AFRICAN MARKET:
Entry for a Trypanosomiasis Diagnostic Device

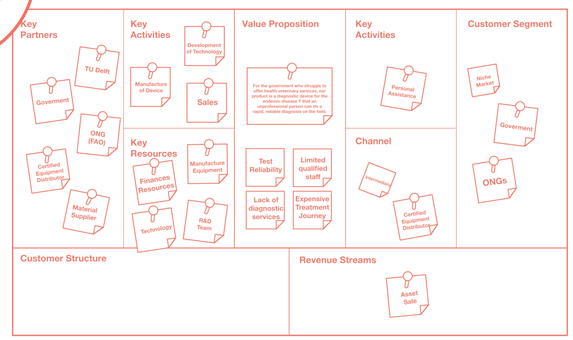
African Animal Trypanosomiasis (AAT) is a vector-borne parasitic disease. It is caused by infection with protozoan parasites belonging to the genus Trypanosoma. They are transmitted to animals & humans by tsetse fly bites which have acquired their infection from parasitaemic mammalian host. AAT is a major constraint to socio-economic development in Africa. AAT has significantly reduce productivity in over 150 million cattle and 260 million sheep and goats (Jahnke, Tacher, Kiel, & Rojat, 1988), and it is estimated to cause annual losses of more than US$ 4.5 billion dollars through direct and indirect agricultural production losses (Yaro, Munyard, Stear, & Groth, 2016).

There are many barriers that complicates the access of trypanosomiasis (T) diagnostics and treatment such as lack of confirmatory test, large distances, limited trained staff and lack of laboratories facilities. The diagnosis of T is notoriously difficult, because the clinical signs are similar to other cattle diseases. Likewise, the only way to confirm a diagnosis is to demonstrate and identify parasites in body fluid. The current diagnostic practices require staff with strong proficiency and expertise, which the limits the reliability of the test. In addition, diagnostic technique for routine veterinary purposes is only suitable if it is cost-efficient. Therefore, there is a need for the new diagnostic test requiring minimum training, inexpensive and should provide rapid and reliable results.

Aidx Medical BV, a social start-up, is currently developing a portable, field compatible, affordable and smart optical diagnostic instrumentation for early detection of AAT infection and other Hemoparasitic infections in animals. An optical smart parasite detection technique using automated smart algorithms integrated into a potentially low-cost imaging platform is being developed by the R&D team. The new prototype is already producing promising results. Its aim is to create a rapid and reliable diagnosis on the field that can be carried out by unskilled personal.

The aim of this project is to define an effective market entry strategy for the diagnostic device that has a positive social impact, yet it is financially sustainable. The strategy will be presented in a detailed business model. This turns a high-level plan into an on-ground implementation solution.

Market Entry Strategy



+

Entry Decision	Company Choice
Entry Location	Niche Market
Entry Timing	Early Entrant
Entry Mode	Indirect Export

+

4P's

- **Product:** Medical BV offers a portable diagnostic device for the endemic disease T, which can be used by unprofessional people. The device should be able to be used as a diagnostic and epidemiological tool.
- **Price:** According to the aalue-based pricing and competition based pricing is around 300 to 500 USD. This price does not encompass the manufacture and shipping costs, which the information is currently not available as the product is on development.
- **Place:** The company will distribute their products through a certified intermediary in Uganda. Normally, the intermediaries do not count with physical stores, as the products tend to be very specialized for a market sector. The intermediaries have an office, but walk-in customers are unusual. The device will be physically represented by equipment vendors and product demonstrations to the target customer and trade shows.
- **Promotion:** will be through product presentations and trade shows, where the intermediary will present the product and have a face-to-face conversation with the target customer. During this product presentations is needed to have promotional material like brochures, videos demonstrations and contact cards.

Business Model Canvas

According to the research, the device had a strong value proposition on the market. Several business model prototypes were created and tested in a field trip to Uganda. In the field trip, it was discovered that the current technique of introducing medical devices (ex. microscopes) and drugs was through an intermediary. This intermediary may be a chain of pharmacies or a device seller that needs to be certified by the government to distribute and sell the devices or drugs. The intermediary takes also charge of the promotion and distribution of the product. The business model prototypes were redesigned with the new set of information. After an evaluation with the company, the most promising scenario was selected according to their aim, strengths and weakness.

The main value of the company is to develop and manufacture an automatic diagnostic device for thick bone diseases that an unprofessional person can do a rapid and reliable diagnosis on the field. The customer segment is the government, because they are the largest employer in veterinary services delivery. The distribution channel will be through intermediaries, because they have a deep understand of the local market. As well, the company does not need a large capital investment on developing a distribution channel. The main revenue would be through asset sale of the diagnostic devices. The business model helped to outline the most important concepts of the company.

International Market Entry

The business model helped to outline the important concepts of the company. Thereafter an International Market Entry was planned. This entailed the entry location (EL), entry timing (ET), and entry mode (EM). As it was previously explained, Aidx Medical BV will be the first mover and focused on a niche market on automated diagnostic device for veterinary health. Finally, the entry mode selected was indirect exports, meaning the company will sell the device through an intermediary.

Paola Montserrat Bautista Gauna
African Market: Entry for a Trypanosomiasis Diagnostic Device
27 Aug 2019
Msc Strategic Product Design

Committee JC Diehl
Willemijn Brouwer
Mirte Vendel

Company Aidx Medical BV

TU Delft

Faculty of Industrial Design Engineering

Delft University of Technology