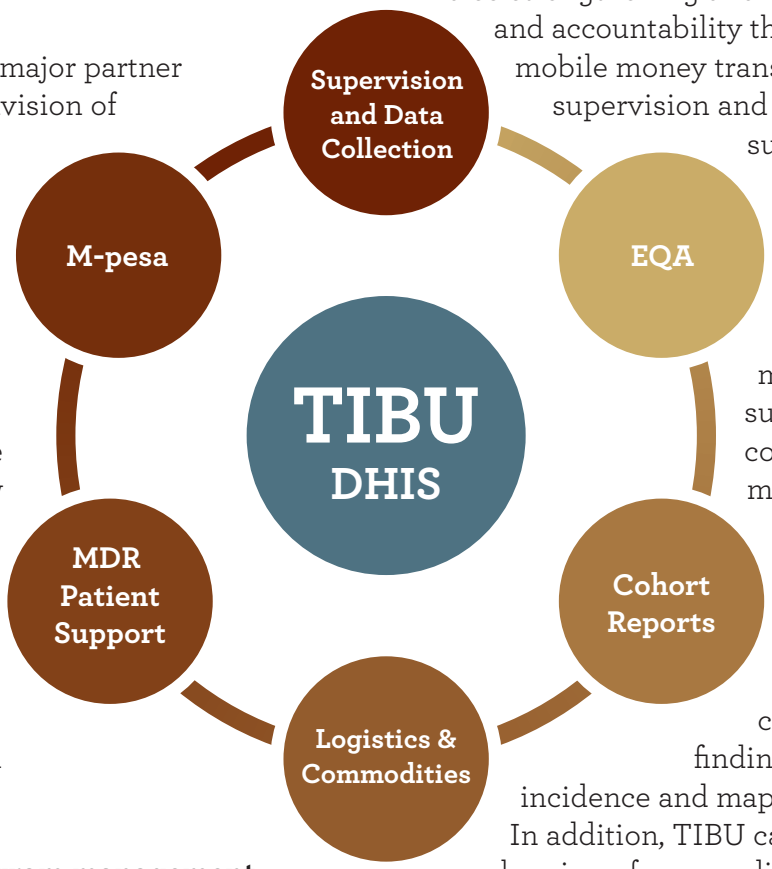
TIBU: Use of Innovative Technology to Improve Kenya TB Program Management - The first in Africa!

TB CARE I is one of the main global mechanisms for implementing the United States Agency for International Development (USAID) TB strategy as well as contributing to TB/HIV activities under the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Specifically, TB CARE I contributes to three USAID target areas; 1) Sustain or exceed 84% case detection rate and 87% treatment success rate; 2) Treat successfully 2.55 million new sputum-positive TB cases and 3) Diagnose and treat 57,200 new cases of MDR-TB.

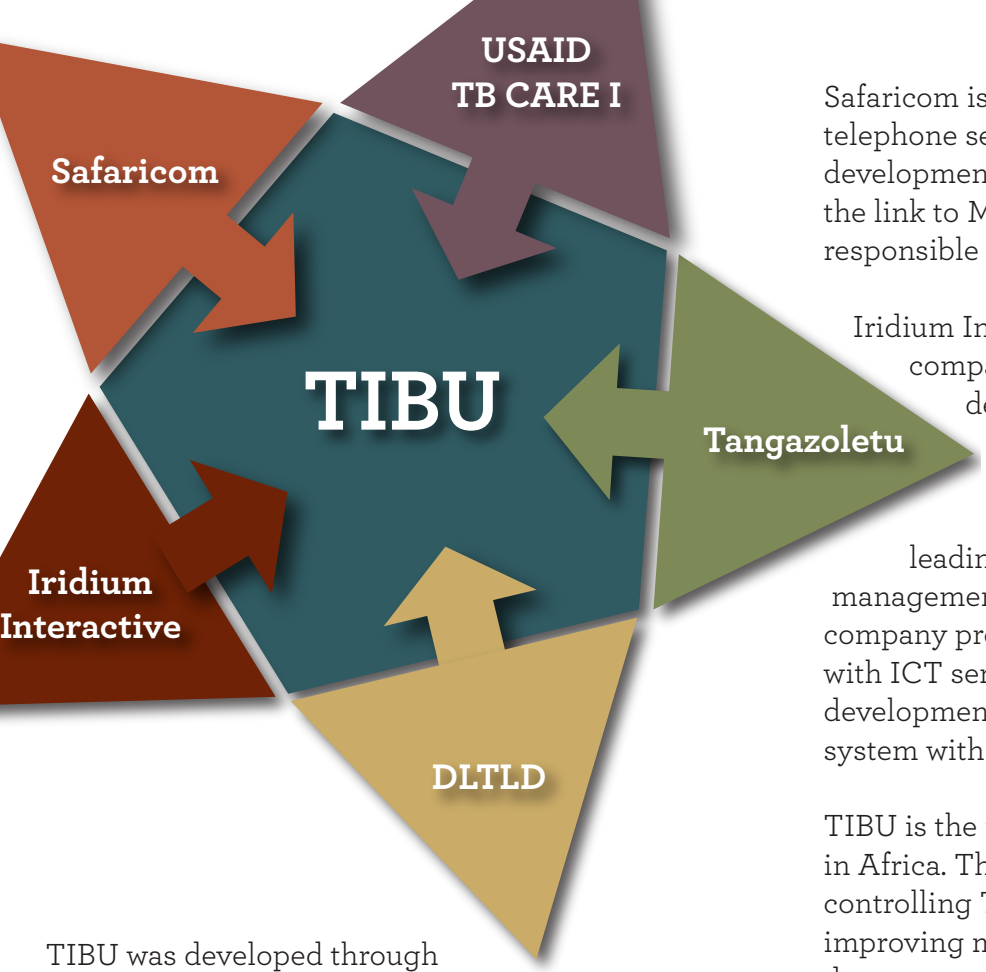
Since 2010, TB CARE I is a major partner providing support to the Division of Leprosy, Tuberculosis and Lung Disease (DLTLD) of Kenya. The main focus of TB CARE I Kenya is to support the the operational activities of the DLTLD like supportive supervision, laboratory External Quality Assurance (EQA) and quarterly review meetings for data analysis and results feedback. In addition, TB CARE I works with local partners to engage all health care providers and increase access to TB services for all persons.



TIBU - Strengthening program management:
Weak program management is a key issue faced by most National TB programs. Kenya has embarked on a revolutionary journey to improve the management of its TB program with an innovative web based solution integrated with mobile technology - the first of its kind to be implemented in Africa. TIBU, meaning "to treat" in Swahili, was developed and launched in November 2012 with support from TB CARE I.

TIBU is a unique system developed for use by the DLTLD in Kenya to specifically address challenges in data management and ensure tracking and monitoring of all TB patient data throughout the country. TIBU is based on a two pronged approach that enables the TB program to easily access data for informed decisions at all levels. It is strengthening and improving recording and reporting with real time data from the facility level up to the central unit, as well as the provision of feedback. TIBU is also strengthening and improving governance and accountability through utilization of mobile money transfer to make payments for supervision and provide MDR-TB patient support.

How does TIBU work?
In practical terms, TIBU is used in the field to perform regular monitoring activities like supervision and EQA. Data is collected electronically with mobile computer tablets and uploaded into the central database of the DLTLD. The data is immediately available for analysis and TIBU can generate cohort reports on case finding, treatment success, MDR incidence and mapping of specific TB issues. In addition, TIBU can be used for logistics planning of commodities and MDR patient support. To enable integration, TIBU is also linked with the national District Health Information System (DHIS2) for TB data sharing at the Ministerial level. The payment system comes into action once supervision or EQA activities are completed. TIBU indicates a need for payment to be made via mobile money transfer using M-pesa to a TB or Lab Coordinator for any costs incurred during supervision or EQA activities.



TIBU was developed through a unique partnership led by the DLTLD and USAID Kenya with TB CARE I and three Kenya Information Communication Technology (ICT) companies-Safaricom, Iridium Interactive and Tangazoletu. This partnership of five separate entities has been successful in pulling their expertise together to develop a system that is simplifying health delivery services and providing an equitable platform for tackling TB.

It is through the vision of USAID Kenya and leadership of DLTLD this venture was made possible. USAID-Kenya is the sole supporter and motivating force behind the development of TIBU. DLTLD is in the driving seat of TIBU's development. They provide the input for the system; knowledge of how TB is managed in Kenya and the needs from the field. DLTLD is also training staff from the central unit to district level and managing most of the help desk functions regarding the technical issues of the system. TB CARE I, through KNCV and KAPTLD, is responsible for providing input on the payment system development from processing to financial management and accountability towards auditors and USAID. TB CARE I has provided crucial support for improving data management quality to ensure TIBU is used to its maximum capacity. TB CARE I is the main partner working with DLTLD to implement and manage TIBU.

Safaricom is Kenya's primary provider of mobile telephone services in Kenya. Their role in the development of TIBU is instrumental as they are the link to M-pesa, as well as the two companies responsible for the technical development of TIBU.

Iridium Interactive is a global business solutions company with vast experience in helping develop simple and creative solutions to complex management issues making the best use of available technology. They have proven to be a crucial partner in leading the development of the TIBU patient management system. Tangazoletu, a leading Kenyan company providing mobile solutions integrated with ICT services has been instrumental in the development of the TIBU payment management system with M-pesa.

TIBU is the first of its kind to be implemented in Africa. The introduction of TIBU will help in controlling TB and providing better care through improving management of patient and laboratory data, management of commodities, creating greater sustainability of the TB program and ensuring zero TB deaths by the year 2030.

Key Features of TIBU include:

- Electronic registers: i.e. TB facility, Commodities
- One time data entry at source using mobile tablet
- Data transfer in real time to central unit
- Seamless integration with DHIS2 (National Health Information System)
- Ability to generate real time reports at any level
- Automation of referral forms leading to identification & tracking of suspects
- Identification of duplicate patient entries
- Funds transfer to NTP staff and MDR-TB patients using M-Pesa.

(source: DLTLD)

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