



# Forecast Staffing with More Speed & Precision

## Challenge

- Call volume dictates staffing levels
- Existing volume forecasting was falling short
- Inaccurate staffing proved to be very expensive
  - Overstaff: Direct cost
  - Understaff: Indirect cost, bad customer service
- Looking to improve advanced analytics function overall to gain a competitive edge
- Needed project management guidance and assistance applying best practices

## Solution

- Two forecast models using RapidMiner:
  - Short-range model using machine learning
  - Long-range model using statistical methods
- Integrated the forecasts with Qlik for reporting
  - Easy distribution for weekly ops meetings
- Regular knowledge transfer sessions to ramp up data literacy across teams
- Identified organizational gaps to address

## Impact

- \$665K projected annual savings per call center
- Achieved average accuracy of 93% for 90-day forecast
- Automation frees up resources for other projects
- Formalized a repeatable process for:
  - Moving ML models to production
  - Maintaining models
- Identified key steps to making ML projects successful
  - Templates and best practices to be applied to other use cases



**Problem type:** Forecast & regression

**Universal relevance:** Labor is the largest variable cost for many industries. Forecasting staffing is both critical and hard to do because there are so many factors that can impact staffing demands. Machine learning helps drive more precision.

