Incorporating Big Data in Omni-channel Planning

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Omni-channel is no longer a magical utopia; it is no pot of gold hidden at the rainbow's end. It's here and it's happening right now. For the retailer to succeed alongside a changing landscape, it is critical for the idea of omni-channel planning to come to fruition. However, planning is only as effective as how well the retailer surfs the data deluge in a connected, digital world; how well he/she mines masses of Big Data, providing split second insights into retail decision-making.

BIG DATA - THE KEY TO BIG PROFITS IN RETAIL

Back in the day, the retail planning process was conceptually simple and straightforward. All that the retailer had to do was this: pick what product to sell, decide at what price to sell it, to whom to sell it, and then ensure its availability at the right place and at the right time.

As more and more selling channels got added, it led to the formation of silos around the inventory and planning process for each channel. This worked well as long as most shoppers still remained channel-specific.

But, omni-channel has changed all of that. To meet the modern shopper's expectations for a channel-agnostic experience, the retailer must enable high-performance omni-channel planning with real-time data from as many channels as possible, 720 degree consumer insights and competitive information. From better inventory visibility and control to efficient real-time customer engagement, he/she must take full advantage of the promise that big data offers.

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THE CURRENT STATE OF RETAIL

According to a report from RIS news, retailers are still struggling to build efficient assortments in today's omni-channel world.

The report provides eye-opening insight into the glaring gaps that still exist. For instance, **a whopping 73% of retailers have developed only basic analytical and reporting capabilities. And yet another 64% rely on separate inventories and assortments for various channels, says the report.**

THE BIG THREE CHALLENGES

Retailers (especially fashion) wrestle with a trio of challenges every consecutive season, which can be easily addressed through the adoption of an omni-channel planning approach powered by big data:

1 STATIC STOCK

More often than not, stock can end up trapped in stores, which leads to absolutely desperate mass-discounting at the end of the season to get rid of surplus merchandise.

2 HAPHAZARD PROMOTIONS

End of Season promotions tend to be localized and even chaotic, without a thorough understanding of demand, at a regional or store level.

3 UNSYSTEMATIC RELOCATION

Slow-moving merchandise is bumped around stores en masse without taking a holistic perspective into stock holding or customer sensitivity.

For the retailer to overcome these challenges, a single source of truth in an accessible repository is an absolute prerequisite. However, with several enterprise resource planning and retail systems using disparate data models, this remains an elusive goal.

HOW ARE BEST-IN-CLASS RETAILERS LEVERAGING BIG DATA?

It's worthwhile to delve into how the leaders in the space are using big data to address various use cases.

ENHANCING CUSTOMER EXPERIENCES

Recognizing powerful big data streams from myriad sources such a retailer's **operational systems** combined with **social media profiles, mobile app utilization, loyalty program interactions** etc. is a precondition for optimizing the customer experience. Insights from cross-channel customer interactions can provide a far better understanding of customer behavior and persona, along with what it takes to boost engagement across channels. It is a great way to bridge the gap between physical and digital realms to create seamless 'phygital' experiences that reduce customer frustration, friction and churn.

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BETTER MERCHANDISING

Harnessing big data from online and in-store interactions can help to uncover patterns such as social media buzz, pop culture events etc. This ultimately helps to ensure the availability of the **right products at the right time, through more efficient localized merchandising**. The retailer can also closely monitor the success of local promotions, and make adjustments when sales are not meeting expectations.

OPTIMAL INVENTORY PLANNING

Applying big data to demand planning helps a retailer stay on top of inventory status as well as next season's trends, thereby reducing both overstocks and stock-outs.

With the help of real-time customer data collected from various channels, he/she can reallocate inventory according to regional demand patterns and also prioritize shipments of top selling merchandise. Further, better analytics can enable him/her to implement and/or improve omni-channel initiatives such as BOPIS (Buy Online Pickup In-Store) and even the more advanced "ship from store" to enable cross-channel order fulfilment.

IMPROVING SALES AND MARKETING PERFORMANCE

Big data tells the retailer how much investment needs to be poured into each product line, channel and geographic location. **Sentiment analysis by store, product, geography and channel can be leveraged to provide real-time personalized recommendations, cross-sell offers and well-crafted marketing campaigns- enabling a robust marketing and sales ecosystem**.

By removing the guesswork from marketing campaigns and helping to define the right messages for customers, **data-driven marketing can remarkably improve marketing ROI** and take the marketing engine to the next level.

EVOLVING A TECHNICAL STRATEGY

A key factor in the selection of technologies and vendors is the scale at which data needs to be handled. For a data-intensive business, it is important to evolve from a traditional data warehouse structure to a platform that can store and process voluminous data from multiple sources and also provide the required speed of analysis.

In addition to creating a big data foundation using repository frameworks like Hadoop clusters and MapReduce frameworks, the retailer's data platform strategy should also include **streams and services**.

Tools such as Apache Spark, Storm and Hortonworks HDF enable streaming data analysis by rapidly analyzing and acting upon data as it arrives into the retailer's systems. The data services layer allows data analysts to normalize data and make it accessible to the end users.

When it comes to adoption of new technologies, a phased approach works the best for retailers of all sizes. To start, a consulting phase is necessary. This would help understand the gaps in the current state to gain alignment between the business goals and IT architecture design and deployment plans.

Once a roadmap is defined, implementation can take place in quick, well scoped increments in order to continually refine and adjust the plan as and when needed.

CONCLUSION

The opportunities that come with Big Data are impossible to ignore. Developing the capability to connect data across channels is the easiest path for retailers to add multi-channel customers. Retailers like Macy's, Walmart, Saks and Gap have made an early mark with innovative solutions. In this high stakes battle, the fully empowered Big Data retailer will see his/her data in a whole new light to think forward and move faster. And the retailer who lags in stepping up to the challenge will be doomed to face an existential crisis.

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