‘Tis the Season for BI and Predictive Analytics

Lebron James wears a black baseball cap in his latest Samsung Galaxy Note II commercial. The cap is fairly innocuous, outside of a regal lion embroidered on the front. Some viewers will focus on the latest Samsung gadget, some on the Miami setting, and a lot of kids will definitely want to know what’s going on with the cap.

Turns out, the cap is a co-branded effort between Nike and New Era. Using multiple data sources, both companies could measure the commercial’s buzz, and use predictive analytics to anticipate demand and volume for the “Heart of a Lion” logo cap, down to the store and display.

Inventory and Demand Drive the Sleigh

With malls exploding during the holidays, Nike and New Era can predict just how good of stocking stuffer or last-minute gift Lebron’s lid may make. Riding a fast trend, while not overstocking shelves or mismanaging plant resources.

Simple product. Simple execution. Right?

Not so fast. The supply chain’s biggest holiday challenge is aligning inventory with demand. Retailers must predict consumer desires and where to locate the hottest products in the store to ensure the biggest consumer spend in a finite amount of seasonal time.

Why? Get the formula wrong and all parties responsible, including suppliers, leave a lot of money on the table. Get to market too late and products must be discounted. Creating the kind of post-holiday fire sale that cuts deep into margins.

According to the NPD Group, the 2012 holiday shopping season presents some new challenges. Early shoppers were distracted by the election. And supply chain disruptions caused by Hurricane Sandy are well documented.

Meanwhile, shopping destinations have changed, further stretching the link between inventory and demand. “Retailers at all levels are likely to be challenged this year with the channel lines increasingly becoming blurred. Among the competition for traditional retailers this year are drugstores and supermarkets,” said Marshal Cohen of the NPD Group.

Wrap BI with Predictive Analytics

Traditional BI tools are good for analyzing historical data, or taking past holiday transactions and extrapolating volume for the upcoming season. On the supply side, forecasting raw materials needed in production can be derived from past structured data resting in familiar buckets. For further support, demand data like retail sales can be pulled from BI reporting tools. BI works.

But, maneuvering today’s consumer-driven environment requires new tools and predictive analysis. Social and mobile provide new weapons for marketing, but aggregate a different type of data. Non-transactional data – oceans of consumer insight – now fall under the jurisdiction of big data and predictive analytics.

Predictive analytics enable manufacturers to respond to BI data using computer models and algorithms built from specific variables designed for measuring specific behavior. Really, giving the manufacturer a predictive tool for getting ahead of buying patterns and product lifecycles.

Data is a Gift

Using predictive analytics, savvy retailers can now sniff holiday trends developing overnight and effectively meet demand. Demand per region, per store, and per display. And this kind of intelligence flows all the way down to the shop floor. Predictive analytics allow maker and seller to work from the same page, filling inventories with in-demand products.

Because the supply chain thrives on collaboration, manufacturers are in a unique position to capitalize on disparate data sources. According to IDC, 90 percent of data is now unstructured. So beyond the protected database, insight can now be captured from video, static images and social media. And with holiday cheer being driven by interactive, multi-media platforms, there is a lot of unstructured data to take advantage of.

So marrying BI with predictive analytics not only boosts data integrity, but also arms the right people with the right intelligence, at the right time. It's the promise of real-time data throughout a holiday supply chain.

Avoid a Blue Christmas

For customers, supplementing BI with predictive analytics means the difference between fulfilling wish lists and scraping the bottom of the toy barrel, or issuing IOUs to deflated teenagers. In the supply chain, company revenues soar because relevant offers are made to targeted customers. Profit margins increase because discounting and cross selling becomes strategic, not reactive.

For those producing the toys, clothes and consumer electronics fueling the Black Friday and December rush, a sizable chunk of annual revenue is at risk. The combination of BI and predictive analytics help align inventory and demand, streamlining the entire supply chain. And keep consumers from getting the wrong cap for Christmas.