

TREXIN CASE STUDY

ARCHITECTING ANALYTICS FOR PRODUCT MANAGEMENT

Trexin helped a premier MedTech company design and build their business intelligence platform.

BUSINESS DRIVER

The cardiac diagnostics and monitoring group of a prominent international medical technology company recognized the value of analytics in identifying and addressing business opportunities, and they were eager to eventually incorporate more advanced capabilities for predictive analytics, machine learning, and artificial intelligence. But their analytics environment, which evolved over time to have numerous data silos and relied on Excel for analytics reporting and data wrangling, was error prone and time consuming to modify, resulting in late deliveries and data errors. Business users often had to wait weeks or months for changes to be processed, and ad hoc analyses without assistance from the analytics staff was nearly impossible. To remediate these deficiencies, the Senior Director of Marketing who championed the use of analytics asked Trexin to lead an effort to re-architect their analytics environment and build a minimum viable product (MVP) within 6 months.

APPROACH

Trexin led a root-cause analysis that exposed that the fundamental problem, aside from the use of sub-optimal technologies, was that each report used data from the same data sources ... but had separate data acquisition and preparation code, resulting in mass duplication of back-end infrastructure and invariably “two-number” reporting. Trexin’s solution design, which introduced modern analytics technologies, prescribed a more efficient, reusable business intelligence architecture that pushed implementation upstream to generalized data-pipeline scripts (Python) feeding a dimensional data model with “one-number” inputs (Tableau Server) serving standardized cross-dimensional calculated measures based on consistent attributes and values to report users (Tableau Workbooks). Per design goals, the implementation had a single master table for each data dimension, and each master table was created by a single script and/or reusable functions. All measures (i.e., calculated fields) and dimensional attributes and values were managed in this “develop once” environment, and user guidelines were developed to emphasize the importance of pushing up reusable components from isolated Tableau Workbooks into Tableau Server or upstream scripts.



RESULTS

The MVP was completed in 5 months, and the new solution was seen as a shift from an analytics artisan job shop to an efficient analytics factory. Designed for future enhancements, the new analytics environment became embedded into our Client’s operating model, and product managers gained new analytics insights as well as the ability for ad hoc analysis without assistance from the analytics staff. The time and effort for data acquisition and data prep work, when needed, also decreased by 60%, allowing business leaders and analytics staff to spend more time focusing on actionable business issues and driving faster speed-to-insight.

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