

Innopia Electromechanical Solutions: Solar-Powered Mobile Clinics

With a quickly growing population of over 80 million, only 16 percent of Ethiopians live in urban areas. Combined with poor transportation infrastructure, the health sector faces a challenge increasing access to primary health care and emergency medical services in remote locations. In the last five years, 92 percent of women who gave birth did not receive a postnatal checkup. This percentage was much higher among women living in rural areas (96 percent) than women living in urban areas (65 percent). Under its Health Extension Program, the Ministry of Health has reinvigorated efforts to make primary health care services available in rural communities through a network of health extension workers based in those areas. However, according to the 2011 Ethiopia Demographic and Health Survey, two significant barriers to accessing health services in rural areas remain: the distance to a health facility and getting transportation to a facility, suggesting that reaching some of the more remote communities with adequate health services still remains a challenge. The HANSHEP Health Enterprise Fund, implemented by the SHOPS project, selected Innopia Electromechanical Solutions to manufacture and market mobile clinics that will bring health services to where they are needed most.

The Business Model

Innopia Electromechanical Solutions is an established engineering firm that designs and manufactures tailor-made electromechanical products for the health, textile, and electronics sectors. Innopia's existing health-related production focuses on easy-to-install solar power kits designed to fit the needs of a typical rural medical clinic, locally-manufactured clinical and special purpose furniture, and custom-made clinical gauze and bandages. Through these initiatives, Innopia serves as a technology provider for health service practitioners.

The Health Enterprise Fund supported Innopia to design and build its first mobile clinic prototype which is used for demonstration and testing. The prototype was built by retrofitting a standard truck and includes a solar-powered electrical system, water supply system, sewage disposal, patient bed, physician's workstation, laboratory desk, and storage cabinets. This vehicle can serve as a diagnostic or treatment room through a customized power system,



Innopia staff prepare one of the mobile clinics, which will serve rural populations and the urban poor.

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Grantee at a Glance

- Vision: Solving basic health problems through tailor-made solutions
- Innovation type: Manufacturing solar-powered mobile clinics to bring quality health services to remote areas
- Health focus: Maternal and child health, HIV and AIDS
- Target population: Men, women, and children in rural areas
- Country: Ethiopia

diagnostic equipment, water tank, and furniture installed inside. Its mobility allows health officers to reach patients in remote villages and provide health services on-site. By equipping the vehicle with communication and signaling equipment, it can be also used as an ambulance in the event of an emergency. Innopia can build tailor-made vehicles for both public and private sector facilities and organizations wishing to extend their service delivery into currently underserved areas. The vehicle can serve as a standard clinic, or can be deployed to serve multiple regions during a specialized medical outreach effort, such as an immunization campaign. The mobile clinic model allows for sharing of equipment and personnel among multiple sites. Using Innopia's mobile clinics, the Ethiopian government and other organizations can reach pastoralist and other rural communities faster and more affordably.

Providing Technical Assistance and Exposure

In addition to support for the development of the prototype, the Health Enterprise Fund has provided legal consultation and general business skills training. Through the fund's technical assistance, Innopia used human-centered design to identify new marketing strategies to reach potential buyers, including developing a brochure and branding mock-ups with client logos. Marketing is critical to gaining clients and beginning production of the mobile clinics

Through networking opportunities provided by the HEF, Innopia has connected with others to strengthen its marketing efforts. When the company realized it needed to

demonstrate the clinics in a real setting, the HEF connected it with the Afar Pastoralist Development Association and with the Food and Agriculture Organization of the United Nations in Afar as potential partners for the pilot. Innopia seeks to attract clients from both the public and the private sector.

The Impact

“Most pregnant women deliver without even going once to the health service...[because] health services are located in the cities... Why not the health service itself go to the public?”
— Getachew Woldegebreal
Co-founder
Innopia Electromechanical Solutions

The mobile clinics will allow rural populations to access health services, and ideally will encourage preventive health-seeking behaviors. Pregnant women can seek antenatal care visits prior to giving birth, postnatal visits after giving birth, and immunizations for their babies without traveling long distances to health facilities. The mobile clinics can be equipped to perform basic lab services and minor surgical operations, such as HIV testing or tubal ligations. In event of an emergency, the mobile clinic can offer ambulance services, providing a lower-cost alternative to importing ambulance vehicles. Local production will create job opportunities for skilled and unskilled laborers, in addition to providing service contracts to other businesses that create some of the clinic's components.

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The Strengthening Health Outcomes through the Private Sector (SHOPS) project is a five-year cooperative agreement (No. GPO-A-00-09-00007-00) funded by the U.S. Agency for International Development (USAID). The project focuses on increasing availability, improving quality, and expanding coverage of essential health products and services in family planning and reproductive health, maternal and child health, HIV and AIDS, and other health areas through the private sector. SHOPS is led by Abt Associates, in collaboration with Banyan Global, Jhpiego, Marie Stopes International, Monitor Group, and O'Hanlon Health Consulting. The views expressed in this material do not necessarily reflect the views of USAID or the United States government.

For more information about the SHOPS project, visit: www.shopsproject.org



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