

# Increasing the relevance of special offers to customers: The Vodafone New Zealand Story

CASE STUDY / TELECOMMUNICATION

David Bloch, manager, analytics and data strategy, Vodafone New Zealand summarised their barrier to progress, “We were restricted in our ability to provide relevant offers to our prepay customers. This prevented Vodafone New Zealand from capitalising on opportunities to upsell and cross sell services and products. Customers were also potentially missing out on deals and offers that would improve their experience”.

In New Zealand, prepay customers are not required to register any details or provide identification to get a SIM card for their phones. This meant Vodafone did not have access to demographic data that could be used to effectively market to this customer base. Instead, it could only develop marketing campaigns according to how much call time, TXT or data the user consumed on the network. Vodafone New Zealand turned to Teradata to help them use big data to accurately predict the traits of their prepay customers.

## Business outcomes

Vodafone New Zealand worked with Teradata to identify patterns within the data-rich portion of their user base. They could then apply those patterns across their entire customer database.

For example, they were able to confirm what many long-suffering parents could have told them – that young people use their mobile phones more in the evening, post more pictures on social networking sites and, in general, have a lot more friends that they call over any other customer group.

Youth customers also used messaging applications more frequently, and recharged their phone credit more often, albeit at lower volumes. They were also more likely to engage in campaign deals and promotions via the SMS channel – making them ideal candidates for a targeted campaign.

David Bloch said, “Understanding how the youth market behaves and what drives them meant we could develop more finely-targeted campaigns that had a higher chance of success.”

Using Teradata Aster, Vodafone were able to seamlessly combine network data from their Hadoop appliance with customer profile data from their DataMart. The resulting predictive model was highly accurate in identifying youth customers in their prepay base. After testing and tuning the model, they achieved a staggering 89% Correct-Prediction Ratio.

This new solution has allowed Vodafone New Zealand to identify a large amount of youth customers within its base – a segment that is now being successfully transitioning into the new youth proposition, Vodafone Mates.

David Bloch said, “If [customer] behavioural patterns match the youth demographic then it is likely that these customers will respond positively to offers and campaigns aimed at that demographic, regardless of the customer’s actual age. By using big data to segment the customer base in this way, Vodafone New Zealand can be far more effective and efficient in offering deals specifically tailored to that customer”.

## How did they do it?

Vodafone New Zealand chose the Teradata Aster appliance, which leverages the open source Hadoop big data ecosystem, and added R analytics software to identify likely demographic segment groups. The team of Vodafone data scientists were then able to analyse immense amounts of data to identify patterns.

David Bloch said, “Using Teradata Aster meant there was a delay of just four minutes between an event occurring and that event being available in our big data environment, so we were working with almost real-time information”.

Vodafone New Zealand captured four weeks of data between March and April 2016. This included 2.6 million connections that generated data usage traffic on the network, 85.4 million different IP addresses accessed by users, and 38.4 billion individual application sessions by users.

With Teradata Aster, Vodafone New Zealand's data scientists can access both system of record information and machine-generated data.

System of record data includes information that was collected through the company's billing platform: billing history, device type, time on network, deals purchased, average revenue, frequency of top-ups, age, gender (if known), and total volumes of usage.

Machine-generated data includes application usage, calling circles, calling patterns, volume of uploads and downloads per web session, time of day for web sessions, and category usage such as social media versus news websites.

Using Teradata Aster, the data scientists now had all of this rich data at their fingertips. Customers can rest assured though, there is no drilling down to an individual level. Instead the data scientists look at big groupings, simply to ensure that the right messages are sent to the right customers, rather than the spam approach that other companies employ.

Vodafone New Zealand will continue to analyse their big data to help improve prediction accuracy using Teradata Aster, R, and Hadoop.

David Bloch said, "The Vodafone New Zealand data analytics team are intuitive analysts who relish the opportunity to work on projects that look at how to make the customer experience better. Every day is different, and using the right tools, such as Teradata Aster, lets these scientists develop accurate predictions and models, in turn giving the business a much stronger basis for decision-making. This way, Vodafone NZ is maximising the value of big data to make a difference in our organisation."

## About Vodafone New Zealand

Vodafone New Zealand is a leading full-service telecommunications company with fixed and mobile networks, with more than 2.5 million customers across New Zealand. Every hour, Vodafone carries more than 256,000 voice calls and more than 200,000 GB of data. They also deliver more than 21 million text messages every day.

Vodafone New Zealand employs more than 3,000 people in Auckland, Wellington and Christchurch. They sell mobile phones and other products in more than 800 retail stores throughout New Zealand.

## About Teradata Aster™

With Teradata Aster™, now everyone can benefit from the power of advanced analytics. The system allows you to ingest, prepare, and analyse data at speed and scale, create data visualizations and operationalize insights, and discover untouched or unknown markets, new products ideas, new customer segments and methods to outsmart the competition, all within an easy-to-use, integrated tool for the most efficient use of IT manpower.

Discover what Teradata Aster™ can do for your business at: [www.teradata.com.au](http://www.teradata.com.au)

## About Teradata Corporation

Teradata delivers better business outcomes through technology-enabled solutions in the areas that matter most - from operational excellence and asset optimisation, to customer experience and product innovation, to finance transformation and risk mitigation. We work with leading businesses in over 75 countries worldwide. Our clients include many of the top performers and best-known brands in telecom, transportation, consumer packaged goods, financial services and manufacturing. We focus on turning the most complex and challenging data sets into high-value assets that produce high-impact insights and tangible value for the business.

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