Quantification Analytics Tool (QAT)

The next generation forecasting and supply planning tool

The **Quantification Analytics Tool (QAT)** is a modernized solution for country-led **forecasting & supply planning**. Funded by **USAID**, QAT leverages new technologies and enhances existing tools such as, **PipeLine & Quantimed**. With an enhanced user interface, greater analytical capabilities and automated data exchange, this new tool enables forecasters & supply planners to easily build and compare multiple forecasts, optimize commodity procurement and delivery schedules, monitor the stock status of products, and share data with external platforms and key stakeholders.

The QAT Solution

Functionality	PipeLine	Quantimed	QAT
Ability to work offline	✓	✓	✓
Available in multiple languages	✓	✓	English, French, Spanish, Portuguese; with ability to add languages
Integration with external systems	✗	Can import into PipeLine	✓ See QAT Data Flow Ecosystem
Cloud-based	✗	✗	✓
Role-based access for data security	✗	✗	✓
Standardized master data	✗	✗	Can individually customize at the program-level
Forecasting & Supply Planning in one tool	✗	✗	Seamless integration between modules
Data analytics and visualization	Basic	Basic	Enhanced and user friendly
Supply Planning			
Supply planning logic	Basic	✗	Enhanced with ability to add batch & expiry data, avoid negative stock, & auto-calculate MAX parameter
"What if" scenario planning	✗	✗	✓
In-tool Supply Plan Review	✗	✗	✓
Forecasting			
Consumption Forecasts	✗	Basic	Multiple data adjustment methods & advanced extrapolation techniques
Demographic, Morbidity, & Services Forecasts	✗	Basic	Flexibility to design own forecast with advanced modeling/transitions or use QAT's standard templates
Ability to compare forecast methods	✗	✗	✓

QAT Forecasting Module

Create forecasts by designing forecasting trees or by extrapolating from historical actual consumption to reach a final forecast. Each planning unit can utilize either consumption or tree methodology, or both!

Tree Forecast

Use QAT's dynamic and visual interface to build demographic, morbidity, or services forecasts. Trees can be built manually or based on app-wide tree templates, and include advanced features to model product scale ups/downs, transitions, multi-month dispensing (MMD) and seasonality.
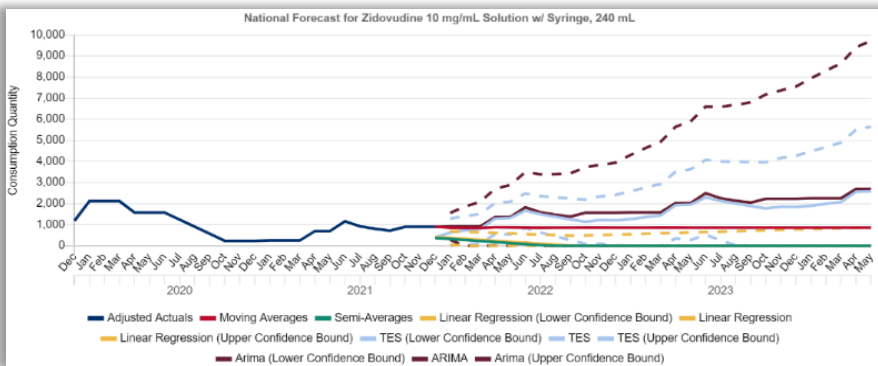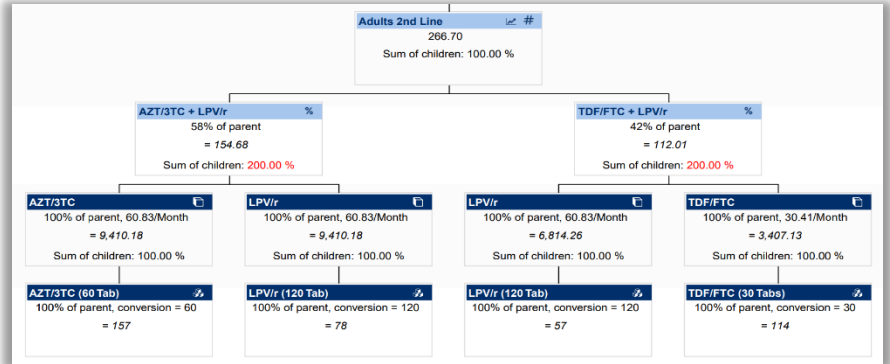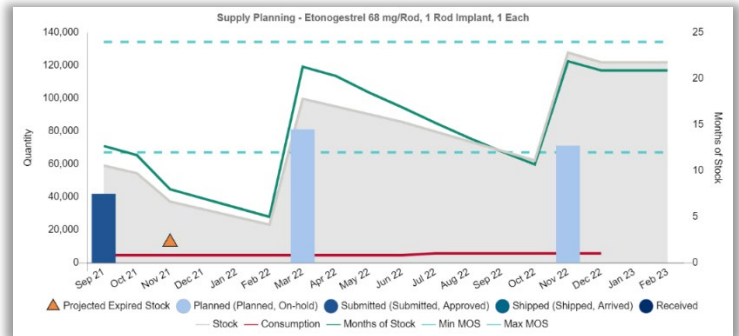
Consumption Forecast

Using data either imported from the Supply Planning module or inputted manually, QAT will extrapolate on adjusted actual consumption time-series data. Extrapolations methods used in QAT include: moving averages, semi-averages, linear regression, triple exponential smoothing (TES), & ARIMA.

QAT Supply Planning Module

Use QAT's Supply Planning module to better schedule shipments and maintain appropriate stock levels for planning units over a future period of time with greater optimization, integrated analytics and enhanced visuals for easy decision-making.

Interactive Supply Planning

The big three supply planning data points (consumption, shipments, & inventory/adjustments) all come together in QAT's Supply Planning screen, where users can quickly visualize their stock status, update data, and conduct procurement planning in their supply plan all on one screen. Information includes: average monthly consumption (AMC), stock status over time, shelf life & potential expiries, incoming shipments & their status.
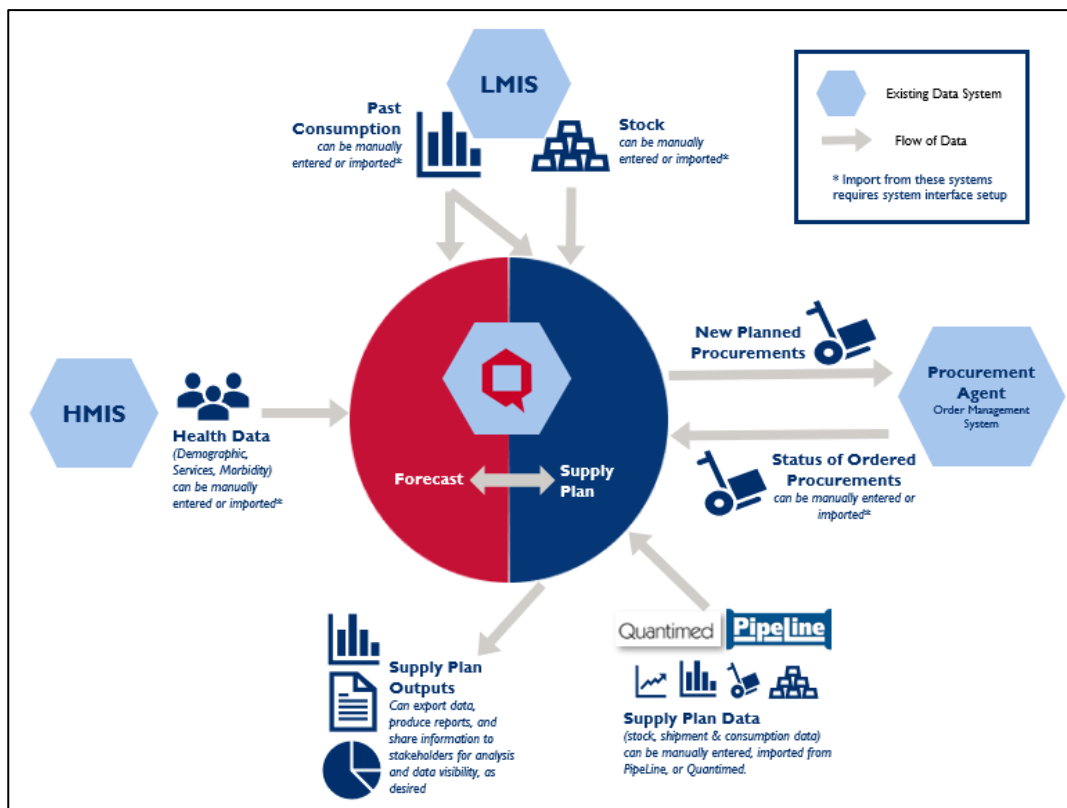
Enhanced Visual Reports

QAT has over 20 reports to help users interpret and make decisions based on their data. One of the most useful reports is the Stock Status Matrix (left), which gives a high-level visual snapshot of the stock status of multiple product across time. All QAT reports can be exported as a PDF and CSV for sharing with external stakeholders.

Who Should Use QAT?

Who	Purpose
Supply Planners	Use QAT to actively manage your procurements and monitor your stock status in the near- and long-term in a visual and interactive way. QAT brings together all your procurements from different funders and procurement agents and all of your consumption and inventory data to project future expiries, inventory and stock status.
Forecasters	Use QAT to forecast with different methodologies (consumption, demographic, morbidity, services) using flexible and easy-to-use templates, advanced extrapolation methods, and built-in validation to check your work. Create your forecast directly into QAT during workshops, using QAT's built-in visualizations to guide conversations, build assumptions, compare methodologies, and select final commodity forecasts.
Host-country policymakers / country directors	Use QAT to visually compare available forecasts, as well as highlight any stock imbalances and the implications of different decisions, such as new program targets, budgetary constraints, and procurement policies.
Procurers and donors	Use QAT to highlight current supply statuses and future procurement requirements.

QAT Data Flow Ecosystem

The QAT solution includes internal and external integration, interoperability and Application Programming Interfacing (API) for data exchanges. Currently, QAT is integrated with GHSC-PSM's procurement platform, ARTMIS, and the Global Family Planning VAN. Additionally, QAT provides csv, xml and Excel templates for the export or import of data. QAT has the ability to integrate with other procurement and logistics management information systems.