

Building an Intelligent Voice Analyzer

For a Major Australian Direct Bank



Client description

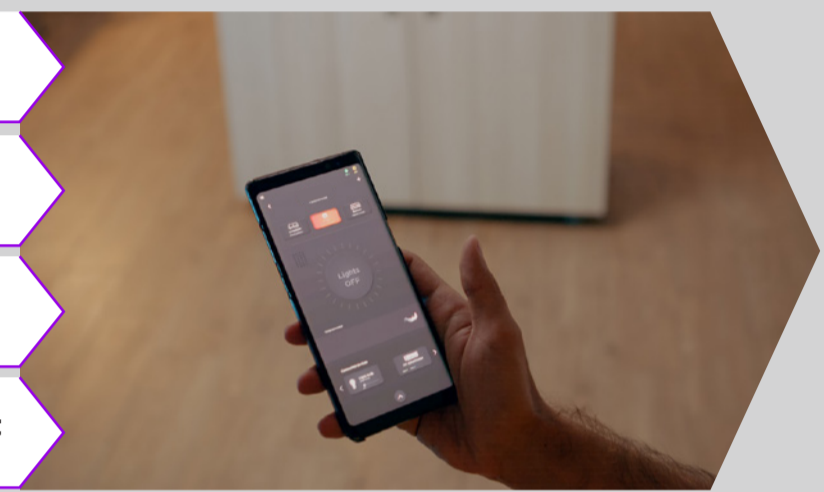
Customer is a 27-year-old direct bank headquartered in Melbourne with AUD 27.3 Bn assets and an 1800 strong workforce. They have offices in Sydney, Brisbane, Adelaide, Perth, Hobart, Canberra, and Darwin as well. Client's unique model of branch less operations is a path-breaking model in global banking industry. Services and support are provided over the phone, through online banking, or by a mobile salesforce of banking managers.



Business challenges

A glance at the client's business gave us a view of the process the bank followed, and the changes related to the same:

1. Bank's operations very much dependent on the call centers
2. Customer churn was reflected in surveys, but root causes were not known
3. Call center agents' performance, productivity and expertise was never measured
4. Call center performance analysis was needed to keep customer satisfaction intact



Owing to these processes, the client was facing certain business challenges

1. Details of call center conversation / communication was available only in the form of call center voice logs
2. Voice logs included challenges like diverse customer accents, frequent background noise, low voice pitch etc
3. Mapping of customer churn to relevant root causes within the Bank needed a thorough understanding of surrounding demographics, culture, compliance etc
4. Meaningful representation of the analysis for CXOs was the final hurdle

Our solution

HCL built a high-performance voice analysis engine to deliver complex AI-driven voice analyzer with embedded business intelligence by leveraging Microsoft Azure AI and BI Capabilities. Solution is built on HCL's IP ADvantage Azure VoiceNet to deliver the desired functionalities towards target use cases and features:



1. 24K+ recording of voice calls between customers and call centre agents collected
2. Text transcript was generated for voice recordings by applying noise cancellation techniques and addressing accent related issues
3. Key phrase extraction was done and prime concerns from customers were identified
4. Sentiment Analysis was done on transcripts to identify the reason(s) for the customer churn
5. Analyzed data was fed into the analytics Engine to generate dashboards and reports
6. Machine intelligence driven recommendations were generated for corrective measure

Tools/Technologies Used: Microsoft Azure Cognitive Service Speech API and related SDK, Microsoft Azure Cognitive Service Text Analytics Sentiment Analysis, Open-Source Accent and Noise Management Extensions, Microsoft Azure SQL and Storage Services, Microsoft Azure Cognitive Service Text Analytics Key Phrase Extraction, Microsoft Power BI

Business impact



Improvement in customer executive performance



Elevated productivity of call center agents and resultant cost savings



Easier decision making by CXOs

For any queries, please reach out to us at digitaltransformation@hcl.com

