

# Cyara Halves National Australia Bank's Test Team

Automated testing of speech recognition system removes the need for another six testers of critical new customer service application, creates customer experience benchmark to enable ongoing measurement.

## Executive Summary

National Australia Bank (NAB) recently introduced a speech recognition and voice biometric application that has replaced interactive voice response systems as the interface for incoming customer calls.

To plan and test the new system, the Bank created a collection of its customers' most common utterances. NAB used Cyara's automated testing products to assess the speech recognition system's accuracy and says that it would have needed to double its six-person testing team to achieve the same quantity and quality of testing.



## Introduction

National Australia Bank (NAB) is an international financial services organisation that offers banking and wealth management services for more than ten million individuals and businesses in Australia, New Zealand, the United Kingdom and the USA. NAB also operates an international capital markets and institutional banking business.

In Australia, the bank operates three major contact centres, where interactive voice response (IVR) systems have long been the main interface. Customers calling the bank have used IVR to enter the nature of their call, which was then routed to appropriately-skilled staff.

IVR was effective, but often resulted in contact centre staff manually routing calls to colleagues with the particular skills customers required.

In 2008 NAB decided it wished to improve the level of service it offered to customers through a speech recognition system that would give customers the chance to say exactly why they were calling its contact centres.

The project's aim was to empower customers to describe their needs, creating a new style of service that would see their calls routed more effectively to speed customer service while also ensuring more effective use of contact centre resources.

## A Need for Testing

To design its speech recognition application, NAB created a collection of words and phrases its customers use when speaking to its contact centre agents.

"We conducted an utterance collection process," explains Sam Jackel, Program Manager for the project. NAB recorded more than 70,000 customers, analysed their speech and used the results to fine-tune its speech recognition systems.

"It was all about getting the solution as robust and user friendly as possible before releasing it to customers," Jackel says. "It is very important to mitigate risks associated with poor customer experience and / or technology systems failure."

## Testing the System

To test the new system, NAB created a team of six testers to test for what Jackel calls "functional and business outcomes." "We need to know if a customer rings in and says something, will the system be smart enough to know where to route the call?"

But even a team of six can make only a finite number of calls, leading NAB to consider a way to conduct more tests, more quickly than a human team could hope to achieve.

That need for more and faster testing led the bank to Cyara's automated testing tools, which the bank uses in software-as-a-service mode.

*"The key benefit of a tool like Cyara is that it offers a high degree of automation," Jackel explains. "We can load up the speech utterances we want to test and away it goes and does the job."*

*- Sam Jackel  
Program Manager - Direct Voice Channels*

"We have a good idea of the language and phrasing our customers use, so we created a model with 400 or 500 utterances that includes the things customers say all the time, plus some of the 'outliers.'"

Cyara uses these samples to automatically place calls to the speech recognition system, then plays the utterances and tests the accuracy of its interpretation by recording the outcome of its test calls.

## Cyara Becomes the Baseline

Automated testing using Cyara made it possible for NAB to conduct frequent tests to improve the performance of its speech recognition system.

"Every time we made a change to the speech recognition engine, we ran that baseline test with Cyara," Jackel says. "Or if we made targeted changes to the system we tested to see if they are working," sometimes using a different utterance collection.



Cyara was also used to help the bank create a benchmark for its customer service experience.

NAB has used that data to create a benchmark for the customer experience, and continues to use Cyara to ensure that its operations achieve the thresholds it deems acceptable.

Cyara was also used for load testing. "One weekend, we took our production systems offline, to conduct performance and load testing" Jackel recalls. "We then used Cyara to place the maximum possible load on the system, to try and break it!" Both the speech recognition system and Cyara survived the process, a welcome result on both counts.

### Cyara Halves the Testing Workforce

Jackel says NAB required just one staff member to operate Cyara, but that the software did the work of many people.

*"I suggest if we did not have Cyara we would potentially need to double to size of the testing team to achieve the same business outcomes," Jackel says.*

*- Sam Jackel  
Program Manager - Direct Voice Channels*

In the future, he expects Cyara will continue to save work for staff across NAB.

"We are still using it every day to improve our speech recognition system. We run the baseline tests every time we make a change."

"What this means is that when we hand over the speech recognition system to our internal customers, they will be easily able to use Cyara for ongoing testing after the implementation project concludes."

### Benefits for Customers

Importantly, Cyara is also proving that its tests can achieve NAB's desired outcome of better customer service.

"Customer response is constantly improving," Jackel says. "The first time customers experience speech recognition, they expect it to behave like IVR. So there is a learning curve. But we can see that we have delivered a solution that is providing our customers with a positive experience by understanding customer intent before call routing decisions are made."

"That allows bankers more time to focus on more meaningful conversations with customers and lets us create more valuable metrics to measure contact centre agents' performance."



## About Cyara Solutions

Cyara Solutions is a pioneer of next generation software based customer experience simulation and testing solutions for IVRs, Speech Self Service Platforms, Voice Biometrics, Outbound Dialers and Contact Centres. Our unique technology enables companies to simulate end-to-end contact centre customer and agent experience in a repeatable automated manner to ensure satisfactory system operation without impacting actual customer experience.

Cyara can perform automated load testing, application testing, Genesys CTI and Routing strategy testing, quality assurance and validation of your contact centre operations without impacting customer experience whilst using real calls. With Cyara Solutions you'll always be the first to know of any issues with your IVR, Genesys CTI or Contact Centre. Deploy our solution on your premise or use our hosted 'On-Demand' services.

[www.cyarasolutions.com](http://www.cyarasolutions.com)



Head Office  
Level 40, 140 William St.  
Melbourne, VIC 3000  
AUSTRALIA

Contact Details  
Tel: +61 3 96078304  
Fax: +61 3 96078282

General Enquiries: [info@cyarasolutions.com](mailto:info@cyarasolutions.com)  
Sales Enquiries: [sales@cyarasolutions.com](mailto:sales@cyarasolutions.com)

Media Contact:  
Alok Kulkarni +61419781878;  
[alok@cyarasolutions.com](mailto:alok@cyarasolutions.com)

