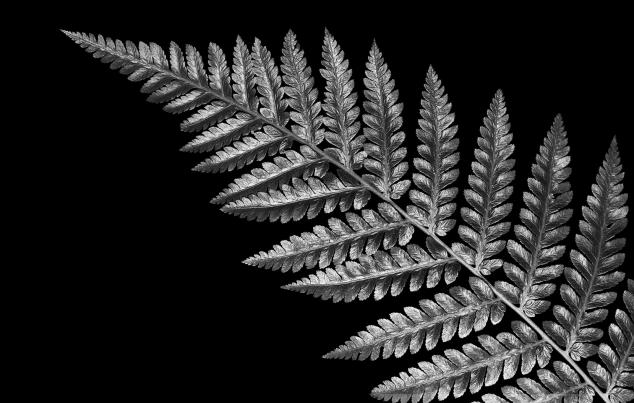




Data: Integration and Science

Will Koning | Ana-Maria Mocanu



Data: Integration and Science

Objectives of this presentation



We will present examples of data integration and data science and the impact these have had in helping our clients drive growth, reduce costs and improve service provision. Examples will include:

- Harnessing big and small data to drive growth and improve outcomes
- Unlocking the value of open data
- Using machine learning and data to drive decision making
- Overcoming the subjectivity of qualitative research with text analytics



1: Harnessing big and small data to drive growth and improve outcomes

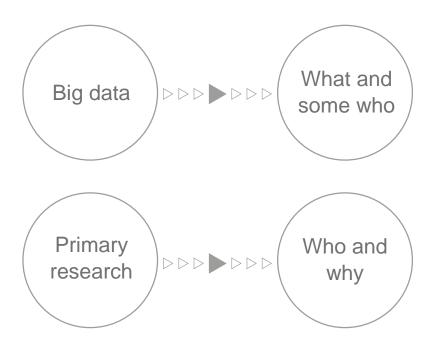
Unlocking the value of open data

Using machine learning and data to drive decision making

Overcoming the subjectivity of qualitative research with text analytics

Harnessing big and small data to drive growth and improve outcomes

By combining big and small data we can help you better understand your market and achieve better outcomes than you would by employing either data source alone





Big data has garnered considerable attention due to the potential it offers. Early results from big data have been mixed as the data is typically very narrow.

The most powerful insights are coming out of work that combines big and small data. Not only does this identify your most important opportunities, it also shows what can be done to harness these.

We combine multiple data sources to provide a fuller picture and better insights – frequently primary research with big data

We employ the most appropriate methodologies to combine the data given the business needs and data sources

Market Ecosystem Framework



Combine the data in a market ecosystem framework (a stock and flow diagram) where loyalty/value segments, brands or categories serve as the stocks

Flows into and out of the stocks are quantified

Choice drivers behind the flows are identified and quantified

Data Integration



A formal process to combine information from two or more separate data sources, making use of information in the databases for the purpose of accurately estimating certain values that are not available in any single data source

This could be as simple as weighting respondents to census data or a very elaborate and complex process

Data Fusion



The creation of a pseudo-single source, respondent-level database from two or more independent respondent level databases, linked at the respondent level, by data common to both datasets

This can be an incredibly powerful technique for enriching customer databases with rich survey data (or financial or persona or ...)

Two client case studies highlighting this approach

Case Study 1
Understanding
customers and
opportunities



A pharma company wanted to understand their customers and market while they were conducting later stage clinical trials. We quantified the patient pools and dynamics of the market using market ecosystem modelling and identified a highly lucrative place to play

Case Study 2
Accurately quantifying
audiences as
viewing shifts online

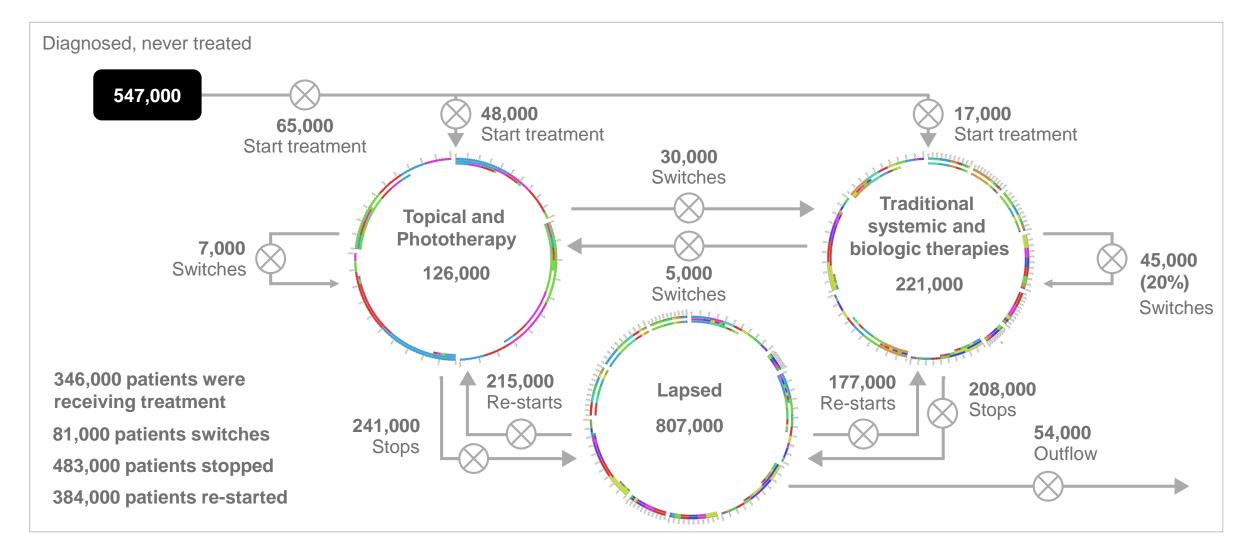


The Netherlands TV industry body Stichting KijkOnderzoek (SKO) is now delivering daily Online TV ratings to the market. Working in partnership with Kantar data scientists, SKO was the first TV currency in the world to deliver daily online ratings data in granular detail

Case Study 1: Understanding customers and opportunities

Pfizer: Psoriasis

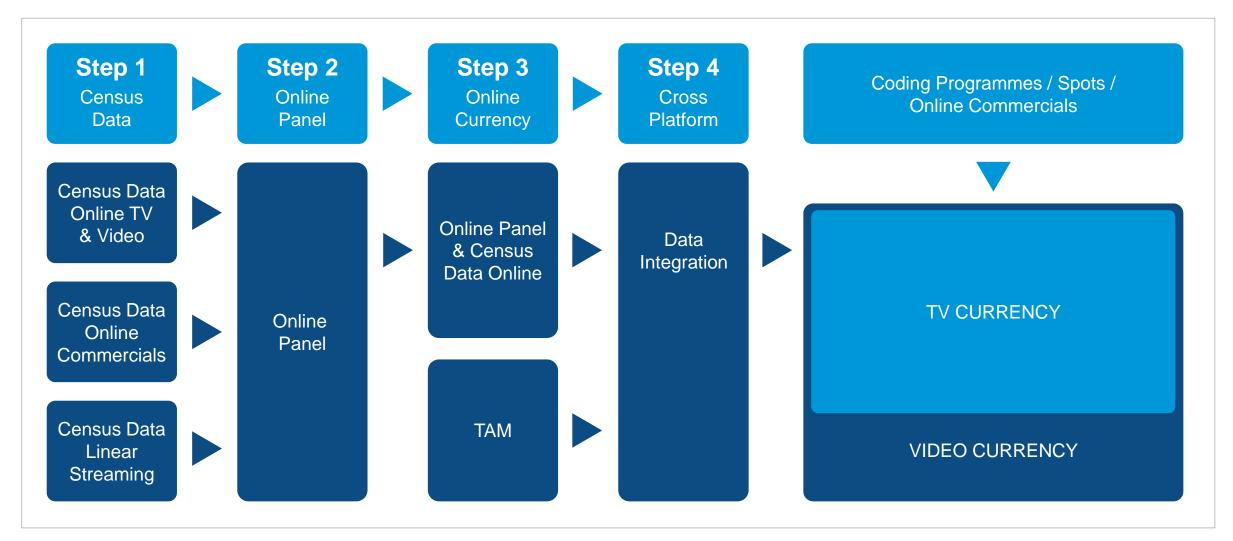




Case Study 2: Accurately quantifying audiences as viewing shifts online

Stichting Kijkonderzoek: Cross Media Audience Measurement

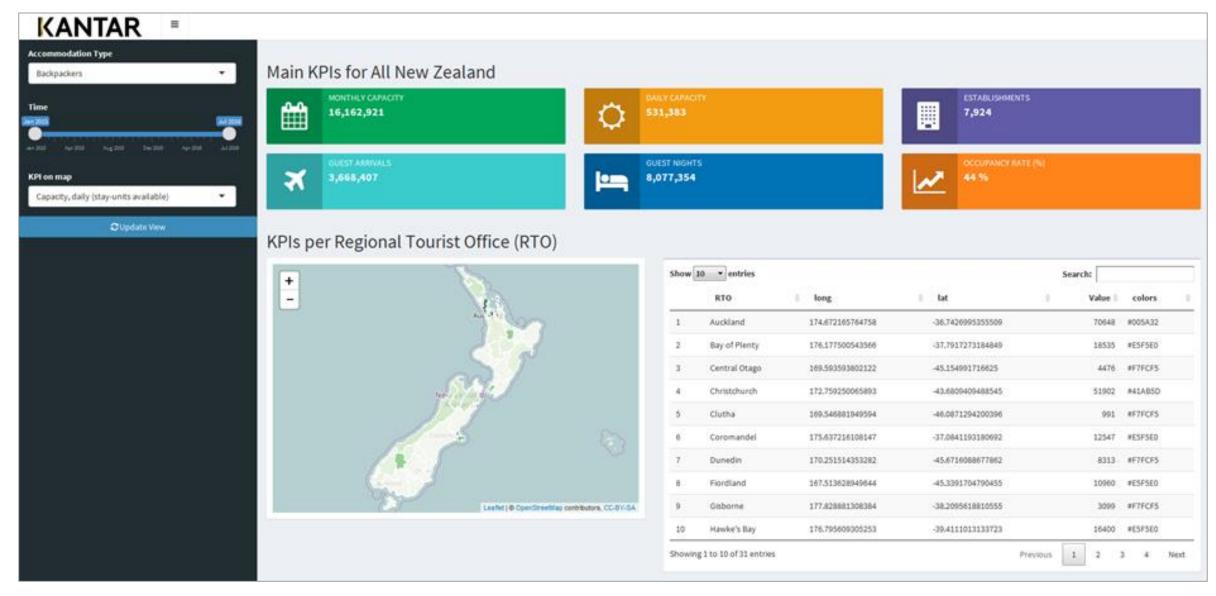




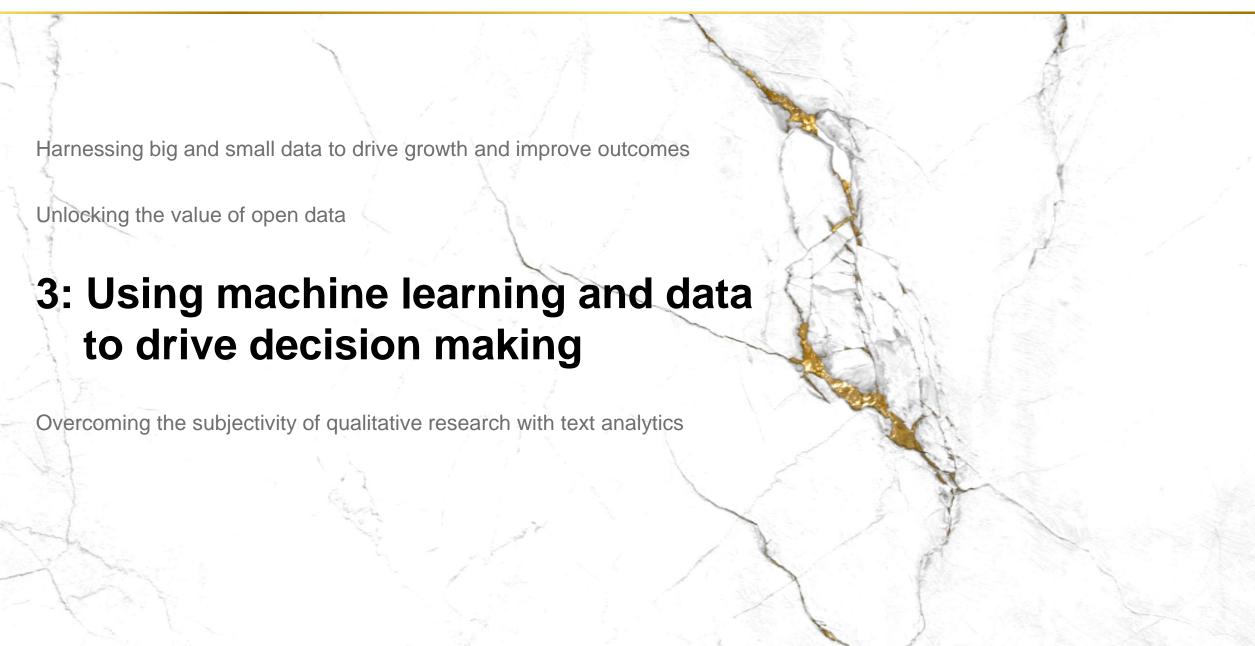




Case Study - Tourism Dashboard



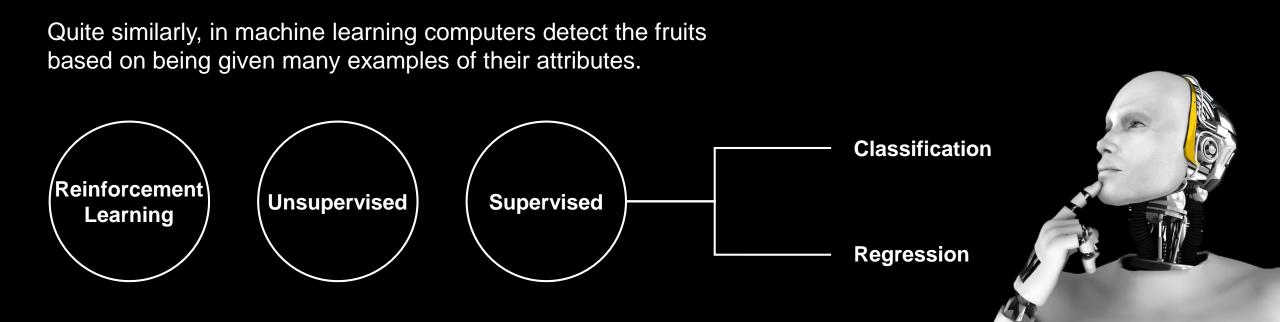




What is Machine Learning?



Imagine you have a bowl of fruits and you need to identify them. The human brain detects the fruits almost instantly, based on past experience



Case Study – Beer!

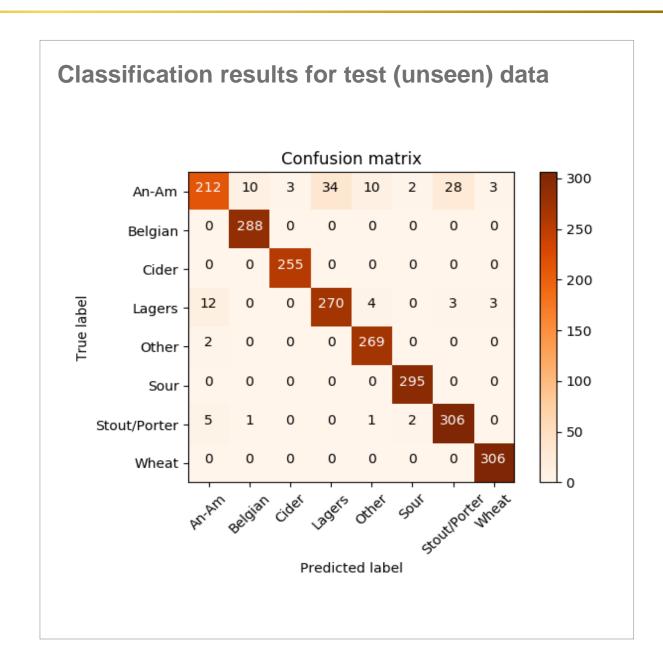
Methodology

We used the data from the web to extract the beers and breweries in New Zealand. In total, we gathered 3200 different beers in 185 breweries.

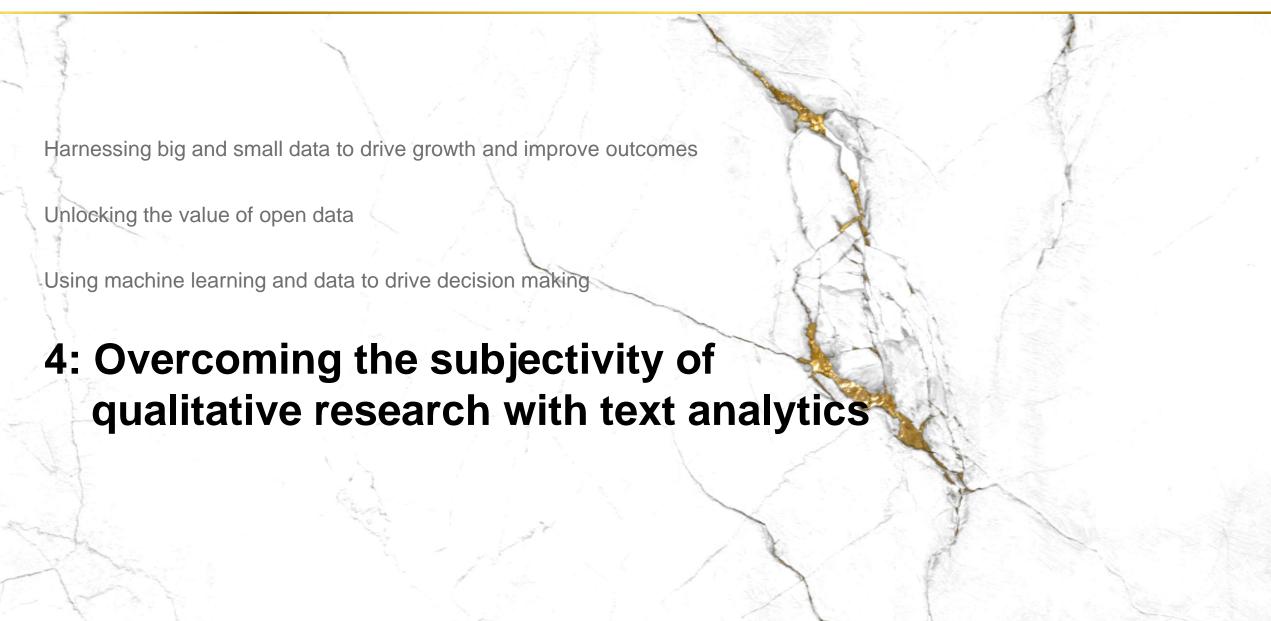
We used the beers' attributes, such as ABV, IBU, Calories, Seasonality, Date when the beers were added, and the scores they received from various public reviews.

We had 8 main beer types which we aimed to predict: Anglo-American, Belgian-Style, Cider, Lager, Sour, Stout/Porter, Wheat Beer, Other (e.g. fruit, low alcohol etc.)

Using machine learning, we used the best model and parameters to train the data, ending up with an overall 95% classification accuracy on test (unseen) points.









Why bother with Text Analytics?



Quantifying text data can expose unknown insights or correlate to the existing ones:

- Are people's opinions consistent when faced with a multiple-choice vs. an open question?
- If not, how do the two differ?
- Understanding mismatches can help us calibrate research results accordingly



Text analytics can tell a lot about the brand

- How do people perceive the brand based on their opinion of a particular ad?
- How do they feel about the brand based on what they liked and disliked?



Last but not least, analysis of textual data can help clients improve their offerings

- Can we do more of what people said they liked?
- How about the dislikes what can we do better next time?

Fictional Example

Concept testing a New Breakfast Superfood

Imagine we are performing a concept testing study for a new type of breakfast Superfood (e.g. breakfast kombucha).

The participants are first asked to watch a short video describing the product, and then given samples of the food to try



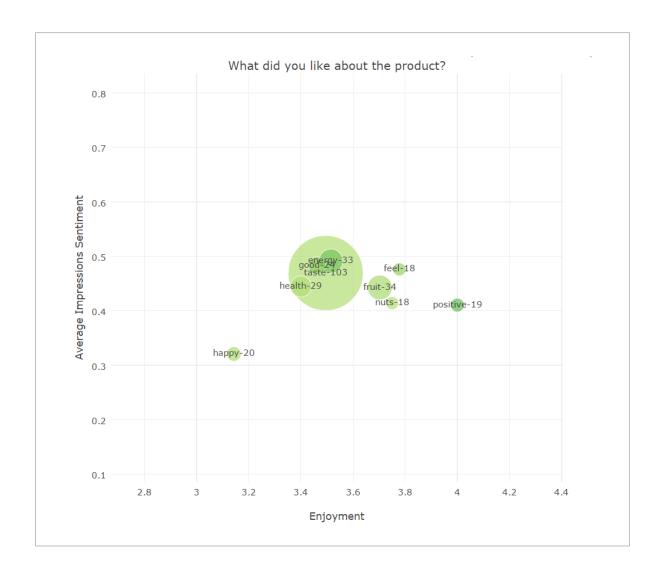


A few hours after the study, they are asked several scaled and open-ended questions in an online survey:

- How much did you enjoy product, from a scale of 1 (Not at all) to 5 (Very much)?
- Please state your impressions of the food (open-ended question)
- What did you like about the product? (open-ended question)
- What did you dislike about the product? (open-ended question)

Taste and Energy were the most liked topics.

A closer look at the Likes



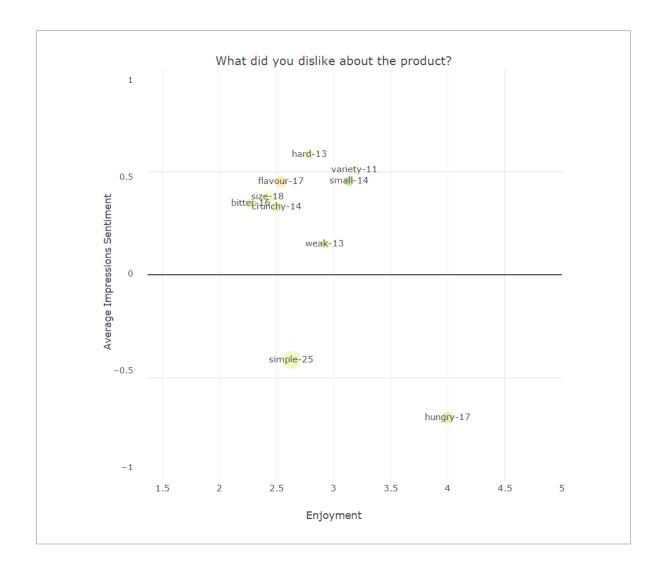
Compared to the dislikes, the scores are much higher for the liked topics – the enjoyment level is almost always above average, and both impressions and likes sentiment are always positive.

Apart from the taste and energy topics' high popularity, the position of the adjective 'positive' is the next most interesting finding – the word scores the highest enjoyment level and like sentiment, even though it is not a top popular word choice.

Other words give away interesting findings, too - The respondents very much enjoyed the feel after having the product, and discussed a lot its health benefits.

Simplicity and Size were the most disliked

A closer look at the Dislikes



The dislikes results are more uniform, with most of the topics in the middle of the scales (average enjoyment, neutral sentiments).

The lowest dislikes sentiment scores were attributed to the flavour and (lack of) variety of the product.

Comparing dislikes to overall product impression, simplicity showed again with a negative sentiment, along with the fact that people were still hungry after trying out the Superfood.





Do you want to just collect and store data or do you want to put it to work creating value and providing competitive advantage?

