

SolarRoute
Nicaragua
Tufts University
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SolarRoute is a social start-up that provides dual solar lamp-cell phone charging units to the last mile in Nicaragua. The “last mile” is a development term used to describe geographically and economically isolated populations with little access to relevant information, services, and resources to lift themselves out of poverty, a definition largely applicable to the 30 million people in Latin America who do not have access to energy. This group makes significant use of kerosene lamps for energy, which are harmful to health, the environment, and provide limited visibility during evening hours. Lack of lighting and proper technologies inhibits productivity – such as fewer hours spent studying or working, which translates to a smaller chance of progressing out of poverty. SolarRoute distributes the Greenlight Planet manufactured SunKing Mobile, a solar lamp/cell phone charger with five different adaptors to charge any cell phone and three light settings. It costs \$55 to the last mile. A full charge takes about five hours and gives 36 hours of light. Greenlight Planet manufactures for developing markets and SunKing products are consistently voted the best on the market.

I received \$5,000 from D Prize and \$1,947 from Tufts University Institute of Global Leadership to help with launch. The second day in, I hired a Nicaraguan who would also foreseeably manage operations after I had gone back to school. His name is William Garcia, a friend from the Peace Corps referred him to me, and he lives in a small town outside Matagalpa called La Dalia.

SolarRoute piloted in Matagalpa, a northern, mountainous region internationally renowned for its coffee farming and is about 60% rural, with agriculture as the main economic activity. We did marketing events throughout the two months. We would post up in a highly trafficked area, generally the bus stop or market in a “cabezera municipal” (the closest town or center) in a rural zone. These are advantageous zones due to traffic of goods and people who were generally traveling back out to or from rural areas, meaning they had unreliable, little, or no access to the grid – our target market. We had our products on display, informational posters, a free cell-phone charging station, and fliers and stickers to pass out.

In addition to informing our interested clients that we look for distributors, we organized with teachers and microbanks. At the end of the month, every teacher in the municipality gets together for a lesson-planning meeting for the next month. We got in touch with the Ministry of Education and visited all 390 teachers from La Dalia to pitch the microentrepreneur idea. We also launched an experimental partnership with a microbank, AFODENIC, to provide lights in their most rural branches – El Ayote, El Rama, Nueva Guinea, and Juigalpa. They have an existing network of 5,000 clients that their loan officers visit on a weekly basis, so they promote the lamps at their field visits and in the branch offices when clients come to repay or take out loans. We also worked with agrochemical stores, where rural dwellers go to buy farming inputs. We had two options for these retailers: consignment and commission or buy and resell, which gave them the option to test the waters without incurring risk.

In Nicaragua, about 90% of the population is on a pay as you go cell phone “plan”, meaning that they just add “saldo” (credit) to their phone whenever they’re out. Everyone has a cell-phone from carriers Movistar or Claro and you can add credit to your phone anywhere in the country. Movistar and Claro contract companies to deliver this cell phone credit to the retailers around the country. We launched a pilot with Movistar’s distributor, ProMix, in the region of Matagalpa – the entire region is covered by five distributors who go visit a different zone in the region every week delivering the credit orders on their motorcycles. They began taking out a SunKing Mobile every day to sell, and then would take orders from other people who wanted one and then deliver them during the next visit. They sold 20 in their first 2 weeks.

It quickly became apparent which distribution methods worked or were worth our time. The teacher and/or wandering microentrepreneur model requires a lot of input with little payoff. At

the end of the summer, we only had two microentrepreneurs. The agro store model proved fruitful, except took a bit of convincing for stores to sign up. We currently have three stores distributing products for us. We currently have two partnerships with two community organizations/microfinance banks. There were also general obstacles we found with everything – most people wanted to know our address (it would have been easier to have a central office simply for recognition), and most Nicaraguans revolve purchasing around a harvest, which didn't take place in Matagalpa until October, meaning our target market literally didn't have cash to buy the product at the moment.

In the second to last week, we scaled the ProMix model to another branch, and will hopefully be scaling it to a third within a month. They have an existing network of 30,000 retailers that they can sell to, along with others along their delivery route. Furthermore, they already sell cell phones and chargers in addition to cell phone credit, so the SunKing is a perfectly accommodating product (since it charges phones). ProMix distributors cover extremely rural areas of the country, too (although we surprisingly did find that areas with electricity were also highly receptive of the SunKing products, since power often goes out).

We started with 70 lamps for the pilot, quickly had to order 50 more, and at the moment have 9 left. That means we sold (or have scheduled to sell) 120 lamps in under two months. SolarRoute is still in operation and managed by William while I am here at school – we are focusing on managing what we have built and will give more attention to scale and strategy development once I am back. We are focusing on the relationship with ProMix and importing our next shipment of lamps from the supplier in order to significantly decrease per unit cost for us and to have enough inventory for the harvest season (September-February) when sales will hopefully increase due to influx of cash to our target market.

I am extremely grateful to 100 Projects for Peace for giving me this opportunity. Back in November, SolarRoute was a very simple idea that I toyed with actually doing if I received funding. It was an amazing learning experience and I'm so thrilled it is (hopefully!) going to keep going and that 100 Projects for Peace supplied an ample amount of funding to sustain us even past our pilot this summer.

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.

SolarRoute is sustainable and scalable: it's a long term enterprise that addresses a root cause of conflict – poverty – and employs an innovative model that provides both financial and technological inclusion as the solution (and has the potential to include other technologies in its distribution). 100 Projects for Peace empowered the kick off of an enterprise that aspires to reach the 30 million people in need of these technologies. There is a nearly limitless potential return on investment in terms of social impact.

I believe that it is easy to become immune to the extreme poverty visible around you – this is not to say that it doesn't evoke empathy, rather you simply become used to it. When development work is your "work," you can start to lose sight of why we actually engage in it. Little interactions keep you in touch, and one particularly struck a chord with me this summer. I had received a call in the middle of a training session that a man wanted to purchase a light and was waiting at William's CyberCafe. I left the session during lunch to go attend to him. He was a very tanned man from the *campo* who wore a hat and backpack slung over one shoulder that he was clutching with both hands:

"Juan Antonio came on a two-hour bus ride to La Dalia just to buy the Mobile. He barely said a word. He meticulously counted his money, slowly, carefully dealing with it, not handing it over until the last minute when he had both receipt and product in hand. In that silent moment, it was so clear how much that money meant to him, and it meant even more to me where he chose

to spent it. It's these interactions that stay with you, and keep you working towards the mission."
- Morgan Babbs, Tufts University
Photos



One of our marketing events in a Matagalpa market. Drying cocoa beans in the background.



Xiomara, our first retailer. You can see her *Parada Oficial* retailer sign and with her products.



This is the training session with the Managua branch of ProMix, significantly larger than the Matagalpa branch—3 times the amount of distributors.