PrediCX

Case Study

Home Appliances Company uses PrediCX to Automatically Handle Customer Interactions

A leading manufacturer of home appliances is using PrediCX, the automated predictive analytics platform for customer experience from Warwick Analytics, to automate the analysis of their customer interactions and 'Voice of Customer' (VoC) data. As a result, they are able to dynamically generate key insights which would otherwise remain undetected. The insight generated is being used to support the continuous improvement of their Customer Experience, from design, through to manufacturing quality, user experience and after-sales customer service. The improvements are also driving cost reduction and increases in operational efficiency.

Background

The home appliances company is highly innovative, constantly developing new products and models. It processes many thousands of customer interactions every day across a multitude of channels including its call centre, emails and chat. There are also indirect VoC data sources requiring active management, such as reviews, blogs, social media and news. These interactions relate to one or more specific areas such as warranty claims, quality (manufacturing or supply chain), design and safety. They can also straddle administrative processes such as user/warranty registrations, complaints and product returns/replacement.

In order to optimise overall customer experience, as well as minimise costs, the company needed to quickly understand what each interaction relates to so the appropriate processes could be applied. They also needed to aggregate these interactions around key issues, understand their root cause and then identify specific opportunities and/or remedial actions in areas such as design improvement, manufacturing quality and new product development.

The company also wanted to be able to assess which 'issues' had the strongest effect on critical customer outcomes such as satisfaction and loyalty. This was originally achieved by linking the issues (separately and in combination) with metrics (such as CSAT or NPS) and objective metrics such as repeat purchase, customer tenure/value progression, reviews and tracked advocacy.

The client also originally ***manually*** classified interactions during only the first few weeks of a new product launch. This involved engineers having to read the notes or transcripts of calls/emails, identifying topics/issues raised, and then making a judgement as to how to classify and aggregate these interactions according to the issues/ topics and their associated business function(s). This was time-consuming, subjective and expensive, requiring skilled and experienced members of staff. As the number of products grew, this process became ever more inefficient.

There was simply too much heterogeneous data, in many languages, formats and styles, to cope with it. Furthermore, while the old manual process was intended to identify new product 'teething problems' during the first few weeks post launch, there was no formal capability or process to detect subsequent issues arising later in the product's life, such as 'wear-out' failure modes. As a result, undetected issues could rapidly accumulate as the product range expanded, forcing the business to be highly reactive in resolving aggregated issues.

In the absence of the ability to spot early trends predictively, many issues which were semantically similar became buried in the 'long tail' of records because they weren't detected. While various reliability analyses (such as Weibull analyses) could be conducted on part numbers and the supply chain, there were many situations where the causal element could not be easily identified. As a result, many different parts could be changed (potentially some unnecessarily) even though the symptoms were similar. In other words, the analysis could not be reliable unless the issues were properly aggregated by symptom/cause.

The overall cost to the business of these inefficiencies was substantial. The hours spent manually processing and interpreting data proved to be the least significant cost when compared to the expense (millions of Euros) of products being manufactured with undetected/inherent issues. The consequences for brand reputation, customer satisfaction and hence future sales could be even greater.

Solution

The company selected PrediCX from Warwick Analytics - a suite of automated predictive analytical software specifically designed for unstructured VoC data. The core algorithms, developed over a decade of academic research, are parallelised in a big data platform which can be accessed via an API in the cloud or on premise.

PrediCX takes the heterogeneous VoC data such as CRM notes, call transcriptions, reviews, complaints, chats, emails and any social media and classifies them automatically into semantically similar clusters. This automates the early warning of issues and topics and handles them in an automated fashion. By subsequently linking these issues and topics to transactional data, PrediCX can go on to recommend and prioritise actions which optimise customer experience and business performance, as well as segmenting customers for more targeted marketing activity.

PrediCX features two key technologies. Firstly AIR (Automated Information Retrieval) extracts all of the possible topics and associated sentiment from the raw data. Secondly OL (Optimized Learning) takes this rich output from AIR and uses it to generate predictive models. Crucially, OL 'asks' users for specific input for validation where it needs it to optimise performance.

PrediCX can also plug into Warwick Analytics' other products such as WarrantyGuardian and SigmaGuardian to address the entire product lifecycle from customer interaction right through to warranty handling and automated root cause analysis, dramatically improving quality alongside increased customer satisfaction.

Outcome

The adoption of the software has dramatically improved the capability of the company. They are able to launch and update products faster, enhance customer experience throughout the lifetime of the product, whilst also getting key insights from customers to support product improvements and new product development. It has also helped the company to move from a 'replace and fix' model to proactively alerting customers and sending parts when they can fix a product themselves.

PrediCX has also improved business performance through better issue classification: enabling lower warranty costs, fewer repeat issues and the management of customer experience in a more systematic way - improving customer satisfaction and reducing costs simultaneously.

Commenting on these outcomes their Quality Director stated, *"We knew that we wanted to improve our process of customer interaction classification to aid our growth and we looked around for AI that could help. We are delighted with the way that PrediCX has enabled our processes to be dramatically improved and automated as well as all the unexpected benefits of cost reduction and a better handle on our customers. It has truly helped us to innovate more with less cost".*

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The head of Customer Experience added: *"We now have an early warning system aggregating Voice of the Customer and being able to action improvements along each part of the customer journey, both aggregated and customer-specific 'Next Best Action'. Going forward this will allow us to get a much better handle on which topics impact CX both positively and negatively above and beyond just product quality. We can also use this to optimise the costs and service levels in customer services, by matching the resourcing levels more appropriately to demand.*

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