PFIZER INC.
NEXT-GEN CLINICAL SUPPLY FORECASTING SOLUTION

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Pfizer Inc. is the world's largest research-based biopharmaceutical company with $49.6 billion revenue in 2014. The company develops and markets a variety of biologic and small molecule drug products, as well as over-the-counter health care products. To demonstrate the safety and efficacy of their products, Pfizer dedicates substantial resources to screening potential drug products in clinical trials. Pfizer's clinical supply chain currently serves approximately 500 clinical trials with 200,000 subjects at 20,000 investigator sites spread around the world.

Ensuring an uninterrupted supply of drugs to patients in clinical trials is critical for the care of the patients and the success of the trials. However, over-supplying drugs to reduce risk of stock-outs can be costly. Forecasting drug demand in the Global Clinical Supply (GCS) department at Pfizer has traditionally been done through Excel models customized for each study. This non-standardized process involves a wide range of forecasting methodologies and output formats. Furthermore, Excel models deliver sub-optimal outputs without considering best and worst case scenarios resulting in potential financial losses due to over-supplies and maldistribution across the supply chain.

To solve these issues, the Tauber team benchmarked the current state and a competitor's forecasting process. Then, a detailed comparative analysis of different vendor forecasting tools was performed. Simulations were run on relevant case studies to demonstrate how supply risks can be identified and costs reduced by using a stochastic forecasting tool. To address real needs and usability of the potential process, the team used mechanisms such as department-wide surveys, focus group feedback, and forecasting tool demonstrations.

The team proposed implementing a tool-based process that could be integrated with an ERP system and suggested a high-level systems integration architecture. The team also completed a risk assessment which identified process implementation risks and mitigation strategies. This would help avoid drug shortages that could impact patients with treatments as critical as breast cancer. GCS's cost savings for 2 clinical trials evaluated as case studies were estimated to be approximately $2.4M and $5.8M respectively. In one case study, the savings were approximately $9.6M if the options were capable of being implemented from the start of the study. Adoption of a tool-based approach to forecasting at a portfolio level could provide additional future savings of several million dollars per year. The recommendation sensured an end-to-end integration vision with a standardized process and improved communications which would benefit many stakeholders including supply chain, systems, finance and senior management.