Generating Rate Increases for Existing Low-Risk Accounts by Creating a User Interface with Excel VBA

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About ArcBest

ArcBest, headquartered in Fort Smith, AR, is a five-billion-dollar integrated logistics corporation managing multiple subsidiaries. ABF Freight is by far the largest of these and specializes in less-than-truckload shipments. To ensure profitability, their Pricing department reviews pricing contracts annually to account for changes in costs and the LTL market overall.

Current Process

The pricing team works with sales to renegotiate annual rates for existing customers. They believe that automating this task for smaller accounts will help make their workload more manageable.
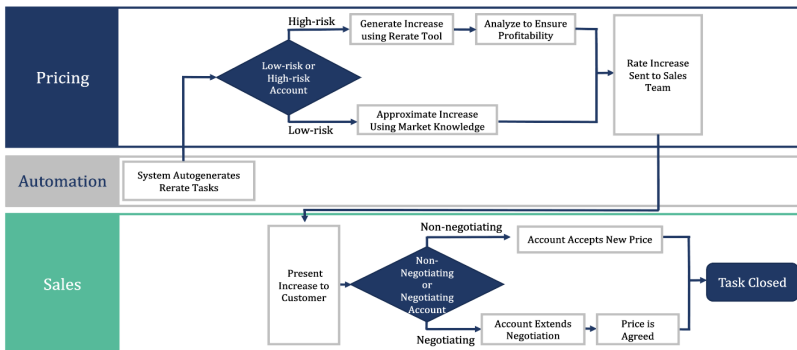

Decision Support Tool

Our goal for this project was to reduce the Pricing team's workload by building and designing an Excel based VBA tool that allows analysts to auto-generate pricing rate increases for small accounts.

We decided to model our tool after the ROMC framework to streamline our user interface and ensure user satisfaction. ROMC is an analysis and design method for developing user interfaces which focuses on analyzing four user-oriented entities: representation, operation, memory aid, and control aid.

Our research greatly aided us in the development of our tool. We focused on several design aspects such as brand recognition, arrangement, color coding, and strain reduction. Through this, we were able to create a visually-pleasing and effective tool that can increase efficiency within the Pricing team.
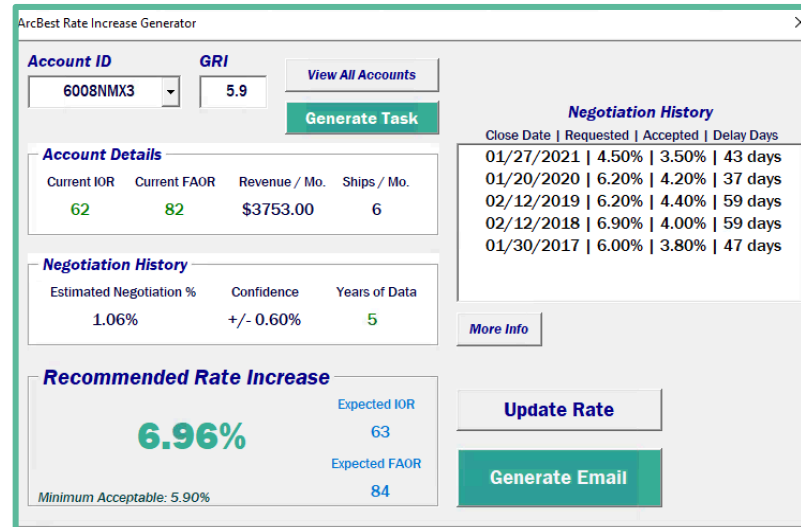
Generating Rate Increase

The General Rate Increase is a value set by pricing to account for increased costs over the past year. However, some accounts may also need an additional increase in revenue to become profitable. This is calculated by dividing the current Fully Allocated Operating Ratio (FAOR) by the desired FAOR. The predicted negotiation percent is also added to the desired increase as a buffer.

$$\text{Desired Revenue Increase} = \text{GRI} + \frac{\text{Current FAOR}}{\text{Desired FAOR} = 90}$$

$$\text{Rate Increase Recommendation} = \text{Desired Revenue Increase} + \text{Predicted Negotiation}$$

Results & Impact

Using the QUIM framework as a guide, we added time trackers to various aspects of our tool to calculate the average time each analyst spent performing each function. This allowed us to measure the overall usability of our interface, and estimate the time saved through the implementation of our tool.