Five Tips on Big Data Optimization for Retailers

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If you are looking for one of the oldest and largest sectors in the economy, look no further than retail. Since the 1990s, it has surpassed the automotive industry as the thought leader in operations. You would be surprised at just how many business process innovations have come from retail and been applied elsewhere.

Retail has once again been reinvented over the last decade, mainly due to the fast fashion ideas from Inditex, ideas that drive frequent changes and quick-response production and distribution for retailers. Perhaps as a result of this, the retail landscape has become very turbulent, with uncertain demand patterns. To adapt, retailers are investing in technology to monitor changing trends. This provides stores with large amounts of data – big data – that can reveal helpful and actionable information, which can be used to make better decisions regarding stocking, merchandising and promotions.

Not only that, there are now sophisticated methods for tracking individual customer behaviors. On the Internet, cookies allow firms to know customer demographics as well as interests from past click history. When it comes to physical stores, loyalty cards can track past purchase behavior. These systems require that retailers record individual actions. However, in retail categories where conversion is low, such as fashion, these systems are not that useful, because they are unable to track customer visits without purchase. But there are alternatives. One option is to track customer smartphones, via Wi-Fi, which allows a retailer to know when and how long a customer visited, and whether he or she made a purchase. This data provides a sort of customer relationship management system for all customers, across stores, which can then be matched with credit card or other types of data.

To navigate the turbulent waters of retail, and effectively use the big data from day-to-day operations, our experience indicates that there are five key questions that a retailer should consider:

1. **Are you investing in the right technologies?**
There are many options available in the market, from RFID tags to beacons. It is critical to clearly understand their effectiveness.
2. **Can the data be useful?**
Storing big data consumes resources, and therefore if a retailer is unlikely to ever use it, perhaps there is little point in collecting the data and storing it. Retailers should develop a clear view of what sort of competitive advantages can be developed from big data.
3. **Do you have the right analytics capabilities?**
Extracting value from big data requires specialized skills: mathematicians, statisticians and computer scientists. These profiles are scarce and they are usually not well trained in business. A good way to overcome this challenge is to partner with a specialist – either an analytics firm or a university.
4. **Are you translating big data insights into action?**
Having a strong analytics team is useless unless it can influence and move retail execution. Fluid communication is necessary, where operations challenges are clearly exposed to the analytics groups who respond with suggestions that can be implemented.
5. **Are you willing to experiment?**
Generating improvements from big data is a continuous process that requires testing the recommendations from analytics. It requires patience to sometimes make mistakes, which are very valuable to confirm or invalidate new ideas. A common framework to do this is to use A/B testing: implement a change in a set of stores or during a few days, and compare the performance with those stores or days where the standard practice was used.

In the coming years, retailers of all sizes will have the opportunity to improve their business models thanks to the democratization of big data analytics as a service and the introduction of affordable data capture technology at the point of sale. And this is already under way.

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