WIPRO
Applying Thought

The retail data overload – sifting through the clutter

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Table of Contents

Retail data – Boon or bane?

Retail organizations are experiencing a phenomenal growth in data. Staying on top of the volume, variety and velocity of the data, and being able to analyze it and deploy the intelligence, is enabling organizations to create a sharp competitive edge. How retail organizations handle this avalanche of data will determine if they rise above competition or get buried. Data – Big Data as it is popularly called -- is providing retailers new insights into improving customer intimacy and bringing about innovations in PLM, sourcing and supply chains, leading to improved bottom lines.

So powerful is the ability of Big Data to influence business that a recent McKinsey Global Institute (MGI) report suggested that the use of Big Data and analytics in the US could increase annual GDP in retail and manufacturing by up to US$ 325 billion in 2020[i]. One recent IDC prediction suggests that "retailers will narrow and enable big data and analytics (BDA) projects in 2014 as 20%-30% of projects fell short in 2013"[ii]. It is evident that there is an urgent focus on data management. In reality, how are retail organizations doing? Are they capitalizing on data? What data are they able to capture? How many are able to derive timely and usable insights from the data? Which data brings them the highest ROI? How can retail organizations ensure they invest in only relevant data?

To find the answers to these vexing questions, Wipro commissioned the Economist Intelligence Unit (EIU) to examine how retailers are responding to the emerging data-rich landscape, its role in shaping customer experience, the benefits derived in delivering omni-channel commerce, enhancing corporate strategy and meeting regulatory challenges. The study, called *The Data Storm – Retail and the Big Data Revolution*[iii], was based on C-suite responses from retailers based in North America, Europe and Asia. Among the key findings of the study was the fact that many retailers are still floundering at the very early stages of using Big Data. Only 46% of retail CXOs said they were confident that their firm's analytical abilities were keeping up with data volumes. Significantly – and this is where we need to stop and ponder a while -- just 36% believed that they had a well-defined policy for analyzing the most valuable information. As many as 30 percent admitted that they are not consistently obtaining value from it. Clearly, while data is flooding every business function – from production to sales and marketing, store operations, e-commerce/ m-commerce, human resource management, back office and logistics -- retailers are stumbling when it comes to leveraging the opportunities it offers.

What to do with all this data? What's good, what's not?

There are two key questions facing retailers:

- What should Big Data be used for? Or, what are the priorities to be set with regard to securing Big Data and leveraging it?

- How can technology be used to reduce and manage data overload without compromising outcomes?

Even before those questions can be answered, many retailers need to understand that their current data management strategies will not be able to scale to meet the velocity and variety of Big Data. An IDC report in 2012 said that the digital universe will double every two years – largely thanks to the availability of cheap sensors and the propensity of the "always on" generation to record, share and store every moment in great detail. Data, said the report, will grow from levels of 130 exabytes in 2005 to 40 trillion gigabytes by 2020 – or what is otherwise by a factor of 300[iv]. Is it worth sifting through all the available data? Which data is good for business? Which data is required today in real time?

Growing Data Sources in Retail

The retail industry has seen a surge in the collection of customer information, operations data and sales/ marketing data. Estimates suggest that about half this data is unstructured.

Structured Data for retail:

- Customer transactions
- Credit card history
- ATMs
- Loyalty management
- Syndicated data
- CRM
- ERP
- Supply Chains
- RFID
- GPS
- Online click stream
- Mobile interaction
- Surveys
- Weather and traffic updates
- Customer location

Unstructured Data for retail:

- Social media
- Blogs
- RSS feeds
- Video
- Audio
- Instant messengers
- Emails
- Phone calls

Which data is required for strategic growth? These are the questions that the retail industry needs to ponder.

The EIU study digs into these questions to provide early pointers into the business functions that can be impacted using Big Data (see Table 1). However, according to the study, retailers are itching to build corporate strategy using Big Data (60% over the next two years as opposed to 40% in the past two years).

Changing Priorities		
Which of the following business functions and processes have been the highest priority for investment in data analysis over the past two years and will be the focus for the next two?		
Marketing (corporate and promotional)	46%	40%
Customer relationship management	20%	20%
Store operations	44%	40%
Supply chain management	22%	22%
Order management	20%	16%
Merchandise planning	8%	6%
Loyalty programs	16%	16%
Customer credit	10%	14%
Sales channel management	26%	16%
Back office/logistics	12%	6%
R&D of new products/services	2%	8%
Corporate strategy (eg, data on potential acquisitions, new markets)	40%	60%

Source: The Data Storm: Retail and the big data revolution, Economist Intelligence Unit (EIU), December 2013

There is a good reason why retailers want to use Big Data to define and shape corporate strategy -- investments in this area are already showing results. About 78% of respondents in the study claimed positive economic return from investment in data analysis for strategy, the highest figure for any function or process. We believe that Big Data can assist retail businesses answer strategic questions such as:

- Where are we today? What should our roadmap be for the next 3 to 5 years? What are the changes (product, process, people) we need to make within the organization to reach our goal?

- How can data be used to clear a path towards our vision for growth? How can data be used to uncover hidden opportunities?

- What are the new financial models we need to adopt?

- How can be move from reactive responses to market fluctuations to predictive and prescriptive analytics?

- How can we create customer intimacy using the lowest cost channel based on customer maturity and comfort?

- How can we innovate around products so that they meet customer expectations?

- How can we ensure greater visibility and control over supply chains and make them more responsive?

- What technologies must we adopt to manage the data so that it propels us towards our vision for growth?

Racing ahead with data

This brings us to the second question that retailers must inevitable attempt to answer: How can technology be used to reduce and manage data overload without compromising outcomes?

Most retailers quickly discover that they don't have the right IT systems to gather or manage the flow of such vast amounts of data. The technology to store the data is rapidly evolving. Businesses are being offered a variety of solutions ranging from object storage, clustered, scalable NAS, block-level SANs and even Big Data appliances with integrated storage, depending on their needs. But the challenges go beyond storage. The biggest challenge is to stream the data (with the intelligence, post analysis) in real time to executives that need the information, where they are. The retail industry doesn't have systems designed to meet these real-time needs. They have to begin by reinventing their systems.

In the anxiety to do what is right, retailers take the risk of over inventing and over investing. This is where a technology partner with domain experience and data and analytical expertise comes in. An experienced partner can ensure that the business identifies the data required to be captured based on business goals and vision. Such a partner can then optimize the use of this data, ensuring it is analyzed and effectively deployed within the organization. Finally, the technology partner can be mandated to set up metrics and systems that measure the ROI of using data. Without this, most retailers would be lost in the data maze.

[i] Game changers: Five opportunities for US growth and renewal, July 2013: http://www.mckinsey.com/insights/americas/us_game_changers

[ii] IDC Retail Insights Releases Top 10 Predictions for 2014, December 2013: http://www.idc.com/getdoc.jsp?containerId=prUS24512213

[iii] The Data Storm – Retail and the Big Data Revolution, December 2013: http://www.wipro.com/retail-big-data-revolution/executive-summary.html

[iv] IDC - The Digital Universe in 202: Big Data, Bigger Digital Shadows, and Biggest Grow in the Far East: December 2012: http://www.emc.com/collateral/analyst-reports/idc-the-digital-universe-in-2020.pdf

About the Author

Hari Shetty

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Hari Shetty is part of the senior leadership team at Wipro and heads the Retail vertical across the globe. As head of Retail, he is responsible for strategy and execution of Wipro's business plan within the industry segment. Hari has been part of the Retail vertical since its inception and today Wipro is among the top 7 Retail technology service providers across the globe and provides services to 10 out of the top 20 retailers.

Hari has over 20 years of consulting experience in the industry. His experience spans across multiple functions in retail and he has worked with some of the best-in-class retailers on cross channel strategy, business transformation, simplification, predictive analytics, and technology transformation. Prior to his current role, he was responsible for technology and architecture in Retail and Consumer Goods industry groups.

Hari has multi-disciplinary background in technology, management, finance and law.

He is an evangelist on multi-channel retailing and strongly believes social media and a connected customer experience will change the face of retail.

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