Meaningful Information: Gaining Competitive Advantage using Big Data

As the retail industry continues to achieve impressive levels of growth, combined with increasing use of loyalty cards, there is an increasingly important challenge of managing and making the best use of the huge volumes of big data that are collected. E-commerce grew 16% last year in the U.S. and continues to provide new sources of data. This data includes product information, log files, transaction data, loyalty card information, spending patterns and comparator data from competitor businesses.

A leading eCommerce retailer, our client operates more than 11,000 physical stores in 28 countries and has eCommerce websites in more than 11 countries. The business has now made a decision to focus on delivering a seamless experience for customer, both in store and from any digital device. There are four important factors driving this growth:

1. Large sales volume made possible by a large customer base and scale of operation
2. A highly efficient supply chain system that maximizes productivity and reduces outlays
3. Low operational and overhead costs
4. Use of bargaining power to achieve the lowest possible prices from suppliers

Used effectively this information provides exciting opportunities for retail businesses to achieve added value and competitive advantage, leading to growth in sales and growth in market share. However, using all this data effectively requires a carefully designed solution. At Loginworks we bring together colleagues with vast experience and knowledge to create meaningful information to support effective management decision making.

A Significant Challenge

Recognising the growing interest in healthcare products and the increased number of producers of these goods, our industry leading retail client wanted to make more informed decisions about the range of products to be sold in each store and online.

This was a direct response to feedback from across the business that identified issues with stock forecasts which varied between stores, with product shortages in some areas of the business and products which were not performing effectively either in individual or multiple outlets. Store managers were unable to effectively meet customer requirements and some items would be sold off as surplus stock and markdowns in some stores, whilst other stores did not have sufficient product to meet customer demand.

CASE STUDY

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This situation had created issues across the business – form inventory managers struggling to provide a realistic picture of stock demand and stores failing to hit healthcare sales targets, with inequitable and inaccurate distribution across the network of stores.

A Strategic Approach

To convert big data into a format which is easy to read and simple to manage and manipulate to present a wide range of meaningful information means that the retailer needs to have a clear aim and objectives for the data on completion of the project. In this case our client was interested in being able to understand consumer interest in healthcare products sold online and in-store in different store locations to make more informed decisions about the overall range of products and the allocation of products to meet customer expectations in different parts of the country.

"The ability to view, compare and analyse complex data across the business, between different business units and in comparison to our competitors offers insight to our senior management team which has the potential to achieve huge competitive advantage for our business"

Having identified the overall goal of the project, data needed to be collected and analysed. The process we use starts with data scraping to create a database of information across, if necessary, hundreds of columns of different information about each product that is sold within the healthcare range. This data is then analyzed and processed so that we can start to develop a visualisation of all the information.

As we process this data we are able to explore the interrelationships between all the data that we have collected to produce a dashboard where different factors can be compared. This makes it possible to choose particular stores or particular groups of stores to compare product sales and across different product ranges. This data can then be used to help managers to make informed and accurate decisions and supports forecasting decisions.

A Satisfying Solution

The dashboard is able to present the data from three selected store locations, providing insights in to categories, sub categories, total product counts and UPCs.

Our solution makes it possible to drill down into the data to check specific products, UPC and ZIP details. This powerful dashboard provides a summary representation of 80 million items of data in a single frame for different store locations.

This visualization is designed to provide an easy to understand dataset, producing a large volume of information on a single page format.

As our client continues to dominate the Fortune 500 list for a further year, maintaining the top position for a retail business, the firm's strategy of price leadership, focussing on keeping everyday prices low has enabled the business to start to explore the digital marketplace.

CASE STUDY

A Series of Substantial Benefits

Once the dashboard was made available to the forums senior management team improvements were able to be made almost immediately.

Each store now has a range of products which match predicted and historical sales levels and the expectations of customers based upon data provided through loyalty cards.

Stores are more profitable and fewer products are sold at discounted prices. Stock turnover has also increased.

The business has been able to streamline the product ranges available in store and have identified brands and suppliers which were less popular across all stores and online, making it possible to reduce supply chain costs.

Forecast accuracy had improved for the healthcare product ranges achieving industry leading performance in the healthcare sector.

Results

- Increased healthcare product line profitability by 25% and turnover by 9%
- Forecast accuracy improved by 800 basis points
- Reduced excess slow moving inventory by US$14m
- Reduced losses on discounted products by US$7.2m