QuanTB. Quantification needs of medicinal products. Use Cases.

The QuanTB is a free, open-source software library and desktop application that intends to develop quantification services for medicinal product stock, considering various consumption and replenishment scenarios. Initially, QuanTB supports TB treatment medicinal products. However, it suits any other.

# QuanTB Desktop Application

QuanTB Desktop Application was developed twelve years ago for all interested in tuberculosis medicinal product quantification, early stockouts, and expiration warnings. Most users are the National Tuberculosis Programs. The application serves more than sixty countries. The execution environment is Java.

A user defines all quantification parameters manually or imports them from MS Excel and then starts the quantification

The parameters include the prognosis period, order lead time, current and expected monthly morbidity with the treatment assignments, medicinal product stock, and stock replenishment orders. The quantification includes stock, completed consumption, missed consumption, and replenished quantities for each day in the forecasting period.

Tables and diagrams present the results, aggregating daily quantifications into monthly totals.

It is possible to receive an MS Excel workbook that contains accelerated and regular product orders based on the quantification results, prices, and overhead expenses defined by the user.

The desktop application does not use any database. The quantification data in XML format is self-sufficient and can be opened and calculated by any other QuanTB application.

The classic edition is available here https://github.com/MSH/QuanTB. Customers began using this edition seven years ago. This edition operates exclusively on Java Virtual Machine 1.8 for Windows OS. Nonetheless, it serves numerous countries. The source code integrates the User Interface and Quantification Calculation components as a single entity. The Consortium supports using this edition, excluding bug fixes and improvements to the software code. This edition is obsolete and is not intended for new downloads.

Currently, the latest edition is available per request. It operates on the current Java Virtual Machine across Windows, Linux, and Mac OS. The source code includes various User Interface and Quantification Calculation components. The Consortium recommends utilizing this edition, which features bug fixes and improvements to the software code. This edition is intended for new downloads.

# QuanTB Collector

The QuanTB Collector resolves ordering process optimization for a supplier that distributes tuberculosis medicinal products worldwide by orders from national tuberculosis programs. The supplier needs the actual prognosis of the medicinal products stock in each country and a summary of all countries and medicinal products.

National Tuberculosis Programs provides clarified quantification data quarterly, using files in QuanTB XML format. The QuanTB Collector allows uploading these files to the database.

The Logistic Management System that serves a medicinal products supplier provides the state of medicinal product orders daily. The QuanTB Collector automatically collects the medicinal product orders and adds them to the database.

The QuanTB Collector quantifies prognosis daily using quantification parameters and product order data. Tables and diagrams present the results, aggregating daily quantifications into monthly totals. Additionally, importing any dataset into MS Excel format for future analysis using a BI tool is possible.

The Collector uses the open-sourced Quantification Calculation component of the QuanTB project. The implementation is particular to the customer. The Consortium provides tailoring the software to a medicinal product supplier.