

HEART

HEALTH & EDUCATION ADVICE & RESOURCE TEAM

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The Challenge

BBOXX was founded in 2010 by three recent graduates of Imperial College London who had seen the overwhelming need for electrification in the developing world. Prior to founding the company, they had worked on charitable projects, and witnessed the demand for such services first-hand. This provided them with a business case for electrification in a way that is environmentally sustainable and financially viable.

BBOXX sells solar-powered products to low and middle-income households (\$50-\$150 monthly income per household) in over 40 countries across the world, with deep distribution densities in East Africa, mainly Rwanda and Kenya. The business model of the company is based on the understanding that while customers can afford electricity on a monthly basis, they do not have the capital to invest in installing infrastructure for electrification. Hence, they resort to kerosene lamps and candles. BBOXX products are offered to customers for a period of 3-5 years on a monthly contract. These include solar-powered televisions, lamps, phone chargers, etc.

BBOXX products and services are responding to the global problem of 1.4 billion people living without electric power. By focusing on solar energy, the company is promoting clean energy in a world struggling with climate change.

The Impact

BBOXX enables more than 63,000 children to study in electric light, thereby driving education and health outcomes. This is an estimation based on the number of school-going children in the 65,000 households that use BBOXX products.

BBOXX was also the most recommended solar solution for education purposes by Worldreader, in a competition to identify the most effective way to charge e-readers. This can prove particularly effective in the millions of communities that do not have reliable electric supplies. It was found that solar charging does not only keep children in school longer, but also ensures more attendance by parents when offered a free charge of their mobile phones.

The vision of BBOXX is to reach out to 20 million people by 2020, i.e. 4 million units in the market. It also aspires to expand into newer markets such as West Africa and Asia. The major barrier to such large-scale growth is the massive need for capital.

Research

BBOXX relies on data on (lack of) electrification (less than 20% in target countries), from sources such as the World

Education technology case study

BBOXX

Website: www.bboxx.co.uk

Bank and International Energy Agency, to identify its



markets and zoom in on communities with most need. It also conducts quarterly surveys of 150-200 customers, recording their expectations and the impact created by the solar energy products.

Studies by external researchers from Stanford University and University College London, have shown positive results. The latter study found that, on average, customers reported better health outcomes due to reduced use of kerosene, more time to study and socialise, greater savings on kerosene expenditures, and increased business productivity.

Stakeholders

BBOXX's most important stakeholders are its customers and its funders. The company has an intricate network of sales agents and 30 branded shops that reach out to its thousands of customers, primarily in eastern Africa, engaging at the level of the community using word-of-mouth marketing techniques. At the moment, BBOXX does not partner with schools or institutions of higher education, and focuses only on low-income households and small businesses. Funds are raised from venture capitalists.

BBOXX also does not take up government contracts for mass electrification. This may introduce bureaucratic hurdles that can be avoided in the current business to consumer (B2C) model. However, BBOXX has engaged in dialogue regarding energy policy with governments of Kenya and Rwanda, and has been successful in influencing the conversation. For example, the Government of Rwanda has announced that off-grid energy will be a considerable part of the country's energy mix by 2020, an unusual step among African countries.

About

This is a series of case studies produced by HEART for the UK Department for International Development. Programme experts were consulted in the process. Any views and opinions do not necessarily reflect those of DFID or HEART.