HACKATHON PROBLEM STATEMENTS

1. IRRIGATION

HOW CAN WE USE TECHNOLOGY TO GIVE FARMERS MORE ACCURATE WEATHER INFORMATION SO THAT FARMERS CAN OPTIMIZE IRRIGATION?

The problem: Weather has an enormous impact on lives of farmers in Myanmar. Even the smallest difference in weather patterns can have a dramatic effect on farmers. If the monsoon comes early and farmers haven't finished their harvest they are in real trouble. Similarly if a storm is coming and they don't prepare their crops they will also be in trouble. In addition, over exposure or under exposure of water can be detrimental to the crops.

There is lots of information about the weather around the region. The Myanmar Department of Meteorology & Hydrology also has 150 weather stations around the country. How can we make usable information easily accessible to Myanmar farmers so that farmers can plan ahead for crop season and also determine the amount of water needed to irrigate?

Sponsoring NGO: Proximity Designs

2. FARMER ALERTS

HOW CAN WE USE TECHNOLOGY TO ALERT FARMERS OF THE OUTBREAK OF PESTS/DISEASES?

The problem: Pests and crop diseases wreck havoc on farmers in Myanmar. They can spread quickly from one farm to another wiping out whole crops and leaving the farmer with no food and no money. Often farmers find out too late that there has been outbreak of pests/diseases.

If a farmer finds out quickly enough about a disease or pest outbreak they can take action. There are things that they can do to reduce the likelihood that their crops will be affected. However, farmers may get alerts on time but have little knowledge on how to take appropriate actions.

How can we create a system that makes it easy for farmers to tell other farmers when they have an outbreak of pests or diseases and provide information on how to proceed?

Sponsoring NGO: Proximity Designs

3. ELECTION MONITORING

HOW CAN WE DEVELOP A CROWD-SOURCED ELECTION MONITORING SYSTEM FOR THE 2015 ELECTIONS?

The problem: In the past there have been significant issues with elections in Myanmar. Voting has not always been free or fair. The 2015 election is critical for Myanmar. Some organizations have begun planning

While some organizations are planning to do some election monitoring, these organizations do not have enough people to cover all the voting places. They are also planning to use a paper-based system. This means that what monitoring there will be won't be quickly and easily accessible. Any issues that arise won't be known until after the election is over.

How can we use technology to let volunteers around the country conduct election monitoring and to get the information quickly and electronically?

Sponsoring NGO: MIDO (Myanmar ICT4D Organization)

4. BIRTH SPACING

HOW CAN WE USE TECHNOLOGY TO HELP WOMEN WITH BIRTH SPACING?

The problem: Many women in Myanmar practice birth spacing using contraceptive injections. However, these injections only last for 8-12 weeks. Many women forget to get their injection regularly or, if money is tight, they choose to delay it. This massively reduces the effectiveness of the contraception increasing the likelihood that they will have an unplanned pregnancy.

A related problem is that if the woman does not plan to have children for a while there are better birth spacing alternatives that they could use. However, many women don't know about these alternatives or when they are useful.

How could you develop a system to ensure that women are reminded of when they are due for another injection? Also how could use that system to educate women of the alternatives that are available to them?

If we can provide innovative reminder to the women using 3 months injection, we can reduce the number of unwanted pregnancy and as the result, we can also reduce the number of death by unsafe abortion.

Sponsoring NGO: PSI (Population Services International Myanmar)

5. HIV/AIDS

HOW CAN WE USE TECHNOLOGY TO HELP VULNERABLE SEX WORKERS AND THEIR CLIENTS?

The problem: HIV/AIDS is a big issue in Myanmar. 40 people died every day because of HIV/AIDS. Many of them are from high risk group like sex workers, their clients and partners.

Some sex workers are particularly more vulnerable. These are the young women who work in entertainment locations such as KTV and staged beer pub. Since those venues are not "official" sex locations, the women do not have the same access to condoms, HIV/AIDS testing and support as women working in brothels or even on the streets. These problems are compounded because women in entertainment locations tend to be younger, less experienced and less aware of sexual health issues. On the other side the men who visited those places do not want to use condoms as they think the girls look clean, young and healthy. According to PSI's survey in late 2013, only half of girls in entertainment places used condoms correctly and consistently with their regular clients.

Barriers – Entertainment owners do not accept PSI's communication agents to provide HIV/sex education to these women. It is also difficult to reach men with money as they are busy, rich and do not want to reveal themselves as clients.

However, all of these women have mobile phones and all of their clients have mobile phones too. How can we use technology to educate these women about

the importance of using condoms, where and how to get HIV/AIDS testing and how to access other support?

If we can reach both populations by innovative approach, the transmission of HIV and AIDS related death will be greatly reduced among both at risk and general population.

Sponsoring NGO: PSI (Population Services International Myanmar)

6. TRANSLATION

HOW CAN WE CROWDSOURCE THE TRANSLATION OF IMPORTANT EDUCATIONAL VIDEOS INTO THE LANGUAGES USED IN MYANMAR?

The problem: The Myanmar education system is very weak and it's going to take a long time to improve it. There are however vast educational resources online. One such source is the Khan Academy. This is a non-profit that has over 5000 educational videos that are watching by over 10 million people around the world. Unfortunately – like many educational resources - all of these videos are in English.

A volunteer group has been trying to translate these videos into Burmese, however the translation process has been very poor (mostly just emailing back and forth!).

How could you use technology to crowd-source and manage the translation of these videos into Burmese?

Sponsoring NGO: Khan Academy Volunteers

7. FOOD SECURITY

HOW CAN WE USE TO TECHNOLOGY TO IMPROVE DATA COLLECTION PROCESSES TO ADDRESS ISSUES OF FOOD SECURITY?

The problem: There are some people in parts of Myanmar that do not have enough food to eat. This is particularly the case in parts of Chin State, Kachin State, Shan State and the Dry-Zone. There are organizations to help these people, but in order to know how to help them they need accurate data about the specific issues that they are facing.

ICCO and its partners currently collect data before, during and after its food security projects. However, this is done using paper surveys, which is a time-consuming, error-prone and logistically difficult. Slow and inaccurate data hampers ICCO's effectiveness.

How could ICCO use technology to improve the speed and accuracy with which it collects critical data about food security?

Sponsoring NGO: ICCO

8. HERITAGE

HOW CAN WE USE TECHNOLOGY TO HELP RESIDENTS & VISITORS CONNECT WITH THE HISTORY AND BUILT ENVIRONMENT OF YANGON?

The problem: In the late 19th and early 20 century Yangon was one of the most prosperous cities in Asia, a diverse and cosmopolitan capital with a magnificent concentration of colonial-era architecture, temples and mosques, churches and cathedrals, commercial buildings, and splendid teak residences. It is a multi-faith and multi-ethnic setting with few peers anywhere in the world, whose cultural mix is reflected in its diversity of architectural styles.

As Myanmar opens it's doors to investment and development, Yangon has begun to experience a rapid pace of change and subsequent building boom. The enormous increase in land and real estate prices is leading to the demolition of many older buildings and forcing residents to leave the historic core. But with both also go the old trades, festivals, traditional food, and personal stories.

These historic buildings and neighbourhoods are potentially an enormous asset for the city; a significant draw for tourists and a source of income and value for residents. There is a very small window of opportunity to protect what remains and not repeat mistakes made elsewhere, where invaluable buildings were demolished—erasing a sense of place and losing collective memory and cultural identity.

How can we use technology to guide visitors and residents around Yangon and raise awareness about the built history around them, while allowing for interaction and shared photos and stories?

Sponsoring NGO: Yangon Heritage Trust