From Basics to Big Data

ADDRESSING THE CHALLENGES OF THE MODERN RETAILER

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GOVERNANCE

SECURITY

QUALITY

AVAILABILITY

RAW CUSTOMER DATA

Enhancing the connection between company and customer can turn shopping into a more personal and customized experience.

Big Data, Social Media, and the Challenges of the Modern Retailer

Working in the world of retail, it's challenging to keep up with constantly changing shopping habits, effectively managing customer data, and choosing the right engagement platforms. IT executives trying to stay on top of these ever-evolving changes, continually ask if their business goals and objectives are aligned with their customers' expectations.

It's easy to see that retailers are in the midst of a very exciting and innovative time. However, it should also be a time to assess current information management architectures and governance. In order to successfully address current retail challenges, and improve the customer experience, it's essential that your data intelligence efforts are positioned to leverage historical measures, integrate new measures from various sources, while remaining within a highly secure environment.

Retail companies continue to be influenced most by Baby Boomers and Millennials

According to 2014 GlobalWebIndex, 88 percent of Millennials have a Facebook account, as well as 70 percent of Baby Boomers. Since over half of each group has an online presence, your company cannot help being influenced by both, as opposed to only one group. With this in mind, you need to ask yourself if your user experience, online content, products and incentives are in line with both of these demographics. If not, you may be setting yourself up for poor results, or even worse — failure.

Consumers to shop on social media sites using mobile devices

A white paper from the CONNECT 2014 Mobile Innovation Summit showed that 62 percent of Americans own smartphones; of those, 94 percent of them look for local information on their phones. As a result, 84 percent of smartphone owners either make a purchase from a business they find via searches, or contact a business they come across. Perhaps an even more important finding is that 79 percent of smartphone owners claim to shop on their smartphones.

Also, consider a recent article on CNN Money about new features Facebook will be implementing soon. One of these features is the ability for consumers to track online purchases and communicate with the business they purchased from via Facebook Messenger. This feature will allow companies to communicate with their customers on a more personal and convenient level than ever before.

Retail companies to experiment with more social platforms

Social media is continuously evolving and producing larger amounts of data daily. With more and more social media platforms being created, it is extremely important to provide proper analysis of new data. By using more than one social media platform and providing a consistent experience on each, your business has the potential to increase customer acquisition while decreasing customer acquisition cost. According to Datameer, one company recently used data analytics to find that customers who spent the most money on their products also shopped at Whole Foods and "liked" The Food Channel on Facebook. This information led to a higher conversion rate and a 30 percent reduction in costs per customer acquisition, because the company refocused their ad and promotional budgets.
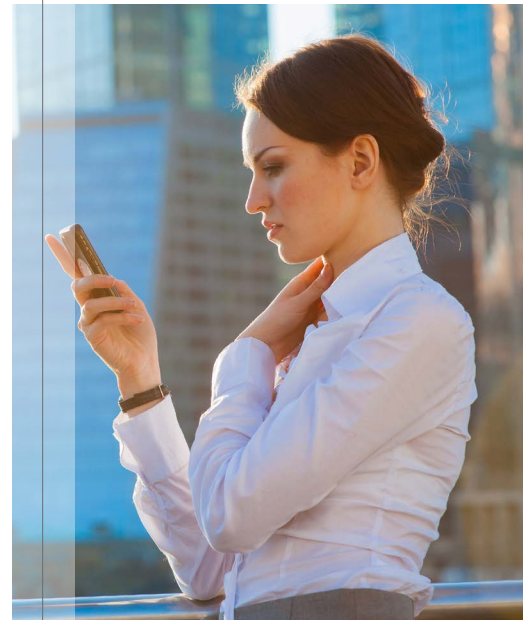
Retail companies have to focus on data security due to consumer info breaches

Shopper loyalty programs, such as Walgreens' Balance Rewards, typically require personal data from their customers. If customer information like birthdays or addresses found its way into the wrong hands, it could have serious negative consequences. For this reason, it is best for retailers to make certain they focus on data security from outside and inside threats.

Retail companies should keep in mind that older generations are typically more resistant to providing personal information, whereas younger generations are more willing to share their personal data. Imagine you are shopping at an online retailer like Amazon. You click "Checkout" and all of your information is stored and ready to submit. If you are younger in age, this probably comes across as convenient. However, if you fall into the Baby Boomer category, this automatically stored data may be alarming. An article explaining the security of your site and lack of data breaches may put some of these customers at ease.

Retail companies will continue to expand their online reach

According to YCharts, e-commerce sales have continuously grown over the past decade and show no sign of slowing down. Given this information, it makes sense (and it's a good business move) for retail companies to expand their online presence.

Zappos is an example of a retailer with excellent online presence. Zappos is a company that aims to have the best service available for an online retailer; so far, their efforts have served them well, as they are logging over $2 billion in annual sales. One example of Zappos' great customer service is their VIP membership.

Customers earn a VIP membership from Zappos by being a repeat buyer; this unique membership allows them to receive free one-business-day shipping with no order minimums. Incentives like this VIP membership increase repeat purchases, thereby establishing trust with your company.

It's important to keep in mind the fundamentals of information management:

Governance

Information governance should be front and center in the initial phases of project design. Your company should not put off governance until the latter phases of design. If governance is considered an afterthought, you run the risk of dealing with both security and quality issues down the line.

Managing data through standardized processes and procedures helps to ensure data integrity. By being pragmatic with data management, your company can rely more confidently on your data, as it will be more consistent and complete. Perhaps the most important goal to have regarding information governance is to make sure the data provided is both trustworthy and easily accessible in order to aid decision-making.

By incorporating some type of format validator into a front-end form that feeds data into the backend, you can almost guarantee proper governance. Properly governed information ensures that data is uniform across multiple projects/departments.

Quality

It is vitally important to monitor the information entered, to ensure it is entered correctly and consistently. The quality of your data will be directly affected by the number of governing strategies you have implemented, as well as how effectively your company utilizes them. For example, if your company has fewer polices in place compared to a competitor, your company runs the risk of generating lower quality information.

Simply put, consistency and accuracy act as a key ingredients. If you are entering data into your systems manually, you should make sure there is an input protocol to ensure that employees enter data in the same manner across the board.

For example, if you are inputting a dog food product from Purina, you do not want it to be entered as "Purina_DogFood" on one occasion and "PurinaDog" on another. Avoiding inconsistency will allow your data to match up, which will then allow your company to better track information such as sales numbers. The easiest way to input data in a manner that circumvents irregularity is to input the information as pure and unadulterated as possible from the source system.

Instituting successful input strategies will result in data that will be more accurate, easier to trust, complete, and up-to-date.

Availability

Retail is one of the biggest consumers and dependents of data. Companies use data to make decisions, understand sales figures, and review financial information. If your company's data is not readily available to be utilized in the fast-paced retail industry, you run the risk of losing customers and sales.

Data availability is growing even more in importance with the aid of social media, especially on the consumer perception end of things. A company that can capitalize on all sources of data will surely have an advantage over their competitors. For example, take a look at the two main uses of Twitter for a retailer. You can use Twitter to see what consumers are saying about your company, and as a platform to communicate with those consumers. Analyzing what your consumers are saying about your company via Twitter, as well as how they respond to your company's communications, can provide data that previously may have been difficult to obtain.

Unfortunately, communicating an abundant amount of information in a tweet is difficult, so one should not expect to obtain the same amount of data from a tweet as they would from a more detailed review on Yelp.

That being said, data mined from something as short as a Tweet can still provide valuable information. For instance, it is now possible to set up a geofence around a particular store location and collect Tweets inside that perimeter. After the tweets are collected, the system can then rank words and phrases from them and assign ratings.

This technology allows stores to integrate a grading system into their store's dashboard. Grade categories could consist of factors like customer service or store cleanliness, and the grades would be assigned based on data collected from the ranked words and phrases in the tweets. Your company could then take these grades and view them against daily sales totals, or, if you want to be more specific, daily sales totals from a particular department.

Security

Lately, with all of the recent issues regarding consumers' private information, it is important for your company to make certain that confidential information is stored in a safe manner.

In the retail world, data is a company's most valuable asset. Unfortunately, your data is also extremely valuable to people outside the retail industry. Like most, your company possesses a staggering amount of sensitive information. This information can include (but is not limited to) details about employees, customer relationships, payment information, and the demographics of the people who shop at your store.

Since this information is highly valuable, having a response plan in place is absolutely crucial in case an outside group attempts to or successfully hacks into your information database.

Additionally, administrators should be constantly monitoring access to your data to prevent threats from the inside. Outside attacks are not the only threat to your data.

SECURITY

How to Supplement Your EDW with Big Data

With information management fundamentals in place and market trends/predictions in mind, your company can more effectively benefit from big data.

Applying Business Intelligence practices with big data gives your business the ability to delve deeper into current information and explore new business opportunities. Since big data introduces more nontraditional data sources such as sensor data, social media comments, and activity log files, it provides extremely valuable business intelligence to your company.

However, big data is largely unstructured, in that the data types do not fit cleanly into traditional databases. This unclean fit means your company needs to utilize newer tools in order to fully reap big data's benefits. It is also very easy to become distracted by new functionalities and theories surrounding big data adoption. In the recent past, retailers have looked at big data as a means of replacing their EDW. Traditional ad-hoc reporting procedures tend to provide information that can start conversations about new root cause questions. That is to say, you should not attempt to replace your EDW with big data; rather, you should use big data to supplement and enhance what you already have in place.

Additionally, one should analyze data from social media sites as well. According to an article on Go for Greater titled "Millennials: How They Make Decisions," 51 percent of Millennials utilize online reviews and recommendations from strangers when making purchase decisions. Since information transactions over social sites have a heavy impact on purchasing decisions, your company could be missing out on valuable information, as well as a competitive advantage, if you are not mining social media sites.

Where do you go from here?

How retail conducts business will continue to evolve, and as it does, the information management processes you implement will continue to grow and structure your data. Although change can prove difficult, the integration of traditional data warehousing with the newer insights found in big data may be a great thing for all businesses (even if your business is small or just beginning).

The connection between the two will surely provide more opportunities for competitive advantages, but it will also help to connect your company with more people. This insight-based connection with customers can turn shopping into a more personal and customized experience.

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Jason Hernandez serves as director of information management at Y&L Consulting. He helps his clients capitalize on information generated from traditional and non-traditional datasets. At Y&L, Jason educates clients on viewing data as an asset that can be maximized and leveraged. Before joining Y&L, Jason worked for HEB, a Texas grocery chain, developing their business intelligence environment while integrating it with social media tools.

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At the beginning of his career, Clint completed a military tour as a nuclear submariner and then went to work for HEB; working within the grocer's business information systems. At Y&L, Clint works within the Information Management vertical providing organizations with best practice solution architecture. His focus and passion lies in Business Intelligence, Advanced and Predictive Analytics, Big Data and Data Science while maintaining the fundamentals of information management – availability, governance, quality, and security. In addition, he works with a dedicated team to design, develop, and deliver cutting-edge mobile applications.

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