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## Using data analytics to drive operational efficiency in an African call center

**Megan Yates**

Ixio Analytics, South Africa

The operations division of a large multinational company offering subscription-based services across Africa used Ixio Analytics to create a predictive model for call volumes in their inbound support call centre. The model previously used was overestimating call volumes, costing the operations division heavily in agent staffing and resulting in inefficient call scheduling. This situation had persisted for several years. Ixio Analytics used call volume data at half hour intervals from January 2012 to create a predictive time series model. We used an ensemble modeling approach, combining a time series forecast model and data splitting at key time intervals. This was the first known application of this modeling method to call volume forecasting. The model took into account seasonal, random and trend components in the data. Total call volumes for every 30 minute period, as well as call volumes for various types of calls (such as billing) were predicted. The Ixio model has achieved 94% accuracy since implementation. This is a significant improvement from the previous model, which achieved only 70% accuracy. The Ixio model has been implemented and used in the company's workforce planning. The accuracy of predictions has enabled efficient workforce planning and an increase in call scheduling. This is currently saving the company approximately USD 5 million annually. A subsequent iteration of the model now includes event data that has further improved performance.

megan@ixioanalytics.com