Team 66

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Executive Summary
Rural communities are often left forgotten as drinking water supply increases in developing countries. Colombia is no different, with an estimated half of all rural inhabitants without access to sanitary water (Fondadelagua, 2017). Research also suggests that people in these areas often spend up to 45% of their incomes on drinkable water, more than those in developed countries.

SunlightPure Ltd offers an innovative solution, which is collectively affordable to rural communities. We have designed a large 1.25m diameter purifier, which can be fitted as a lid on large water tanks. The purifiers are made from glass with a nanocoating of molybdenum sulphide and copper (Cui, 2016). Sunlight then activates the coating, performing a chemical reaction, which purifies the water. Each purifier is capable of cleansing 400 litres of water per day to a safe standard.

Our business model works through two key relationships. We establish a supply and license relationship with the US company with the required technology. SunlightPure also works with Tecnoglass, a local well-known Colombian glass manufacturer to produce our product. This ultimately allows SunlightPure to directly focus on sales and marketing.

Our target market is rural Colombia with an initial focus in La Guajira. These areas are suffering from disease and poor health directly resulting from drinking water with contaminants (Eltiempo, 2016). The market segments we are targeting are local schools and communities. Our purifier is strategically scaled so the system costs less than $2 per person for the first year’s supply of water and is free from then onwards. We market our product directly to these areas with our sales team as well as using low cost radio, newspaper and magazine advertising. This allows us to reach a large chunk of the market at a minimal cost.

SunlightPure is also financially viable. Based on future projections, we will be producing a small profit in our 2nd year of sales, which will grow significantly over the following years. Over the 5-year model, we have a positive net present value of $47,214 and an internal rate of return of 61%. Sunlight pure retains profitability with a 40% increase in variable costs.

SunlightPure is a company which has been built for the purpose of enhancing social wellbeing in Colombia. Our company is innovative, self-sufficient and environmentally friendly, relying on no consumable energy sources. Over the 5 year projections, SunlightPure would have already purified more than 100,000 peoples water, changing their lives forever.

Business Overview
SunlightPure Ltd uses state of the art technology to provide sustainable water purification in communities which need it most. Our life changing journey begins in north east Colombia. By strategically setting up our operations from an office in Barranquilla, we place ourselves close to Tecnoglass a well-known glass company, an international port and are on the borders of the people needing us most (ProBarranquilla, 2012).

To make water affordable at an individual level, we had to think large. We have developed a massive 1.25m diameter container lid which fits common 1000l water storage tanks and purifies water using visible light. By establishing a key relationship with Tecnoglass to produce our purifiers, we directly focus on getting our product to market and begin improving people’s lives.
There are three key elements which make this business plan work and achieve our ultimate goal:

**Business Objectives**
SunlightPure Ltd is built to deliver the following key business objectives:

- Increasing supply of safe drinkable water in rural Colombia.
- Supporting local economic growth and development.
- Directly benefiting the health of local communities.
- Providing sustainable long-term solutions to water purification.

Many of these objectives go hand in hand. It is estimated that every $1 spent on water purification results in economic benefits of $6-$70 (Drop4drop, 2017). SunlightPure provides a self-sustainable purifier which does not rely on consumable energy. We maximise efficiency by using UV light and visible light, delivering fast and effective water purification (Cnet, 2016). SunlightPure strives to maximise social benefits, supporting local industries and pricing to minimise the cost of water to individuals.

**Operations Process**
SunlightPure’s core business is the marketing and sales of our water purifiers. The key activities of the business are as follows:

Managing relationships – it is essential for SunlightPure to develop and maintain effective relationships with our technology supplier and Tecnoglass, our manufacturer.

Marketing – reaching the largest audience at the smallest cost, to promote the importance of water purification and safety.

Sales – directly going out to rural villages and schools to promote and sell our water purifiers.

Admin – taking care of the general running of the business.

The key advantage of our operations is that SunlightPure has a direct focus on providing purifiers to local communities, our main business objective.
Production
SunlightPure works in collaboration with Tecnoglass in Barranquilla. By using local expertise, we limit our learning curve and can support local industry. This partnership is also beneficial to Tecnoglass, they gain new working knowledge, capabilities and add to their social image helping local rural communities.

Sales Office
Location
SunlightPure Ltd will have an office located out of Barranquilla. Barranquilla is a strategic location for the following reasons:

Local expertise – Tecnoglass is located in Barranquilla. Tecnoglass are a well-known company who offer innovative glass solutions and are the perfect company to manufacture our purifier. With over 2 million people, there is a large workforce (ProBarranquilla, 2012). This will give us access to talented sales people to sell our purifier.

Surrounding areas – Barranquilla is surrounded by many rural communities. As these areas are our target market, travel costs are limited and we can respond quickly to customers.

Port access – Barranquilla offers the largest multi-purpose shipping port in the Colombian Caribbean (ProBarranquilla, 2012). This makes it very simple to retrieve the nanofilm we have imported from the USA.

Staff
SunlightPure will start with one admin and marketing manager. The remaining staff will be sales staff, growing in number as our predicted sales increase.

Resources
License – SunlightPure Ltd will acquire a license to use the molybdenum sulphide nanotechnology required for our purifier. A low-cost royalty fee will be negotiated by committing to also use the inventor as our exclusive supplier for nanofilm.

Strengths and weaknesses analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large market with over 783 million people without safe drinking water</td>
<td>Our purifier may not fit all water tanks</td>
</tr>
<tr>
<td>Local manufacturing limits shipping costs and stimulates local economy</td>
<td>High levels of competition with established large competitors such as Solvetten</td>
</tr>
<tr>
<td>Our purifier is more efficient in comparison to competitors</td>
<td>Doesn’t suit communities with no access to water at all</td>
</tr>
<tr>
<td>Strategic business relationships</td>
<td></td>
</tr>
<tr>
<td>Our purifiers are built for a large group of people and are collectively affordable</td>
<td></td>
</tr>
<tr>
<td>The purifier is self-sustaining from non-consumable energy</td>
<td></td>
</tr>
</tbody>
</table>
Market Overview

Marketing objectives
- Educate people in Colombia’s rural areas about the importance of clean water and how dangerous drinking unsafe water can be.
- Show the capabilities of our purifier to harness the sun’s energy, efficiently and effectively purifying large quantities of water to a high standard.
- Demonstrate how our purifiers are collectively affordable and work out to less than $2 per person for a year’s supply of water.
- Build SunlightPure’s image of being committed to social well-being.

Target market
- Our initial target market are rural schools and villages in Guajira, Colombia. In Guajira, a sample test was taken where more than 20% resulted in the presence of coliforms, directly and negatively impacting human health (Superintendency of Public Household Services, 2015). SunlightPure will later look to grow in the surrounding areas of north east Colombia.
- To get access to these markets, we will more specifically target village elders and those in charge of schools. These people will have the greatest influence on the use of collective funds to purchase our purifiers.

Marketing communications
- Advertise directly by sending sales staff to schools or villages to educate people about the importance of clean water and demonstrate our water purifier on a small scale.
- The remainder of our marketing budget will be spent predominantly on radio and street advertisements to reach the largest amount of people at a low cost.
- Local newspapers and magazines will also be used for advertising with catchy slogans highlighting the minimal cost of our purifiers per person.
- We will partner ourselves with large-scale organizations which help bring clean water to poor people in rural areas, such as Waterislife and Colombia Water Center. This can be mutually beneficial, promoting their name and providing us with key information they have from servicing our target market.

Competitor analysis
- Providing clean drinking water in developing countries is a crowded market. There are companies distributing bottled water, tank loads of water, water filters and water purifiers on large and small scales.
- SunlightPure is directly competing in the water purifier market. One of our most significant competitors is “Solvatten”, a partner of “Connect 2 Colombia” to bring clean water to people in La Guajira. Solvatten has technology using UV lights and pasteurization (Taylor, 2017). Other purifiers require consumable energy to be powered.
- SunlightPure is a step forward over other sunlight purifiers. Our product is the only one on the market which harnesses visible light as well as UV light. The use of visible light makes our system 50% efficient on solar energy compared to UV systems with 5% efficiency (Aljazeera, 2016). This efficiency results in a purifier which purifies a larger quantity of water in a fraction of the time.
Financial Analysis
The following section includes the financial analysis of SunlightPure Ltd. All currency has been converted from the Colombian Peso into $USD.

Initial investment costs
Prior to first year sales, the following costs will be incurred as part of setting up the business during a 6-month period. SunlightPure will employ two part-time staff members to undertake the following key tasks.

- Find a suitable office for rent in Barranquilla.
- Negotiate royalties and supply arrangements in the United states for nanofilm.
- Meet with Techoglass to negotiate terms for an agreement to work together.
- Begin implementing our marketing strategy.

<table>
<thead>
<tr>
<th>Initial Investment</th>
<th>Research</th>
<th>Equipment</th>
<th>Salaries</th>
<th>Marketing</th>
<th>Petrol</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
<td>2000</td>
<td>3000</td>
<td>1496</td>
<td>400</td>
<td>500</td>
<td>9396</td>
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</tbody>
</table>

Operating costs per month for first year

<table>
<thead>
<tr>
<th>Operating costs</th>
<th>Salaries</th>
<th>Rent</th>
<th>Utilities</th>
<th>Marketing</th>
<th>Petrol</th>
<th>Shipping</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000</td>
<td>400</td>
<td>140</td>
<td>249.38</td>
<td>33.33</td>
<td>25</td>
<td>41.67</td>
<td>1889.38</td>
</tr>
</tbody>
</table>

Capital required and source of capital
Each team member will contribute $US2500 each totalling in $20,000. The capital raised will cover initial costs and 4 months of operating costs in our first year of sales. As SunlightPure will be registered as a private limited company, each team member will be equal shareholders, totalling in 20,000 shares valued at $1 each. The remaining capital at just over $3,000 will cover us for any unexpected costs or outcomes.

Sales
Our sales price reflects our objective of making each purifier cost less than $1.10 per day over the course of a year. There is an extremely large market with growth potential. The growth reflects the increase in sales staff. On average, each member of the sales team will have to sell just two units a week to meet our projections. Our sales forecast is the minimal sales we would expect.

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>75</td>
<td>150</td>
<td>250</td>
<td>350</td>
<td>450</td>
</tr>
<tr>
<td>Selling Price</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Forecast
The following table outlines the financial outlook of the company with projected sales and costs. We have been very conservative with growth. Our forecast suggests a loss for the first year, but as scale up we see profit by the end of the 2nd year. The left column of year 0 outlines some of our costing assumptions, estimated from researched information. The values have also been discounted at a 10% rate, giving a net present value of over $47,000 and IRR of 61%. This suggests the project should go ahead. SunlightPure could unexpectedly have over $80 in variable costs increase and still remain profitable with an IRR of 21%.
Future of SunlightPure

SunlightPure is only just hitting the surface of how many people can live longer and happier lives thanks to our purifier. Colombia itself, still has the 12 rural areas in the table which do not have access to safe drinking water. These communities are at the highest risk of disease contraction like Hepatitis A, cholera, typhoid and parotid fever. By the end of year 5 of our forecasts, we will have purifiers in place providing more than 100,000 people in rural areas with safe drinking water. Sunlight Pure will endeavour to supply in the whole Colombian rural market in the future, before heading overseas. The social benefits to these communities will be immense. We will see economic growth, people growing up, flourishing and living healthy lives.
References


