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SolarRoute
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I. Introduction

The objective of my projects is to set up a network of microentrepreneurs to sell products on routes throughout Nicaragua. This will be carried out in partnership with, SolarRoute, a last mile distribution network that employs national bus routes. It contracts bus drivers and partner ticket collectors as microentrepreneurs to sell the Greenlight Planet SunKing Pro dual solar lamp and cell phone charger to those in rural, off grid areas in Latin America. The bus networks serve as the publicity and sales platform, and profits made through sales enables scale in order to reach 30 million people in Latin America without access to electricity.

I am piloting this in Nicaragua as a consequence of my prior experience there. However, this model is scalable in any country with an extensive transnational bus system and where \$50 is an affordable price tag for the lower income quintiles (often the rural poor): Bolivia, Peru, parts of Brazil, Guatemala, Honduras, Haiti, and the Dominican Republic.

For me, this is not just a summer project. I am passionate about and confident in the mission because I believe the potential long-term impact and reach is enormous. As far as sustaining the project is concerned, if the pilot is successful or shows promise of take off, then I will hire a country manager to run operations while I'm back at school for my senior year and return during each break. If the model shows some promise but isn't reaching full potential, I will reevaluate and redesign based on experience and re-launch after I graduate.

I piloted this model in Nicaragua by setting set up a solar technology program through a microbank last summer. SolarRoute employs the traditional microentrepreneur model that is often used in last mile distribution—i.e. micropharmacies, Avon ladies. SolarRoute will partner with the Nicaraguan microbank MiCrédito, who will provide loans to SolarRoute bus driver microentrepreneurs so that they have startup capital to purchase the lamps that they will sell on their bus routes.

The issue with access to electricity lies in its access and distribution. The Greenlight Planet SunKingPro is the best solar product on the market: a solar lamp and cell phone charger that comes with a panel for charging and four cell phone adaptors. I worked for an impact investor last summer who had invested in MiCrédito so that they could start a line of credit specifically dedicated to solar. Part of my job was to set up the microentrepreneur program in which MiCrédito would finance someone to sell the small solar products. I travelled throughout rural Nicaragua with a loan officer and did household demonstrations of the products. Everyone wanted to buy it right then and there to replace their current “solution”: kerosene.

II. The Problem

SolarRoute addresses development issues related to lighting. The rural poor burn kerosene. Solar lamps are not only good for the environment and improve individual health, but improve access to light, which allows for more productive hours. A family can keep their store open later, cook later, or children can study at night. Furthermore, families pay around \$5 to \$15 a month in energy expenses. The SunKing Pro retails for \$50, which allows families to make an investment that pays for itself in a year—furthermore, the lamp battery lasts for 5+ years (and can be replaced for around \$10). Secondly, SolarRoute uses bus drivers as our last mile distribution, providing a lower-income demographic with a side job and a role in their region's economic development.

III. Peace

Picture your daily life without light—or if you had to wonder when you could charge your cell phone. Imagine what it would be like to eat, sleep, play, read, cook, or study while always breathing in toxic kerosene. Imagine the significant health risks and costs you would incur from purchasing kerosene on a monthly basis. 30 million people in Latin America—even at the lowest poverty level—can afford a \$50 investment (that will pay for itself in under a year and then generate savings from forgoing kerosene and cell-charging expenses) but, by no fault of their own, have no access to solar lights.

Economic development is not necessarily the traditional definition of "peace". Development equals freedom: freedom to educate yourself, to take out a loan or open a bank account, to work, to take care of your health, and every other freedom we enjoy every day. Possessing freedom avoids conflict. Development can be the fast track lane to peace in a country where many lack resources, money, or education. Development avoids conflict that arises from poverty, since development alleviates poverty.

This project is particularly important because of its sustainability and scalability: SolarRoute will be a long-term last mile distribution organization, not just a summer project. It addresses a root cause of conflict—poverty—and employs an innovative model that provides both financial and technological inclusion as the solution. 100 Projects for Peace will be empowering the kick off of (hopefully) a social enterprise that aspires to reach the 30 million people in need of these technologies. The potential, scalable impact SolarRoute has, combined with the guarantee that it will continue far beyond one summer, makes it a sustainable investment in peace that will continue to scale, reaching more and more people with nearly limitless potential return on investment in terms of social impact

IV. SolarRoute's Model and Why Bus Routes Are Advantageous

Last summer, I traveled on the "chicken buses," where people sell bizarre things. I thought it would be efficient to add to this trend by having bus drivers sell solar lamps. Since the concept is not novel in Latin America, the model fits with the status quo. Visibility is key: the panel will be mounted on the front of the bus during the day to charge, and then the light will be turned on inside at night and passengers will have the opportunity to charge their phones. With the presence of televisions on every bus, a promo video will be shown. Bus routes are often taken by rural poor, who, when traveling, carry lots of cash because it's generally to do a big errand. Buses are extremely advantageous as the sales and publicity platform: they are easily the most visible and far reaching system in the country. Oftentimes, buses are the only "institution" that a rural area ever sees. Once this model infiltrates the market, customers will know to go to a local bus stop to purchase a product. I plan to market the position to the bus driver and ticket collector (who work together on one bus route) as a partner sales job, so that they can share the burden of the credit and split the profits. Lamps will be sold to them at \$35 each and they will sell them to customer at \$50. Lamp costs (from SolarRoute) and interest rates (from MiCrédito) will decrease as the client continues to purchase lamps and take out loans. These are the current market prices for microentrepreneurs and last mile customers in Latin America. Last summer when I studied the market and did household demonstrations, we marketed the product to the two different actors at these prices. Microentrepreneurs need enough of a profit to incentivize them to sell the products, and to pay back to interest (1.9%) on their loan.

V. Goals and Metrics

My goal is to have 20 microentrepreneurs that will start with 10 products each by the end of the pilot; ideally, these will sell fast and they'll have a continuing line of credit to keep purchasing and selling products. The first target region will be the state of Boaco, where 70% of residents do not have access to electricity. The route from Managua to Boaco runs about four times per day. The model can "kill multiple birds with one stone" by communicating with bus drivers in Managua but impacting areas all over the country since most routes reconnect to Managua.

VI. My Qualifications

I have a strong relationship with my partner, MiCrédito, for whom I worked last summer. Their traditional microentrepreneur model has not taken off to do lack of staffing and innovation in approach. Since MiCrédito has milestones to meet set by their investor, they are in support of SolarRoute's model. They already have bus driver clients who have received credit for other initiatives. Through my experience in providing household demonstrations last summer, I know these lights will sell, but the current distribution methods do not maximize the customer base potential. My model goes further than current methods by combining distribution with an already existing system that reaches rural areas several times a day.

In addition to speaking fluent Spanish and possessing valuable knowledge from my development education at Tufts, I am even more at an advantage to launch the venture considering that background work is completed. I have a network of advisors that I met the past summer who are in support of the project.