranchisees in each country, so that instead of selling at a mark-up, microfranchisees buy in bulk at a discount, and sell at the same price as franchisees. This has allowed us to maintain brand consistency and credibility among customers, and to enforce pricing that reaches our target market of low and middle-income urban households.

Conclusion

While we have fallen short of our impact goals of 50% of all Jibu positions being filled by women and 100% of our water treatment systems being solar-powered, we have seen measurable impact in the communities in which Jibu operates. The majority of Jibu customers report having switched from boiled or other unsafe water sources to Jibu, and fall within the target market of low and middle-income urban households. Through reducing consumption of boiled water, we estimate that we have saved 9,799 tons of CO₂ through the reduction of household charcoal use. We have also created 557 jobs, over half of which are filled by youth, who through Jibu's training programs are acquiring transferable skills including budgeting and cash flow management, quality control, customer service & marketing, typing and use of technology. Through our combination of financial and entrepreneurial support, we have launched nearly 200 small business owners who are providing safe water to their communities through a profitable business model.

With success in Rwanda and Uganda and nascent growth in Kenya, we believe we are pioneering a powerful model capable of transforming communities, and that by equipping emerging market entrepreneurs, Jibu will create affordable access to drinking water and other necessities in many geographic locations. We plan to pilot in regions beyond East Africa beginning in the fall of 2017, and to capitalize on our strategic retail locations by selling impactful products alongside water. We recently introduced fortified porridge, and are researching other health-improving product offerings. Our



ultimate vision is to capitalize, equip and grow a network of co-invested business owners who will revolutionize the way critical resources are leveraged to meet basic necessities in emerging markets.

This report was made possible with the generous support of the U.S. Agency for International Development (USAID) through the Partnering to Accelerate Entrepreneurship (PACE) Initiative. The views expressed in this document reflect the personal opinions of the author and are entirely the author's own. They do not necessarily reflect the opinions of USAID or the United States Government. USAID is not responsible for the accuracy of any information supplied herein.