Case Study: Electrification in Frontier Markets

Christopher Baker-Brian BBOXX Ltd.

Empowering Members to Create the Future

IEEE Sections Congress 2011



Presentation Overview

- e.quinox and BBOXX
- What we do
- Our current operations
- Challenges in the field of rural electrification
- Opportunities for IEEE members

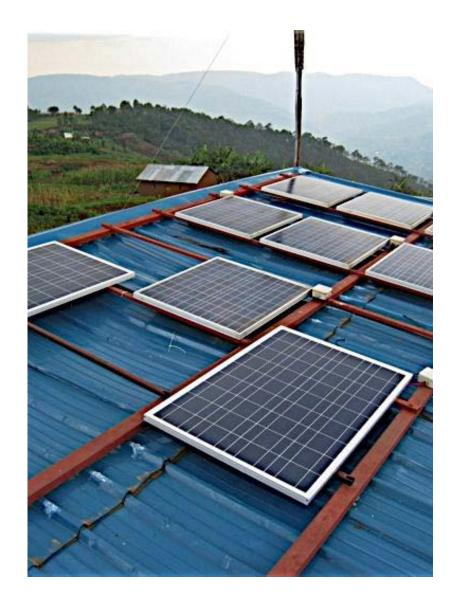


















e.quinox Achievements:

- Over \$270,000 raised since 2008
- Three Energy Kiosks implemented in rural Rwanda – Two more planned for Sep 2011
- Over 300 households electrified
- Backed by:









About BBOXX

- Founded by e.quinox alumni in 2010
- UK based company
- Operations in Rwanda,Pakistan, China and DR Congo



 Commercially produces electrification solutions for the developing world







Rural Electrification Challenges

- Technical
- Financial
- Market Analysis
- Local Acceptance

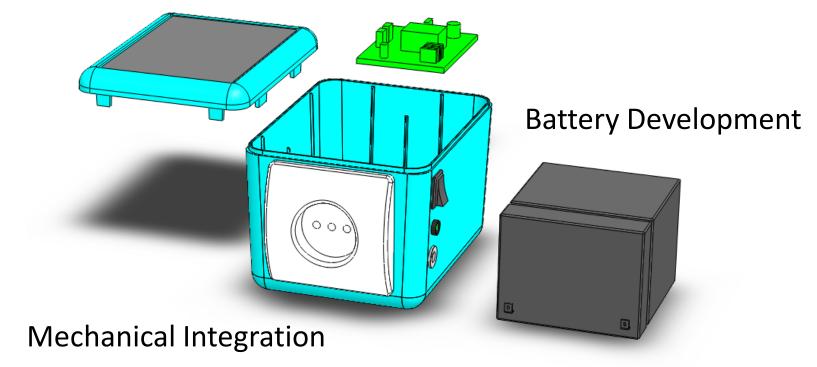
IEEE Members can be involved in all these areas





Technical Challenges

Solar Panel Development Power Electronics Development





Financial Challenges

- Access to western investment
 - Standards and acceptance



- Pricing in the local market
 - Unit cost reduction





Market Analysis





- Requirement for on ground activities
- Surveys of end users
- Utilising and leveraging other organisations



Local Acceptance



- A complex mix of all the above, plus more:
 - Performance of Product
 - Local Pricing
 - Local Politics
 - Local Cultures



Leveraging IEEE Members

- Many of these problems can be seen throughout a wider selection of other humanitarian projects
- Requires a strong "whole" engineering solution
 - Technical
 - Financial
 - Social/Political Issues
 - Local Acceptance
- IEEE Members can add value in all these areas



Summary

- Background to our work in electrification in frontier markets
- The challenges we continue to face
- Multifaceted problem that requires cross organisational involvement
- Leveraging other organisations/institutions– i.e. Engineering for Change (E4C)
- IEEE members can be involved in all these areas to bring benefits for the wider global society

Where to find this Presentation:

This and all Sections Congress 2011 presentations will be available for view at the IEEE Center for Leadership Excellence website.

Visit us for this and other Volunteer Leadership training specifically designed to train volunteers like you!

Let us know what you think:

http://www.ieee.org/go/cle

