SAVING PENALTIES FOR AN AUSTRALIAN TELECOM COMPANY BY ACCURATELY PREDICTING CONSUMER COMPLAINT ESCALATIONS

Abstract

Infosys helped a global telco reduce escalations of complaints using deep analytics to predict the propensity of complaints raised to the Telecommunications Industry Ombudsman (TIO), a body that provides an independent dispute resolution service for telephone and internet complaints.

This helped the business devise necessary intervention strategies for those set of customers and complaints much before they escalate, resulting in tangible benefits of approximately AUD 7 million and intangible benefits of increased net promoter score (NPS), customer satisfaction, and experience.

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The high cost of telecom disputes

Pioneers in the telecom industry, our client is one of the biggest brands in Australia. Its channel operations team for consumers and small businesses were looking for actionable insights to base various business decisions on their customer, markets and agents.

One of the key areas that the company sought insights on was complaint escalations to the TIO. Complaints-handling within the TIO ranges from level one (L1) to level four (L4). When a customer first complains, the telco is charged AUD31 for an L1 complaint; however, the cost sharply increases to AUD260 for L2, AUD475 for

L3, and AUD2250 for L4. This makes every escalation expensive for telecom service providers. But the aim of the fee is to recuperate the TIO's costs for investigating complaints and to incentivize the telco to resolve complaints at one of the lower levels.

Each year, nearly 1 million complaints were raised against our client, out of which 8-10% was escalated with a 50-50 L0 to L1 and direct L1 split. Resolving, 100,000 escalations cost our client a fortune. With an objective to reduce the cost burden of these complaints, the company sought to identify / predict complaints and

customers that escalate to the TIO (L1). The underlying need objective was to:

- Reduce L0 to L1 leakage by 2 percentage points (4% down to 2%)

- Reduce the percentage of TIO escalations without a prior L0 by 20 percentage points (45% down to 25%)
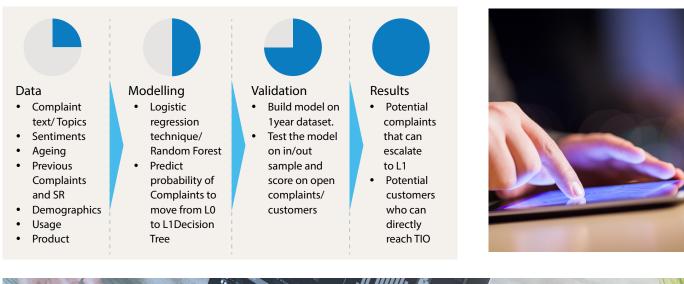
Our solution approach through analytics

Our team began by designing a set of predictive models for the complaints and customers that escalate to TIO. For each model built, a solution was designed through multiple phases, which was then implemented through various intervention strategies.

Phase 1: Establishing hypotheses and model parameters – In phase 1, we built several hypotheses that could predict the escalation behavior based on key parameters in the data . The parameters were identified through:

Sentiment Analysis
The sentiments of the text in the complaint (classified as negative to neutral)

Topic Modelling
The complaints are associated with specific topics, e.g. billing

History
Complaints and service requests history of the client.

Usage and Product Holding
Complaints related to specific product or usage type, having a higher probability of escalation

Demographics
can hold a key in predicting the tolerance level of problems among the cohurts

Aging of the current complaint – the number of days needed to resolve the issue, the key driver for escalations
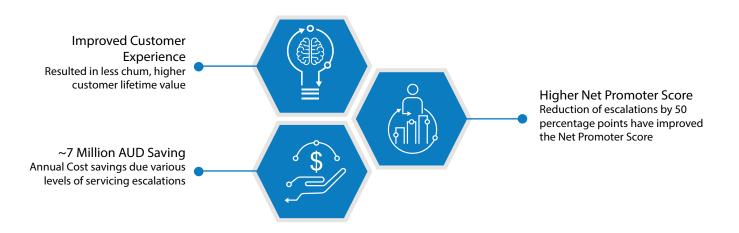
Phase 2: Model development – Post the development of the hypotheses in phase 1, we built a couple of models through logistic regression and random forest to predict the probability of complaints being escalated from L0 to L1. We validated and tested the models using a 1 year dataset, and finally ran the models on live data to identify the customers who were likely to reach out to the TIO.

Data
- Complaint text/ Topics
- Sentiments
- Ageing
- Previous Complaints and SR
- Demographics
- Usage
- Product

Modelling
- Logistic regression technique/ Random Forest
- Predict probability of Complaints to move from L0 to L1Decision Tree

Validation
- Build model on 1year dataset.
- Test the model on in/out sample and score on open complaints/ customers

Results
- Potential complaints that can escalate to L1
- Potential customers who can directly reach TIO

Benefits

The Infosys BPM analytics solution has delivered significant business value to our client. Through predicting complaints likely to escalate and acting to resolve the issues early-on, the company has been able to reduce escalations, improve customer experience, and save on dispute resolution costs.

Improved Customer Experience
Resulted in less chum, higher customer lifetime value

~7 Million AUD Saving
Annual Cost savings due various levels of servicing escalations

Higher Net Promoter Score
Reduction of escalations by 50 percentage points have improved the Net Promoter Score

For more information, contact infosysbpm@infosys.com

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