Business Intelligence for Retail

Why BI is vital to the survival of retailers in the 21st Century
Introduction

The Greek philosopher Heraclitus once famously said “the only constant is change.” While true for everything in life, it is an especially pointed statement today for retailers struggling to keep their footing in a rapidly shifting consumer landscape.

Historically, technology has been a catalyst for long wave economic cycles. The railway & electricity in the 19th century, automobiles, flight, telecommunications and the computer in the 20th century, the internet, bio and nanotechnologies thus far in the 21st century, have all littered the landscape with once venerable organizations who failed to adapt. One need only a few years back to see names like Circuit City, Blockbuster and Borders tossed off to the roadside because they couldn’t change their business model to meet the challenges (or seize the opportunities) presented by new technologies.

On the other hand, this explosion of technology has been enormously beneficial to today’s consumers. They are more educated about the brands, have more choices and power about how and where they buy. Consumers have developed higher expectations in terms of customer experience and service, and expect retailers to cater to their desires across multiple channels (e.g., in-store, online, social networks, kiosks, mobile, etc.). For the retailer, understanding these customer drivers requires monitoring customer activities, extracting knowledge from customer touch points, and aligning business processes based on customer interactions. In order to achieve all this retailers need to overcome three fundamental business challenges:

• Personalizing the customer experience regardless of their preferred channel
• Differentiating the organization from its competitors
• Engendering customer loyalty in an environment where it is easier than ever to switch
Fortunately, retailers of all sizes are generating incredible amounts of data which can help tackle these issues. Unfortunately, quite often this data is divvied among numerous databases and applications which adds to the complexity of getting the right answers to move the business forward. For example, even a smaller retailer can have information stored in a dozen or more systems including Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), point of sale, web analytics, supply chain management, email marketing, social media, RFID tags, mobile apps, and so on. All of these systems contain pieces of the puzzle that must be assembled to complete the customer picture.

Traditionally consolidation of this data required extracting it from each system, importing it all into another application such as a spreadsheet, and then re-assembling it into some sort of meaningful analysis. This process is not only slow and tedious, but also highly susceptible to errors. Now, however, enlightened retailers are rapidly adopting business intelligence and analytics systems that automate this process, improving the speed and accuracy of customer information analysis. For many, these software tools have been pivotal in transforming decision-making from a process guided by intuition into one driven by the facts. Using these customer profiling technologies retailers are finding new ways to foster and develop unique relationships with customers that can’t easily be replicated by competitors.

For organizations making the move from “gut feel” to data-driven decision-making, the transformational outcomes don’t have to be preceded by a wholesale up-ending of existing systems and processes. In fact, the move can be nearly pain free when broken into smaller, simpler steps. Here’s how.
Step 1: Start with what you have

The best place to begin is with the information you already have. The vast majority of retailers already collect the essential information they need to answer fundamental questions about their customers. These questions include:

- How do they like to buy?
- How frequently?
- How much?
- What did they buy? What’s on their wish list?
- Did they respond to a promotion? Which channel(s)?
- How much or how often do they use customer service?

As mentioned earlier, this basic information may be stored in a number of systems, but a business analytics system should be able to bring it all together to answer these questions and provide some insight about how you should approach individual customers (or customer groups) with future promotions, merchandise choices, channel delivery preferences, customer service options and so on.

Example Customer Profile 1: Roger

Here’s a simple profile about a fictional customer named Roger that a business analytics system should be able to provide:

60% of my mobile purchases were in-store pickups
I spend below customer avg.
I recently started purchasing online
I tend to buy low cost goods
I’ve used the competitive price matching program often
I don’t respond to e-mail promotions, but what I buy correlates to ads I see in ads

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Looking at his thoughts, we can glean that Roger is a loyal, but price-sensitive customer who is increasingly using his mobile phone to price products and shop. We can also infer that Roger probably uses his smartphone rather than a computer to browse the Internet and he reads his mail. Based on this, we might design and deliver mobile friendly “bargain” emails with offers that let him buy right from his phone and have them either shipped or picked-up in store. The intent would be to keep Roger as a dedicated customer while lowering overall promotion costs, leading to a better lifetime customer value for him.

Step 2: Enhance customer profiles with additional data

Augmenting your existing data with information about your customers outside of their buying relationship with you will help you further improve your interactions, loyalty and lifetime customer value. Information about their demographics (age, income, family size, home-ownership, etc.), web surfing habits, media consumption, and other purchases they make will add significant depth and value to your customer data. Of course, it also adds complexity, making a business analytics system that can aggregate both internal and external data sources, and delivery the results to the right people all the more important.

Example Customer Profile 2: Tracy

For this hypothetical customer profile we take our standard internal data and augment it with some internal information. Here’s what we know about Tracy’s purchasing habits with us:
Here’s some additional things we learn about Tracy with the help of 3rd party data:

- Tracy is 45 years old
- Owns a home
- Is married and has 3 children
- Tracy is a man

With these additional insights we now have a clearer picture of who Tracy is and what brings him to buy from us. Augmented with the new information we can now infer that Tracy probably skew higher on the income scale (older, owns home, has 3 kids), isn’t really interested in shopping with us regularly (no emails, no website, 70% of his shopping with us is during the four week holiday period), but when he does, it’s probably gift shopping for friends and family (large purchases). Knowing this, we can alter our marketing spend on Tracy, tailoring promotions for him to focus on in-store, larger ticket gift items during the holidays, birthdays, etc.

These extra bits of external data and the tools to analyze them transforms our customer information from bulk groups with similar tastes or preferences into individual profiles, allowing you to fine-tune your interactions based on highly specific attributes.

**Step 3: Refine and repeat**

As you collect more information on each consumer you can introduce analytics to understand which attributes are predictive in a desired behavior -- for example based on past purchase behaviors, identifying the next most likely product(s) a shopper will buy. We have all experienced cross-selling behavior online, i.e. “customers who bought product X were also interested in product Y,” but now with the proliferation of mobile devices and location-based services, cross and suggestive selling opportunities, and the analytics the drive them, are moving beyond the e-commerce website and into the hands of sales associates on the floor who can interact directly with the customer and further refine the sales process.

Knowing the customer at this level is not just for the marketing department. By bringing together all of the data and insight, marketing, sales, purchasing, operations, and management -- everyone from bottom to top -- gets a better understanding of the full scope of their organization and can continue to refine and replicate what works while eliminating those things that don’t.
Conclusion

There’s little doubt ubiquitous analytics, internet and mobile technologies are putting retail through a dramatic transformation. In order to survive, retailers must leverage data across channels enabling a flexible approach to various customer strategies. Decisions regarding operations such as product placement, store layout, merchant decisions can all be impacted by making sense out of data. A prime example is adding services based on demographics. Ikea in San Diego has a daycare facility where you can check-in young children allowing the parents kid-free shopping time. Other retailers have altered their store design by lowering the shelving in stores that cater to “moms” making it easier to find their children.

Retailers have more data now than ever before, and those that fail to leverage this information will struggle in the 21st century. To be successful, they’ll need to give managers and executives access to accurate, up-to-date information in a way that’s fast and simple to use. Most importantly, by transforming their information into knowledge, retail organizations are empowered to make better decisions regarding what services to offer, how to organize retail space and how to improve their customer’s experiences.