

# BIG DATA AND PERSONALIZING THE GROCERY SHOPPING EXPERIENCE



AUGUST 2018 TECH BRIEF FOR FOOD INDUSTRY TALENT NETWORK

## Online vs. Brick and Mortar

Like Marty McFly discovered in the 1980s Classic “Back to the Future”, what was once old is new again in the grocery shopping business.

Back in the days before refrigeration, logistics, and the interstate highway system, all foodstuffs were acquired locally. Meats, vegetables and dairy products were sourced from area farmers, and everybody knew everybody else. The farmer knew how many eggs you bought, and had them ready for you to pick up on the day you always came.

Then, shopping became a centralized event. Increased demand from urbanization and improvements in shipping capabilities drove goods to intermediate warehouses, then end unit grocery store outlets, where consumers could get whatever they wanted, from anywhere in the country, at their local store.

Now, online capabilities and personalized marketing has taken today’s shopper back in time, to a custom, personalized experience. This is due to the advent of Big Data, and the knowledge that comes from buying history down to the individual level. How can grocers, who just completed the conversion from brick and mortar to a “superstore” model, quickly reconfigure to compete using data driven analytics?

## Labor Force Takeaway

TAN recommends that the acquisition of Big Data tools that allow for the collection and reporting of client purchasing trends be included in all food service industry strategic roadmaps. Incorporating information on buyer behavior with automated tracking and reporting of purchasing patterns, volumes, and seasonality will be beneficial. Reporting through companion software tools will allow management to make proactive decisions with regards to product mix, restocking and individual purchase histories. Certifications in mining tools, like MySQL, Python, Hadoop and Node JS will give employees an edge. This data mining, interpretation, and utilization is a growing field.

The work of upskilling existing associates and redeploying workers to different functions brought about by the assimilation and interpretation of Big Data is crucial. Certifications in proprietary software tools, data mining capabilities, reports building (Crystal Reports, Salesforce, Quickbase) and more, will be new requirements savvy food service companies will want their associates to obtain.

# PREDICTIVE GROCERY ANALYTICS AND BUSINESS NECESSITY

Big Data is here to stay. The ability to collect, aggregate, and report on customer buying patterns is a business reality, and retailers who embrace this new technology with fare well in the new economy. The nation's biggest and most prevalent retailer, [Wal-Mart](#), also recognizes this, and said so publicly in a shareholder meeting in November, 2017. Doug McMillon, President and CEO, stated the company has used data to restock and replenish goods, but not to personalize the marketing of them – and that will change. A total of 55% of all grocery retailers agree that they are not where they need to be strategically in terms of embracing and using Big Data.

Grocery analytics are a business necessity, for three major reasons:

- (1) Customer Experience Decisions – Analytics can be used to predict needs, and thereby enhance the shopping experience. Market niches can be targeted, and, according to a report by Accenture, these efforts have been demonstrated to increase client loyalty and likelihood of repurchase.
- (2) Strategic Decisions – With Big Data, grocery purveyors can make very targeted decisions as to the 4P's of marketing – product, price, place and promotion – which will optimize revenue opportunities.
- (3) Operational Decisions – Stocking amounts, types, vendor purchasing patterns, and promotional activity can all be better managed with the predictive capabilities Big Data provides, all while tightly managing the expense line.

Examples of chains already deploying the information gathered through Big Data and Predictive Analytics abounds. Kroger, a major midwestern chain, has implemented personalized coupons direct to loyal store shoppers, which has earned the chain millions in upselling. Target Supermarket's Instacart service, which is an on-demand grocery service, aims at getting orders to clients in under an hour, and is currently available in the Minneapolis test market. Amazon, from its purchase of Whole Foods, offers Amazon fresh and Amazon Dash to clientele, which remembers and repopulates past and or regular purchases for shopping convenience. The internet eCommerce resource Internet Retailer is forecasting that all retailers will be using some form of Artificial Intelligence/Machine Learning, supported by Big Data, to get and stay ahead of the competition within the next 5 years.

Big Data can even help ease the transition from brick and mortar to online, according to [Boston Consulting Group](#):

**Localization - helping brick and mortar stores stay relevant by grouping products likely to be purchased together and improving the in-store experience – is Big Data's duty.**

Reporting on shopper purchases can guide retailers on ideal floor space location (design), placement (heat maps), product assortment, adjacencies, and bundling by assimilating purchasing decisions from online and in store purchasing patterns. Though not a replacement for an online presence, it is certainly a viable transitional strategy.

Where are the grocery dollars going today? There is big money at stake. [IDC](#) reports that 22% of all dollars are spread by consumers between multiple vendors. 40% are spending their grocery dollars online. They further predict that the use of analytics can potentially increase all grocery sales and share of wallet by 29%, or \$310 billion, annually.

Customized tools and software abound in this effort, together with data warehousing suppliers, to help the grocery executives new to Big Data get started. IBM's tool, [Sales and Promotional Analytics](#), can bundle tools and data warehousing for the user, as well as provides other real time insights on demand. Another tool, [DS-IQ](#), (Dynamic Shopper Intelligence), discovers and activates meaningful and actionable shopper intelligence. Finally, Intelligence Nodes, "[Incompetitor](#)", a SaaS based pricing and analytics tool, is also gaining ground in this sector.