

A case study of income generation activities in Nairobi
with the LifeStraw Community filter

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Project summary

The LifeStraw Community filter is a 25 liter capacity filtration device which used hollow fiber membrane technology and does not need cartridges, electricity, chemicals and is easy to maintain and operate. The filter has a lifetime capacity of 80,000 liters. Access to safe drinking water is a challenge in many areas and this filter could be a solution for small scale water supply. We wanted to pilot different business models around Nairobi to see if the filter could be used for income generation. This would make the filter more interesting for microfinance projects and potential customers of the filter who would become micro-entrepreneurs.

For 10 days we piloted the following models to try and generate income with the LifeStraw Community in Nairobi:

- Selling cups of water at specific place events, churches, schools, and restaurants.
- Leasing filters on a daily basis
- Selling filters to water customers

Business model 1: Selling cups of water at specific place events, churches, schools, and restaurants

CHURCH

The filter was taken to the church. The objective was to sell as many cups to the congregation as possible. It was noted that the church usually had three sessions. The first session usually occurs in the morning and because of the weather that could not be appropriate since it was cold. The filter was placed outside the church gate since this could help in selling the water to the congregation and the passersby (capturing everybody attention) This was done for two sessions and at the end of the day the total number of sells was 87cups@ksh 5. according to the observations and calculations as per the total sells made on that day more sells were made on the second service. Reasons being:

- That was when it was too hot since it was in the afternoon and thus people tend to be thirsty at that particular time
- That being the youth session they were so curious to find out what it was all about thus coming to drink water in large numbers and in groups

We sold an additional 23 cups at Ksh5 the next Sunday.

ROAD PLACING

This is the method of placing the filter on the side of the road specifically at strategic place. This is done in order to attract the customers' attention and hence making more sells. The main area for this day was at kikuyu bus terminal. The filter was placed in the morning till evening drivers, conductors, and passersby were marshaled to buy water. By the closing time 21 cups sold @ksh5.

KANGEMI STADIUM

On this date there were ball games at kangemi stadium. This was an opportunity to demonstrate the filter as well as sell the water to the players and the fans that had come to watch the tournament. I convinced the team coach to pay for the player's water. On that day the sales were 58 cups sold at ksh5. On the following day 64 cups were used by the players at ksh5.

Business model 2: leasing the filter to a customer who sells water

INSTITUTION

The filter was placed at the institution to convince them to lease the filter at Ksh100 per day to provide water to the students.

On these two days the main target was to sell water to an institution thus the students, teachers and even the non-teaching staff.

After consultation with the management permission was granted to place the filter outside Ebenezer Information College. The LifeStraw Community was placed from ten in the morning till five in the evening with the help of the receptionist. On the first day 12 cups of water were sold but the prices varied: 4 cups sold at ksh10 and 8 cups sold at ksh5.

On the second day judging from the previous day the price level was standardized to one cup sold at 5kshs. We did this in order to maximize the profits. On that day the total sales were 26 cups at ksh5 and we exceeded the suggesting leasing price of 100 KSHS per day.



1. - Ebenezer College



2. - Road placing Kangemi



3. Kangemi stadium

Opportunities

- **Quick introduction and sales of water cups** - we were always able to sell cups the first day and people understood and valued the benefit of filtering water and trusted the water they purchased.
- **High profit margin on price of cup versus price of source water** – the price of selling water per cup was not set since I was introducing a product in the market so I had to use the willingness to pay method where the customer is asked for his maximum price to set the price for the cup of water. Kshs 5 was accepted in all situations. Kshs 5 is the sales price of a 20 liter jerry can of untreated water. A cup is about 100 ML so this means that the cost of the source water is 0.025 KSHS.
- **Selling water to market filters** - as we were selling water we presented the opportunity to buy the filter to customers. This was a good way to introduce and market the product. This could be used to setup a sales commission system for water sellers.

Challenges

- **Harassment from the city council** - according to the Kenyan policy one has to acquire license to operate any kind of business or research to the public. Acquiring the license was a major challenge due to time factor. The filter is visible and conducting informal business is a challenge. We were harassed by city council officers on different occasions. Renting a spot from a licensed street vendor or shop can be an option.
- **Stock outs** – in some situations we used up the full capacity of the filter (football stadium) and ran out of water. We had to wait for 60 minutes to filter a 20 liter jerry can and start selling again.
- **Scarcity of water in some places**-in some places getting water is a major challenge especially in the slum areas. This affects the price of source water which can go up to 10 Kshs.
- **Leasing filters selling water to customers in a hotel or restaurant** -the management of the hotels bought the idea of the filter but they viewed it as a culture or a norm of giving their customers free water. Through this they saw it as a threat since some of their customers might dislike their idea and hence defect to other hotels which give free water.
- **Seasonality of sales** - the study was done during the rainy season and we saw that we had more sales on hotter days and towards the end of the day. We expect more sales in the dry season.

Sales and costs

Total sales

No. Of Days	Location	No. Of Cups	Price Per Cup(Kshs)	Total (Kshs)
1 -3		—	—	—
4	Church	87	5	435
5	Leasing to Ebenezer college	4	10	40
	Leasing to Ebenezer college	8	5	40
6	Leasing to Ebenezer college	26	5	130
7	Stadium	58	5	290
8-9	Stadium	64	5	320
10	Church	23	5	115
			Total	1370

Total costs

Item	Unit price (in Ksh)	Total (Kshs)
Transport to stadium	100	100
Transport to Church	50	50
Source water 20 liters Jerrycans – 11 units	5	55
Cups (270)	2.5	675
	Total	880

Conclusions

- Selling a cup of water above 5ksh is a challenge. Profit is very sensitive to the cost of inputs i.e. cups and source water. It is important for the seller to keep the cost of cups below 3kshs.
- The cost of obtaining a license from city council is not included. One option could be to rent out a space from a seller who has a license
- Average profit per operational day of $1370 - 880 = 490 / 7 = 70$ KSH