Challenge From Engineers Without Borders

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Brief description of objective

A platform for storing and exchanging information between EWB Sweden and their project beneficiaries. Most commonly, the project beneficiaries are NGO's based in the project countries. Almost all of EWB Sweden's projects are directed at schools or clinics.

Challenge and problem statement

Even if information and knowledge for a specific question exists, it can be hard to find and/or access. It is inequitable and inaccessible in many poorer or rural areas, especially where expertise is scarce, and even more challenging where resources (such as computers or internet) are in short supply. We want to make information more accessible, whilst transferring knowledge to the persons who benefit from Engineers Without Borders projects, in order to reduce the likelihood of abandoned systems that fall into disrepair, due to the lack of capacity and knowledge on how to maintain them. In the future, we envision capacity to have developed to the point where local

beneficiaries are able to expand or install new systems, ensuring project sustainability, and increasing the communities' self-reliance.

EWB, as an organisation, has a lot information (manuals, guides etc in form of PDF's and ebooks), as well as access to a wide network of professionals and experts. We need these resources to be leveraged, organised, and made accessible in a usable format, so that our partners in the field can use it. Most partners have access to a mobile phone, but the internet access can be challenging, it is also necessary to make the platform equitable and understandable for those that may have difficulty navigating complex technology.

Background

Engineers Without Borders Sweden is an NGO working to address challenges linked to the Sustainable Development Goals, both in Sweden and around the globe. Through improvements in education, equality, energy poverty and access to water and sanitation we always strive to make a sustainable and long-term impact with our work, for local communities and the Earth as a whole.

We think that everyone has a right to improve their standard of living and we want to provide the means and infrastructure for people to do so, no matter where they live or where they come from.

Goals

We hope this will lead to a possibility for the trainees to, in real time, explain the challenges that they have regarding their systems. This would in turn give opportunity for getting things done and fixed in a shorter time, meaning communities will improve their self-reliance/ resilience (through increased knowledge and autonomy) as well as increased ownership of the system in general, which is often observed as problematic.

We want a platform that is:

- An equitable and accessible knowledge database for project beneficiaries
    - Available on- and off-line
    - Manuals, teaching material
    - Sketches, circuits, maps

- A communication system between EWB Sweden and project beneficiaries
    - Primarily intermittent communication (think about how volunteer engineers would be able to access this to answer the questions)
        - Similar to a support forum/ email inbox where a user can post a question and get a response
            - It should have the ability to upload photos or videos
            - Describe the issue
            - Categorise etc
        - The platform should allow for different users
        - Extra: Common questions or issues to be discussed in an open forum with different channels depending on the type of project or question

    - Secondarily real-time communication

- Either voice- or video-call where users can ask questions and get replies in real-time.
- Think about connecting pre-existing communication platforms.

End user

EWB Swedens members, partner organizations, and project beneficiaries (men and women living in the communities)

Agenda 2030

1. No poverty (indirect goal)

4. Quality education (direct goal of the app)

9. Industry, Innovation, and Infrastructure (indirect goal)

10. Reducing Inequality (direct goal)

What hashtags goes along with the challenge⌴SEP⌴

#Access2info, #eduCAN, #platform4change, #problemsolvers

• Future plans

We want this platform to be the "go to platform" for engineering projects in beneficiary countries. In 5 years time, we want it to be a well known platform where people turn to when they need information or manuals to set up a solar, or water, or computers4school programme, a place to ask for advice and tips. But primarily, it is a go to place when the system has an issue that the caretakers cannot fix, and instead of allowing it to fall into disrepair, they can call on a network of engineers (based anywhere in the world, but we would

hope they would be locally based) to resolve the problem e.g. through video call, answering pictures etc.

Optional

- Requirements/criteria's (E.g. must run on Android OS, use Java/ C++ etc.)