



On-Market Product Forecast

Forecasting with higher accuracy and greater versatility in a competitive market

A large pharmaceutical/biotechnology company wanted to better understand the product potential of an on-market, non-retail drug distributed through a limited network of specialty pharmacies and distributors in an active, competitive environment.

Viscadia was asked to build a custom forecast model that could integrate seamlessly with the client's existing Latest Estimate (LE) process and that would also be versatile enough to support multiple stakeholders and the long-term brand planning process.

Increase in accuracy compared to previous forecast model

Challenges



Data complexity

- Product and distribution model involving multiple and disparate data sources
 - IntegriChain (unit demand, inventory)
 - Patient data (enrollments, restarts)
 - Internal (finance, ex-factory)



Market event modeling in absence of competitor data

- Specialty (non-retail) distribution model across all competitors hindered the availability of market data, and complex market events were impacting product performance – increasing the complexity of the required modeling.



Cross-functional stakeholder management

- Sales, marketing and finance each had distinct objectives for the model, including harmonization of the unit-demand forecast with patient enrollments.



Approach



Improved user experience

Built an organic model with a streamlined flow, incorporating VBA-driven automation, with complete transparency and user-friendly design.



Mapped cross-functional stakeholder needs

Identified discrete needs across sales, marketing and finance stakeholders and created customized outputs to meet requirements.



Modeled complex market events

Assimilated market research (ATUs) to understand and model for multiple market events using diffusion curves.



Designed multiple forecasting pathways

Created capabilities for users to choose from multiple forecasting pathways (unit demand vs. patient enrollments) that were harmonized across the platform.



Embedded in-house forecasting palette

Integrated a robust but transparent statistical palette (Exponential Smoothing, Holt-Winters, Box-Jenkins, etc.) resulting in improved forecast accuracy and model flexibility.



Developed forecast platform

Customized platform for the product allowed for dynamic, comprehensive evaluation of key performance drivers, and served cross-functional stakeholder objectives.

Outcomes

End Deliverables

- Forecast platform with a comprehensive set of output views and summaries addressing cross-functional stakeholders.
- User manual providing extensive documentation of model design and operation to facilitate easy knowledge transfer.
- Executive slides to facilitate quarterly LE discussions, generated by an automated module within the model.

Key Highlights

- Reduced the MAPE (mean absolute percentage error) by nearly 50% in actual vs. forecast for the new model compared to the existing model.
- Dynamically modeled for five major market events occurring at different times in the forecast horizon.
- Successfully enabled the forecast team to tie the revenue forecast to weekly patient enrollment targets for the sales team.

Impact

- Reduced workflow for quarterly LE from ~40 hours to ~8 hours.
- New model served as the base platform for future Life Cycle Management (LCM) strategy scenario-planning exercises.
- Client asked Viscadia to design and build a new model for another product within the same franchise.