Global Enterprise Experience 2018
SauерPower Inc.
Lacto-fermentation in Burundi

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Executive Summary

Using a humble cabbage and a dash of salt, SauerPower Inc. aims to help fight malnutrition and create jobs in Burundi. Despite having a population in excess of 10 million people, Burundi is one of the smallest countries in Africa - making it the most densely populated. Most pertinent to this, is that Burundi also is one of the poorest countries in Africa with 90-95% of the population living off less than $2 every day (Frank, 2015)!

As a result, over 60% of Burundians suffer from malnutrition (Kerstein, 2015).

This information was, and still is, devastating. We, as a group, have focused our efforts on consolidating a plan to reduce these problems. The result is lacto-fermented cabbage, better known as Sauerkraut. This report outlines our business plan to create jobs but also to fight malnutrition in Burundi.

Our company, SauerPower Inc. will tackle these problems by setting up a lacto-fermentation factory which will be located in the Bubanza province. Inside this factory, we will make sauerkraut from salt, and locally grown cabbages. Sauerkraut is fine cut cabbage that has been fermented using salt, creating lactic acid bacteria. Fermentation is a method of preserving food that is globally used and growing in popularity due to the enormous health benefits (Shubrook, 2017). When fermented, cabbages produce a diverse population of live bacteria/probiotics which are important for gut health (Busch, 2017). Besides probiotics, sauerkraut has other nutrients such as: vitamins and enzymes. In addition to the great amount of nutrition, it is also easy and cheap to make.

Our plan involves the training of 10 Burundian women who will make the sauerkraut. We then will sell this to our target groups which include local shops, hospitals and schools. We will partner up with organisations such as the UNHCR, WFP and CRS (United Nations High Commissioner for Refugees, World Food Programme and Christian Relief Service charities) to help distribute Sauerkraut to our broad target market.

Due to the low costs of both acquiring materials and ingredients for Sauerkraut, paired with the low production costs, SauerPower Inc. needs very little initial investment ($1000USD) and will pay this back after turning over profits in our first year ($1207USD). Such low costs and simplicity of production, combined with high nutritional value makes Sauerkraut the perfect product for Burundi. With this in mind, SauerPower Inc. will reach her goal to create jobs and to reduce malnutrition in Burundi.

Business Overview

Burundi is one of the poorest countries in the world and has the second lowest GDP per capita according to the World Bank, after the Central African Republic. Burundi’s GDP is low as a consequence of civil wars, corruption, poor access to education and health services, weak infrastructure, and the effects of HIV/AIDS. Burundi is densely overpopulated with substantial immigration. In addition, Burundi’s health care is much lower than that of other countries. Life expectancy is 50.4 years and a significant percentage of the population suffers from malnutrition. At the beginning of the 21st century, there were 3 physicians per thousand inhabitants.

According to these figures, it is necessary to look for food alternatives adequate enough to improve the high rates of malnutrition. This is where sauerkraut can be incredibly beneficial because it contains a significant number of nutrients, as well as being an easy to make product. Sauerkraut will be of enormous help for Burundi in reducing the high malnutrition rate (Petre, 2017).
Our product is not only intended to be sold at a profit but in doing so we will create significant jobs for many Burundian women who will make the Sauerkraut as well as distribute and sell it.

**Business Objectives**
The main objective is to design a strategy for the production and distribution of sauerkraut, which aims to reduce the problem of malnutrition and poverty in Africa, specifically Burundi.

Burundi is located in East Africa, has no outlet to the sea and has a dense population. Burundi was rated the world's leading nation affected by hunger, according to the 2014 Global Hunger Index (GHI), a score calculated annually by the International Food Policy Research Institute (Kerstein, 2015).

Sauerkrauts’ fermentation process produces beneficial enzymes and probiotics which have been linked to improvements in cognition, digestion and immune functions. As our product contains various vitamins it can be used as a supplement, replacing current expensive supplements (PersistenceMarketResearch, 2018). The project will be led by a group of women, who have a direct relationship with a member of the team. Our idea is to promote entrepreneurship among women in Burundi in addition to helping women to develop leadership skills. Taking into account, decent work, providing decent conditions and an appropriate space to develop the work, our project aims at positively impacting families by offering a better quality of life. This is based on the definition of the UN "Decent work means opportunities for everyone to get work that is productive and delivers to income, security in the workplace and social protection for families, better prospects for personal development and social integration." (United Nations, 2015)

The proposal is a profitable one, as it will contribute to the struggle against malnutrition and at the same time it will generate income and employment.

**Marketing Analysis**

**Target Market**
The extreme level of chronic food insecurity is fueled by extreme poverty and poor access to basic livelihoods. Chronic food security refers to a lack of the absolute minimum requirement for food for sustained periods (Bajagai, n.d.). This vulnerability has been exacerbated by a 10 year civil war, as well as by political and socio-security issues. For a country where over 90% of the population survives off the agricultural industry, this is alarming.

The high dependence on agricultural production exposes the provinces in the North-East, Central-East and South-East (who are most exposed to the water deficit), to even higher risk of food insecurity.

It is these same Eastern areas, that host the provinces classified as level 4 of severe chronic food insecurity. In addition, more than 30% of households in Bubanza, Kayanza, Kirundo, Muramvya and Ngozi provinces have a "very poor" poverty index. Locally produced food accounts for 65% of Burundi’s food requirements, whilst the rest is made up of imports (Isteebu, 2012).
Based on this information of Burundi’s nutrition crisis, we will begin operation in the town of Bubanza and our specific target groups include:

- School children - via WFP* and CRS* organisations who distribute the products to schools;
- Medical patients (referred to us by hospitals as well as via the CRS charity);
- We will also appeal to the general community at local food stores;

*As shown, NGOs are a clear target for SauerPower. If we can get them onboard with our product, they will be instrumental in distributing sauerkraut to those in need (e.g. schools and hospitals).

**Competitor Analysis**

One benefit of selling Sauerkraut in Burundi is the lack of competitors. Lacto-fermented foods are not a commonly sold product in Burundi or nearby countries (Chilton, Burton, & Reid, 2015). Currently, families commonly live off corn and potatoes (and other crops) which all lack nutritional value, but are chosen as they are cheap. The making of sauerkraut is also very cheap, but the process of fermentation actually adds probiotics and has other health benefits. These benefits, combined with affordability, is what allows us to undercut competitor food distributors who sell more traditional, unfermented products.

**Marketing Strategy**

Our marketing strategy will involve the use of various different strategies and channels.

**Strategy One:** Our first marketing strategy will be: “mouth-to-mouth marketing”. This strategy involves the passing of information from person to person by oral communication. We envisage that via this strategy women whom we will educate to make sauerkraut, will tell the people in the communities, in which they live, to buy the products. Therefore It is crucial to our project that our business and team work together to make this a profitable, informative and engaging experience for the women we work with. As our aim is to provide aid in Burundi, our team, with the addition of experts and operations supervisors, will be committed to creating a work environment that the women feel proud to be involved in.

**Strategy Two:** We will partner up with large organisations which will help us distribute the product to our target market. Examples of organisations are: the WFP, the HCR and the CRS. These organisations are responsible for providing food to refugee camps, schools and hospitals.

**Strategy Three:** We will use advertising to generate product recognition. This will be done in several ways. We will put advertisement on the national tv/radio and the local and national newspaper. Newspapers will be the most important one. A lot of big organisations announce their product or activities in newspapers. Furthermore, newspapers in Burundi are often read by educated people. This means that the educated people will decide whether we are selling a good product.

**Strategy Four:** Another important strategy for us will be: “retail marketing”. This means that shops in Burundi will buy our product and then promote and sell the product to the end customer.

**Strategy Five:** We will use discounts. This is a well known strategy and we will use it in two different situations. The first situation will be when organisations or shops buy our product in bulk. The second situation is when our end customer comes to our shop in the factory to buy sauerkraut. They will get a discount when they bring their own cans or other packaging method. This will be good for us because we have to make less cans and it will also be a good method to reduce waste. Therefore, we want to encourage our customers to do this by giving them a discount.
### SWOT Analysis

<table>
<thead>
<tr>
<th>Internal</th>
<th>Helpful</th>
<th>Harmful</th>
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</table>
| Strengths: | - There is a lot of demand for sauerkraut.  
- There is a good climate to cultivate cabbage.  
- We don't have a lot of competitors.  
- Partnerships with big organisations.  
- Better health in Burundi.  
- Fermented foods can be stored for a long time. | Weaknesses: | - People don't like sauerkraut.  
- Bad storage for the bought cabbages.  
- New legislations.  
- Low brand awareness. |

<table>
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<tr>
<th>External</th>
<th>Opportunities:</th>
<th>Threats:</th>
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| - Demand in neighbouring countries.  
- We can educate people on their nutrition.  
- Increase our product line (lacto-ferment other foods).  
- Train more women to increase production. | - Chance of country being economically unstable  
- The chance of competitors mimicking product.  
- Bad cabbage harvest due to dryness or insects eating the cabbages. |

### Operations Process

**Materials needed**

The materials needed to make sauerkraut are minimal and non-exhaustive:

**Ingredients:** Cabbage and Salt. (Optional: selection of seeds and spices. Common practice to add caraway seeds but this is not compulsory.)

**Equipment:** Cutting board, knife, container, cloth, stones or other weighing instrument to weigh down cloth, canning Machine, cans.

**Circumstances:**

- Clean environment: As the fermentation process requires beneficial bacteria, it is important to secure a clean environment. For example, a clean kitchen counter, to allow the desired bacteria to succeed.
- Stored away from direct sunlight and at cool room temperature.
- Fermentation process allowing for a period of more than 10 days. The smaller the batch of sauerkraut the faster it will ferment.

**The relationship between materials and scale of production**

We will produce Sauerkraut in a workshop which we will rent out. Here, the women will work to prepare, ferment and then can the Sauerkraut so it is ready for distribution. This workshop allows us to store and prepare ingredients (cabbage, salt, seeds), store the finished product, hold large containers for fermentation, and transportation docks.

### How to make Sauerkraut

1) Ensure you have a clean working environment.
2) Cabbage
   a) Discard the outer leaves
   b) Cut the cabbage in half and then wedges
3) Transfer the cabbage to big mixing bowl.
4) Sprinkle salt on top.
5) Massage the salt into the cabbage until it is 'limp'.
6) If you wish to add seeds or spices, do so now.
7) Transfer cabbage to your designated container.
8) Pour any liquid/water left from massaging process into container.
9) Press the cabbage beneath the liquid using a weight if necessary - e.g. bricks or a lid
10) Cover the container with lid or cloth.
11) Check up on the cabbage during the following 24 hours and press down every so often.
12) Allow for the fermentation process.

Staff and Training
Our group believes it is critical to ensure our product is marketed in a sustainable manner. Therefore, our team will include:

- Denis Ndayizeye who resides in Bujumbura will be our head of operations. He will oversee day-to-day processes of SauerPower Inc.
- One woman out of the 10 employees will be responsible for marketing.
- An expert on lacto-fermentation who will ensure appropriate practice and procedure is followed as well as supervise production. This will also be one of our 10-member team who will learn the skills necessary via direct communication and instruction with us. We have calculated costs in to allow for trial and error/training.

Our team will include 10 women, chosen by Denis (head of operation) from three Burundi ethnic groups (Hutu, Tutsi and Batwa). This makes our project wide-spread and non prejudicial:

- 3 repatriated women;
- 3 women with no access to land and therefore struggle to get enough food;
- 2 women from ex-combatants;
- 2 women with disabilities.

The 10 women team will increase as SauerPower Inc. expands.

Our team is dedicated to creating sustainable jobs for Burundian women. Initially, Denis will hold a brief seminar to inform the women about our project, the requirements and how we hope to help them. We will also include a training programme through which older woman who have worked with SauerPower Inc. will teach and train younger women. This programme will support our goal as it will create viable and sustainable employment option for women throughout many generations.

Economic Analysis
The following section outlines the six year financial projection for SauerPower Inc. as well as initial start up costs. All values are in USD. For interest sake, the current exchange rate from USD to Burundian Franc (BIF) is 1 USD = 1,761 BIF (Figures as of May 2018).

<table>
<thead>
<tr>
<th>Sauerkraut Industry in Burundi</th>
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<tbody>
<tr>
<td><strong>Assumptions</strong></td>
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<tr>
<td>Cabbage Price / unit</td>
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<tr>
<td>Salt Price /kg</td>
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<tr>
<td>Sauerkraut Price / Kg</td>
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<tr>
<td>Price / Can</td>
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<tr>
<td>Daily wage in Burundi</td>
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<tr>
<td><strong>Year -&gt;</strong></td>
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<tr>
<td><strong>Revenue</strong></td>
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<tr>
<td>Sauerkraut Sold</td>
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<tr>
<td>TOTAL REVENUE</td>
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<tr>
<td><strong>Capital Costs</strong></td>
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<tr>
<td>Canning Machine</td>
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<tr>
<td>TOTAL FIXED COSTS</td>
</tr>
<tr>
<td><strong>Variable Costs</strong></td>
</tr>
<tr>
<td>Cost of Cabbages /year</td>
</tr>
<tr>
<td>Cost of Cans /Year</td>
</tr>
<tr>
<td>Cost of Salt Purchased /year</td>
</tr>
<tr>
<td>TOTAL VARIABLE COSTS</td>
</tr>
</tbody>
</table>
Business activity is predicted to begin in the second half of 2018 (purchasing of capital resources, paying legal fees etc.) and sales will commence in 2019. Fixed costs increase over the years primarily due to the expansion of the business and the need for more staff and therefore increased wage expenses. Obviously, as we expand, the quantity of materials and cabbages needed also increases (variable costs). However, SauerPower Inc. is able to turn over profit starting from year 1 (2019) due to such low costs. Profit will continue to grow over the five years as we expand into new regions and grow our markets. The discount figure is 10%.

### Projected Sales

We project sales will start small as we are based in Bubanza and building our brand. Once established, we are able to grow quickly, due to the low start up and production costs. Eventually, we aim to have a second production location which comes with increased costs (rent and capital).

### Capital Requirements

Relatively low start up costs are required for SauerPower Inc. due to cheap sourcing of materials, and minimal materials required. However, $1000US Dollars in our first year is required to purchase capital (machines and workshop), pay legal fees and purchase equipment and materials. We will obtain 80% of this from the BBCI (Banque Burundaise pour le Commerce et l'Investissement). In line with standard Burundian procedure, the remaining 20% of the initial investment ($30US pp) will be provided by our group. We are confident the BBCI will invest in us due the enormous social and health benefits of our company and product.

### Future Outlook

After successfully setting up the company in Burundi, raising product awareness and reducing malnutrition, we will establish in neighbouring countries. We realise that not only burundi is suffering from malnutrition, and Sauerpower Inc. wants to help. This will involve hiring more staff and expanding facilities. The social benefits for these countries will be huge. First of all, people will live healthier lives but we will also create employment and boost local economies.

Another goal for SauerPower Inc. will be to add products into our existing product line. Everybody has different taste. We will research the lacto-fermentation of many other vegetables and fruits. By adding products into our product line we can meet an even wider target market and further improve the fight against the high malnutrition rate.
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