



Z Solutions®

CASE STUDY: OPTIMIZING A GROUP DECISION

SITUATION

A large electric utility desires to reduce the cost of serving customers by more accurately estimating and sizing electric power transformers to serve the customers. The utility believes they can save \$250,000 to \$500,000 annually by improving their sizing process. The decision of sizing transformers is not easy. Up front before a building is completed, the utility must forecast the electric load of the customer and install the correct size transformers. If the transformers are undersized they will overheat and fail. If the transformers are oversized then the additional cost of the oversized transformer is a stranded investment. Because of the cost of moving the transformer, it is not usually economical to remove the transformer after installation.

The situation is confounded by the fact that three areas of the company are involved in the decision. First, the customer service representative that is the primary contact point for the customer. Second, the field engineer responsible for the field decisions including the final sizing decision. Last, the corporate engineer that makes purchase decisions for the company from the transformer manufacturer.

A solution is needed that solves all of these requirements.

ANALYTIC SOLUTION

The probabilistic modeling needed to solve this problem was comparatively easy. The organizational issues were difficult. Using Organizational Data Mining concepts Z Solutions developed methods and metrics to better predict customer loads while simultaneously improving the communication approach. By changing the metrics of the discussion and the resulting decision parameters, Z Solutions was able to improve communication and improve decisions.

RESULTS

The company is well on way to achieving their desired savings. Additionally, by having a better understanding of the whole transformer problem, the company is now addressing areas that should deliver even more savings.

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