

Using GIS to enhance the customer experience



By [Gary Allemann](#)

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Today's economy is highly challenging for the majority of businesses, from retailers to service providers and everyone between. Differentiating on product or price is simply no longer an option, as the competition can and will counter this with similar products or pricing in a matter of days or weeks. In addition, customers have never been more empowered or able to switch providers should they be unhappy with services, or to influence others with their negative opinions about a brand.

Rather than trying to offer different or better products and services, the key to success today is for businesses to provide their customers with a preferred shopping, or service, experience. Not only does this avoid the inevitable price war that devolves when competing on price, it also helps to prevent negative repercussions as a result of customers sharing their poor experiences virally.

Achieving this hinges on allowing each customer to interact with your business at the time and place of their choice. Customers may, for example, choose to interact in different ways depending on where they are in their buying cycle, the time of day or the ease of access to a particular channel.



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Leveraging Big Data for your interaction strategy

Delivering a superior experience requires the marketing department to identify and provide the optimal interaction strategy for each segment and customer. To do this, they must obtain as much information as possible about their customers and their behaviour. This must then be used to produce the optimal combination of channel, interaction, product and pricing to give each prospect and customer the experience they expect.

Big data is frequently adopted to drive enhanced customer experiences. Companies that harness the customer insight available from big data sources: including internal CRM and marketing software; call centre and weblogs; and even social interactions; are better positioned to provide their customers with an optimal experience. Outcomes may include a better understanding of customer and market behaviour, improved knowledge of product and service performance, enhanced revenue, reduced cost, and the ability to make more rapid, fact-based decisions which can enhance efficiency, reduce risk and more.

Ultimately big data is able to assist organisations with managing the customer experience by answering a few pertinent questions, including who the customer is, how they prefer to interact with the business, which channels they use at different stages of the buying cycle, and so on.

Keeping track of customer movement

One area of big data that is only just being explored for its ability to improve customer experiences is GIS, or location data. Location data is part of a bigger picture that can give organisations insight into a customer's movement, when and where they prefer to interact, and where they prefer to buy. Location data is critical for any business that recognises that many customer interactions require face to face contact - whether this may be through the appropriate placement of a billboard advertisement, or drive the location of a new store, ATM or cell phone tower.

A variety of information, from purchasing, CRM, channel and GIS data, can be combined and analysed to deliver big data insight that helps to identify where to invest in infrastructure in order to deliver enhanced sales and services to a particular geographical segment. In fact, every contact with the organisation can be improved through a proper understanding of the customer's location.

Combining location data from multiple sources has its own challenges. GIS/mapping systems store data as shapes based on their longitude and latitude - where customer locations in CRM and other sources are typically stored as addresses. To really exploit location data requires us to create a link between these two sources - typically by plotting the location of an address on a map and providing a point, or geocode, for that address.

Poor address data quality makes this difficult to do.

Structuring address data

Common complexities may include address variations in both English and Afrikaans, missing information such as suburb names or postcodes, or miss-spelt place or street names. Invalid data can skew the results of analytics - for example, by suggesting an expensive infrastructure investment in a suboptimal location that was overrepresented in the source data.

Organisations need to ensure their GIS data is accurate before using it to obtain insight, otherwise there is significant potential for a failed or incomplete customer view. In order to tackle this issue, unstructured address data must be turned into a structured address record. In addition, obvious spelling mistakes and ambiguity must be resolved and missing data must be added where possible.

As with any big data analytics, the addition of location data has the potential to add another layer of insight and understanding about customers and their behaviour. This in turn can be used to optimise business processes and services around these requirements, and enhance the customer experience. However, without quality data, any insights derived will be less than accurate, which could lead to poor decision-making. Data quality issues must always be addressed in order to ensure analysis produces accurate, effective and actionable insight.

ABOUT GARY ALLEMANN

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