

## CASE STUDY

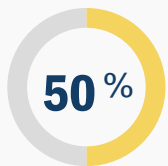
# On-Market Product Forecast



## 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.

Viscacia 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 needs

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