



Refugee Camp Fire Disasters: Roadmap

1. Social Impact

- 1.1. Summarize your understanding of the problem you are trying to address and its root causes.** *You may wish to draw from and briefly summarize relevant key components of your round one submission.*

The problem we have focused on is fire management inside of refugee camps on the Thailand Myanmar border. The refugees have been arriving on the Thailand/Myanmar border for 30 years to escape political violence. Their initial arrival was not planned, so camp layouts were created in an ad-hoc way with no layout plan. The housing structures have been built with flammable building materials such as bamboo and thatch. Many camps do not have electricity and use fire as their main source of energy. Many people inside the camps, including children, engage in risky fire behaviors that lead to fire disasters. The protracted unrest in Myanmar has led to donor fatigue, making it difficult to effectively respond to and improve prevention measures.

- 1.2. Explain who will benefit from your social innovation.** *What specific target population will benefit from your social innovation? What other populations or stakeholders will derive a benefit from your social innovation? (see SEGMENTS on the social business model canvas)*

The refugees living inside the camps along the the Thailand/Myanmar border are the primary beneficiaries. Other stakeholders who will benefit from this social innovation are the Royal Thai Government, The Border Consortium, the United Nation High Commissioner for Refugees, and other NGOs working on fire management in the camps, because these agencies expend resources to rebuild homes and facilities that are burned in fires.

1.3. Explain what your social innovation does. *What are the key activities that you will carry out? What is the product, service, or intervention that you offer? (see KEY ACTIVITIES and TYPE OF INTERVENTION on the social business model canvas).*

Creates a microfinance market for solar-powered LED lanterns that refugees will pay off using their daily income that was once used to buy candles. Refugees will then own these lanterns and have a reliable, safe source of light for at least 2 years.

First we will need to do some fundraising and approach certain stakeholders to buy-in. Then we will go and talk to people in the camp in order to invite them to collaborate with us in this initiative. This initiative should create sustainable funding circulation and expand the number of refugees using solar powered LED lanterns instead of candles. As a result we will reduce the risk of fire due to candle accidents.

1.4. Explain the potential depth of impact. *What is your project's most important social impact?*

To reduce the number of fires in Thailand's refugee camps, and the high cost in human life, injury, destroyed homes, and damaged facilities. It will also be a community-led solution with the social impact of developing leadership and ownership among different segments in the community: from children, to women, to entrepreneurs.

1.5. Explain the potential breadth of impact. *How scalable or replicable is your social innovation?*

While our innovation would be rolled out in a single refugee camp initially as a pilot project, once that project has been evaluated and modified it will be replicated in all of the nine refugee camps in Thailand. If other refugee camps regionally or globally are having similar issues, the methods and lessons learned will be made publicly available for those that might want to adapt our solution to their context.

2. Acceptability/Desirability to Customer

2.1. How would your target customer / beneficiary define the social/environmental challenge you are addressing in their own words?

A refugee who has not attended the type of awareness-raising program we propose might frame the challenge thusly: Fires are a normal part of life in refugee camps. They cannot be avoided, only dealt with after the fact. Fires destroy our homes and our belongings, and sometimes injure and kill people.

2.2. Explain how your activities will create your desired social impact for this customer.

In what way is your approach going to solve the problem you have identified? What is your theory of change and or your social ventures strategies to create impact? (see VALUE PROPOSITION on the social business model canvas)

Solar LED lanterns offer a safe, reliable, long-lasting source of light, and peace of mind. This will reduce the fire hazard risks that refugees are taking, and let them sleep without worrying a candle may burn their house. This makes the camps safer for everyone.

2.3. Explain how you have tested the assumption(s) that your idea will work and what customer insights you have gleaned in this process. *What have you done to test or validate your idea? Have you interviewed people? How many and what did you learn? Have you run any experiments? What did you learn? What changes have you made to your social innovation concept based on the insights you have gathered? What other assumptions you have yet to test, and how are you planning to test them? If you have a Minimum Viable Product (the most basic form of your intervention that you use to get customer feedback early on in the process), please describe what it is and how you have built / will build in a feedback loop to gather insight from your customers as you test.*

The solution we are proposing is the result of thorough research online, as well as personal experience from Wachira, one of our group members who works for the Thai government as a leader in the refugee camps. We took solutions gathered from these sources, and tested them first with a group of eight former refugees from Thailand's camps who are now living in San Diego. We made considerable changes as a result of these interviews with former refugees as they articulated why some of the proposed

solutions would or would not work, and proposed their own solutions. We then further tested these ideas in a Speed Coaching Idea Lab session with social business experts, who helped us incorporate our ideas into a business model with a sustainability plan. The next stage in the project will be for Wachira to bring the pilot project back to the largest refugee camp when he returns this summer of 2018, and to run a series of community workshops that include the women's groups, shopkeepers, school leaders, section leaders, Thai government officials, UNHCR workers, and other stakeholders we have identified. We will make necessary modifications based on the feedback they give, and then commence the pilot of the program as a test. Once repayment of loans begins, we will begin reinvesting the revenue into purchasing more lanterns for that camp, or for the other camps, depending on where the demand is strongest.

3. Resource Gathering and Financial Sustainability

3.1. Explain how you will connect with crucial stakeholders for building your social innovation. *How will you reach (i.e., connect with or access) the customers, beneficiaries, and payers for your social innovation? How will you communicate the value of your social innovation and compel stakeholders to act? How will you get any special access or permissions you may need in order to implement your social innovation? (See CHANNELS, CUSTOMER RELATIONSHIP and KEY STAKEHOLDERS on the Social Business Model Canvas).*

Women are the ones who usually use fire for candle lighting and cooking in the camps. So, women will be our first point of contact in the refugee camps. We will listen to the perspective of these women and ask them if they agree with our LED lantern idea and who they believe we should speak with next. This will begin our process of connecting with stakeholders from the customer's perspective. Through this process we will establish a business model with stakeholders such as shopkeepers, NGOs, UNHCR, and many others.

3.2. Explain the financial model for launching and running your social innovation. *What are the initial financial costs required to launch your social innovation? What are the ongoing costs of running your social innovation? What are the sources of funding that you will use to start up your social innovation in the first two years? What are the revenue streams that you will use to financially sustain your social innovation over the long term? Who will pay for what? Will you depend on earned income, donations, some combination? (see COST STRUCTURE, KEY RESOURCES, and REVENUE STREAMS on the Social Business Model Canvas)*

This is a microfinance program that would incentivize refugees to swap out the candles they currently use at home for safer and more cost effective solar lanterns. For as little as \$5, solar lanterns can be purchased and financed to the refugees at the same cost as they are currently paying to buy a weekly supply of candles. Built into the loan will be an operation fee that covers the shopkeepers' work of receiving and logging payments, a program development fee that covers the work of women's groups to monitor and promote the program, and a reinvestment fee to help grow the pot of money available to future borrowers. Though we approximate an \$8 total loan amount per lantern, the actual numbers will be calculated with the mutual cooperation of stakeholders. The solar lanterns will last long after they've been paid off, and the best part is the paid loans will be reinvested into purchasing more solar lanterns.

The initial investment in solar lanterns and the operational costs to get this program off the ground is the only funding this project requires, as it will eventually grow to be self-sustaining. Our hope is that entrepreneurial refugees will begin producing their own fire safe equipment to sell.

With the seed funding provided by the Global Social Innovation Challenge our team will be able to buy hundreds of solar lanterns and to start a fire safety program before the end of this year.

4. Feasibility and Team Readiness/Capacity

5.

5.1. Describe your current resources, partnerships and support network. *What human, material, or in-kind resources have you already secured or do you plan to secure for your project? What key partners or relationships do you already have to support the development of your social innovation? (see PARTNERS & KEY STAKEHOLDERS on the Social Business Model Canvas)*

5.2.

Through Wachira we have existing relationships with the Thai government, UNHCR, NGOs working regionally, and section leaders in the refugee camps. We would need to reach out to and enlist the support of women's groups and shopkeepers to become involved. Through the GSIC we hope to develop donor relationships and secure

seed-funding.

5.3. Explain how your team is equipped to turn your idea into a reality. *What skills and experiences does your team have collectively that make you the right people to implement this idea? Why is this social innovation and the social impact it creates important to all of you? What makes you passionate about this cause? Are you missing any key expertise and, if so, how will you obtain it in the next three, six, or 12 months? (see KEY RESOURCES on the Social Business Model Canvas)*

On our team we have several members trained in Program Design, Monitoring, and Evaluation. We also have team members who have worked on program management and social business management. This social innovation is important to us because Wachira directly experiences the effects of this challenge on a regular basis, and as his team we are motivated to support him in a solution that he can take back and implement in his context. Wachira's role as a leader in the refugee camps and a person that has social capital among the other stakeholders positions him well to be the implementer of this project. While we have done some research, we are missing some of the engineering expertise that would advise us on which solar lanterns would be the best choice for this context, which we could enlist from our engineering contacts at the University of San Diego, and in Bangkok, Thailand. Additionally, we would seek out the expertise of other similar microfinance programs to gather more information on best practices and advice for our context.

5.4. Explain how the members of your team will contribute to the social innovation. *What roles and responsibilities will each of your team members take on to stay on track? What expertise, specific skills and experience will each team member contribute?*

The primary team member in charge of idea implementation will be Wachira, as he will be the only one working on the ground in Thailand, conducting workshops, meeting with stakeholders, and overseeing implementation. The roles and responsibilities that the other team members will take will be to contribute our skills in researching and program monitoring and evaluation to gauge the project's success and efficacy. From the monitoring and evaluation the other team members will provide, modifications to the project will be offered and those will be implemented by Wachira.

5.5. Demonstrate your team's commitment and readiness to implement your social innovation. *How much time has each team member committed to this project for the*

next three, six, and 12 months? What are your academic and professional plans for the next 12 months and how will these impact the execution of this project?

All of our team members are graduating seniors in 2018, whether from a graduate or undergraduate program of study. Wachira will be returning this summer to Thailand where he will be serving as the Chief of Refugee Affairs. From his position he will have the authority and existing stakeholder relationships to implement such a program. The other team members will likely be remaining in the United States to work after graduation, and have offered to volunteer their time as researchers and program monitors and evaluators for the project as it begins its first year as a pilot and second year as a fledgling program.

6. Innovation & Competitiveness

6.1. Explain your understanding of what is already being done to address this issue (draw from and briefly summarize relevant key components of your round one submission). What other organizations are trying to address the same problem or meet the same need as you are? What other social innovations are offering similar products or services? Who are your competitors in this market?

Currently the Thai government runs an annual fire drill, which we would be contributing to and working collaboratively with, not replacing. As Wachira is a high-ranking official in the Thai government, he will be able to garner support from his colleagues for collaborating on these drills. Some NGOs are experimenting with solar cookers to replace the charcoal stoves. As these have not gained the funding or public interest to launch on a large scale, our project will not involve solar cookers (in the short-term, until a more popular or effective model can be produced) and will therefore not be in competition. There are currently no organizations offering solar lanterns in the refugee camps, and there are no large-scale microfinance programs that we would be in competition with.

6.2. Explain what is innovative about your social innovation and what differentiates it from what already exists. What makes your social innovation unique or better than what is currently being offered in your chosen space? Do you have an entirely new product / service / value proposition, or are you adapting an existing idea to serve a new function, population, or geographic region? What advantages does your social

innovation have over other, similar social innovations? (See VALUE PROPOSITION on the social business model canvas).

Our idea combines well-researched, established models of microfinance that are currently being used in other contexts with the need for more fire-safe technology in Thailand's refugee camps. It takes a problem that is usually addressed only in emergency response and charitable terms, and involves refugees in a prevention-based solution.

7. Risk

7.1. Describe any potential obstacles, risks or threats that might affect the progress of your project.

Think about the risks inherent to your solution (your idea, your team, your resources, the environment you will operate in etc.). What competing forces, conflicts, priorities, or circumstances might dilute your efforts, decrease your social impact value or delay your project progress? Have you checked for the possibility of any unintended consequences of your solution that may actually make it worse for your target customers or beneficiaries? How do you plan to address these barriers / risks?

The primary obstacle we anticipate is a lack of motivation from the general population to make the behavioral change of swapping solar lanterns for candles, and making other efforts toward fire-safe practices. We feel that the government, UNHCR, and NGO workers operating there will be supportive of the plan because they will be secondary beneficiaries since the resources they expend to rebuild after fires will gradually decrease as program participation increases. Of course, asking already busy workers to increase their workload to support this project does put the project at risk of burnout. To alleviate this risk, we propose that the primary operators of the program will be the shopkeepers, who will receive and log payments, and the women's groups, who will conduct outreach and oversight of borrowers and shopkeepers. We have built in to the cost of the lanterns a portion of overhead that will cover the costs of these shopkeepers and women's groups, and therefore we do not anticipate competing priorities to be an obstacle. One risk would be that the solar lanterns we choose have a shorter lifespan of usefulness than anticipated and that beneficiaries do not save money by swapping these for candles. This, however is an unlikely risk because the models we have researched are made for use in rural contexts similar to the refugee camps.