Analytics Case Studies

Customer Journey Dashboards

Using advanced data engineering and visualisation to reveal the hidden truths of customer experience
- enabling our client to focus their transformation investments on the highest impact improvements

Customer: Large UK Retail Banking Group

Situation

"Investments in improving customer journeys were based on intuition and incomplete data."

There is no such thing as a standard customer journey. Every customer is unique and their behaviour is often complex and unpredictable. Creating outstanding customer experience requires a deep understanding of how people actually behave in the real world... a challenge when their electronic footprint spans many disparate systems.

Value Goal

To enable customer journey owners to uncover issues and trends across their end-to-end customer journeys. Then to support deep-dive analysis to direct action towards improving customer experience.

Mudano's Approach

Unbounded questioning
We started by putting business users at the heart of our analysis, using design thinking to uncover everything they wished they knew about their customers - from the web pages they visit to the reasons they choose not to take up offers targeted at them.

Data innovation
Our architects worked with the business to create connections between the systems their customers traversed - appointments, complaints, applications and more - connections which had never before been possible. We translated their vision into a technology blueprint for our engineers, who stitched together webs of interactions, revealing for the first time the actual paths trodden by real customers.

Interactive information design
Our information designers created innovative visualisations to represent complex patterns of behaviour simply, highlighting customer journeys that appeared anomalous and enabling the business to clearly see the problem areas.

Results

We integrated and visualised our client's highest priority customer journeys in just 12 weeks.

Our analysis triggered our client to redefine key business metrics, including mortgage application-to-offer time, based on new insights revealed about typical journeys.

Impact

This new perspective on customer experience and the insights it gave fundamentally altered the way change activities were defined and massively increased the impact of transformational investments in each customer journey.

Such was the impact of the initial 14 dashboards that the Board requested they be replicated for all of the priority customer journeys across the Group.
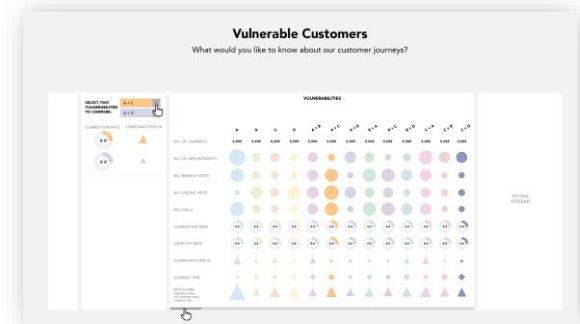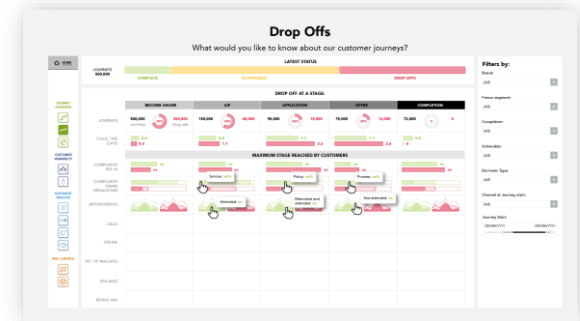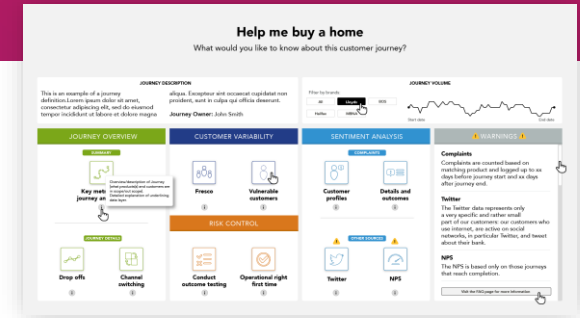
Machine Learning Propensity Model
Using machine learning to understand customer behaviour and identify high potential marketing leads, significantly increasing new customer acquisition

Customer: Large UK Retail Banking Group

Situation

"Over 90% of customers who started the onboarding journey dropped out before successfully opening the product"

Customer acquisition for niche products is hard. A lot of time and effort can be wasted chasing dead ends unless you can identify and target people who have a real need. Machine learning can enable this, revealing the hidden indicators in transaction data and enabling a much better understanding of a customer's propensity to buy.

Value Goal

To significantly increase the new business conversion rate for an investment product by using machine learning to analyse data about previous sales and drop-outs, together with current customers and their transaction data, enabling the marketing team to identify and target customers most likely to complete a purchase.

Mudano's Approach

Process and profile visualisation
We used data visualisation to understand the typical journeys and characteristics of customers who completed new business onboarding and those who did not. From this we were able to identify features and events in the process that indicated the likelihood of success of onboarding.

Transactional behaviour profiling
We applied Natural Language Processing and Principal Component Analysis to build aggregated behavioural profiles for customers based on transactions. What we discovered about the transaction behaviour of customers who tended to complete onboarding was significantly at odds with existing beliefs and resulted in fundamental changes to our client's marketing approach.
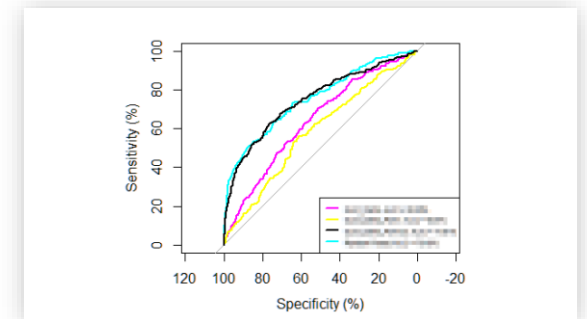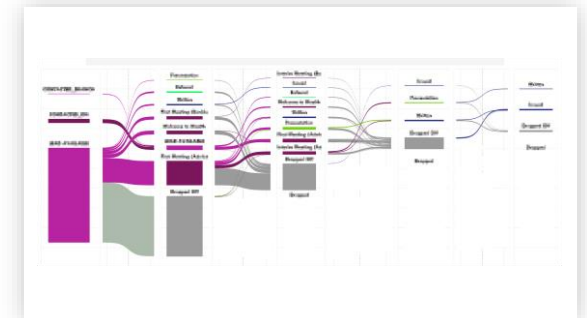
Predictive machine learning models
Using what we'd learnt from our customer behaviour and transaction profiling, we built and tested different machine learning algorithms to predict which customers would successfully complete an onboarding journey.

Results

Our client achieved a 25% increase in successful onboarding journeys, resulting in more than £20m of additional annual revenue.

Impact

Applying the predictive model to the retail customer base identified a large pool of leads that previous methods did not find and significantly increased the onboarding success rate. In addition to this, because the model identified leads more likely to complete, the average onboarding journey time was reduced by 25%, saving time and cost.

Predictive Complaints Analysis

Using Natural Language Processing and machine learning to understand and predict the causes of customer complaints to prevent them from occurring.

Customer: UK Financial Services Group

Situation

"How do we shift from reacting to complaints to predicting and preventing them?"

Complaints tend to result from the frustration that builds as customers encounter friction navigating processes, systems and bureaucracy on the path to their desired outcome. Customer advisors try to interpret the customer's description of events, which can be a distorted, partial picture of what actually happened, making root cause analysis more of an art than a science.

Machine learning can change this paradigm. Modern technologies make it possible to see everything that happened leading up to a complaint and to identify the common circumstances that tend to trigger them. Once we know this, it's then possible to recognise stress points and to predict when complaints are likely to arise.

Value Goal

To predict when a complaint is likely to arise and the circumstances under which it tends to happen; to enable preventative fixes and achieve a 10% reduction in complaints.

Mudano's Approach

Automate complaint categorisation
We changed the way that complaints were analysed, using Natural Language Processing to identify root causes, replacing the existing manual process.

Link complaints to customers and events
We built an automated solution that identified the individual customer that each complaint related to and the timeline of interactions leading up to the complaint.

Machine learning path analysis
We used machine learning to identify the features of journeys which were highly predictive of a complaint, from online API calls to specific call handler interactions.

Results

We analysed 43 billion data points in online click journeys, identifying areas requiring priority attention to avoid potential complaints.

We replaced a manual process that took 4 days to classify just 20% of complaints, with a new automated process that takes just 40 minutes to classify 100% of complaints.

Impact

Our analysis directed technology remediation work to areas of the web application which were common triggers for complaints. This included enabling them to build prompts offering support to customers at typical friction points in order to improve the customer experience and prevent potential future complaints from occurring. It also enabled operational managers to identify staff who were more highly correlated to customer complaints, enabling targeted training.
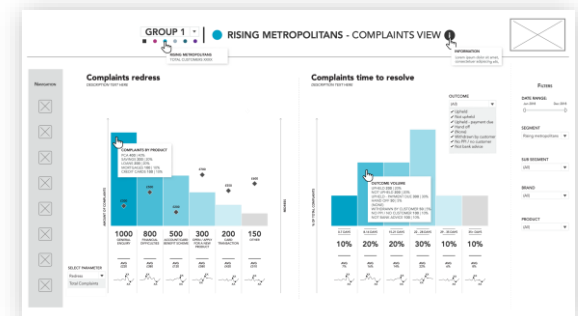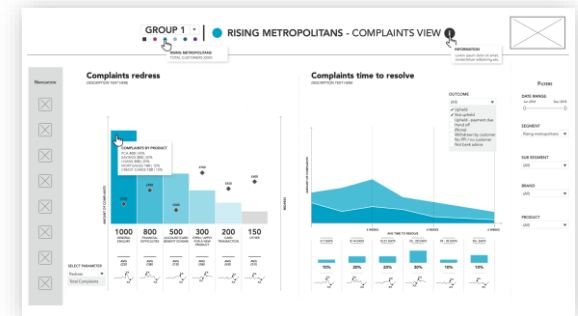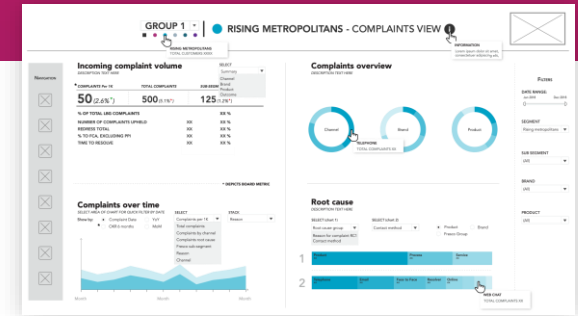
Social Media Sentiment

Using Natural Language Processing and text analysis to evaluate customer sentiment about specific campaigns and customer journeys

Customer: UK Retail Bank

Situation

"How can we get an unvarnished view of how we are doing, direct from our customers?"

Insights drawn from complaints are merely inferences - interpretations of complex scenarios and human emotion. Surveys and net promoter scores provide a more direct form of feedback but only cover a small percentage of the customer base. Social media can provide an additional, much broader and more direct view of what your customers think of your products and services, as well as what they think of your competitors.

Value Goal

To identify social media posts relating to specific customer journeys and marketing campaigns and to understand both point-in-time customer experience as well as trends from the sentiment expressed in the posts.

Mudano's Approach

Classify each post
We applied Natural Language Processing to the text in social media posts to classify them based on the customer journey or marketing campaign they related to.

Measure the sentiment
We performed text analysis using customised sentiment libraries to score each post based on the tone of voice and types of words used.

Visualise trends
We created visual representations of changes in sentiment over time, overlaying campaigns and events relating to different journeys in order to understand their impact

Results

One of the most surprising insights was the strength of positive feeling about the welcome gifts given to new mortgage customers... our client had intended to stop this campaign but quickly reversed their decision!

Impact

Establishing a direct connection to the voices of individual customers completely changed the conversation about how to create exceptional customer experience and influenced their marketing strategy. For the first time, our client didn't only see complaints, but also feedback on parts of the process that truly delighted their customers.