Chapter 107

Strategic Best-in-Class Performance for Voice to Customer:
Is Big Data in Logistics a Perfect Match?

Supriyo Roy
Birla Institute of Technology, India

Kaushik Kumar
Birla Institute of Technology, India

ABSTRACT

For any forward-looking perspective, organizational information which is typically historical, incomplete and most of the time inaccurate, needs to be enriched with external information. However, traditional systems and approaches are slow, inflexible and cannot handle new volume and complexity of information. Big data, an evolving term, basically refers to voluminous amount of structured, semi-structured or unstructured information in the form of data with a potential to be mined for 'best in class information'. Primarily, big data can be categorized by 3V's: volume, variety and velocity. Recent hype around big data concepts predicts that it will help companies to improve operations and makes faster and intelligent decisions. Considering the complexities in realms of supply chain, in this study, an attempt has been made to highlight the problems in storing data in any business, especially under Indian scenario where logistics arena is most unstructured and complicated. Conclusion may be significant to any strategic decision maker / manager working with distribution and logistics.

INTRODUCTION

Data never dies! ....Nowadays, business world is awash with a 'flood of data'. Big data as it name suggested, refers to very huge and disparate volumes of data being generated every moment by use of man – machine interaction. In the arena of globalization, any management decision requires innovative, new and scalable technology to assemble, host and processing analytically the large amount of data collected

in order to predict real-time business insights that directly relate to suppliers and end users; and also concerning risk, profit, performance, and productivity in order to enhance shareholder value (Antai & Olson, 2013).

In today's extended supply chain, Big data is generating intense quantity of attention amongst suppliers, shop floor managers, logistic managers and even end users / consumers. Together with advanced analytics like digital channels, cloud-based technologies and data visualization, all these are thought of as all part of current diverse ecosystem generated by technology megatrends. Some even proclaim the potential transformative authority of current trends as countering that of internet. Keeping researchers view in the line of business perspective, concepts of big data is typically designated by four 'V's (Sanders, 2014; Manyika et. al. 2011):

- **Volume**: Date created is more voluminous than that using traditional data sources.
- **Variety**: Sources of Data are diverse and are created by both people and machines.
- **Velocity**: Data generation is extremely fast—a process that never ends.
- **Veracity**: Testing of veracity/quality of the data is essential, and Big data is sourced from many different places.

In the business parlance, application of Big data analysis poses both opportunities and challenges starting from strategic sourcing. Extract value for big data, data must be processed and analyzed in a real-time manner, and the results need to be available in such a way as to make effective business decisions. Effectiveness of using Big data analysis in any organisation demand proper collaboration / right combination of people, process and technology. Traditional restraints are overcome by Big data in cost-effective sense and opens opportunities to store, ingest and process data from any sources from the market. Basic capability of Big data allows organizations to 'integrate multiple data sources' in a seamless manner with effectively less effort within a stipulated time frame. Equipped with a lower cost of storage, this blend of technology allows organizations to create a federated vision of customers by transforming customer data from different interdisciplinary business areas into a single way (Sahay & Jayanti Ranjan, 2008; Pearson, 2011b). In particular, users of Big data find three thrust areas that appears to make a sea difference in the decision making process to any complex problem: Thrust on developing a strong enterprise-wide analytics strategy (Strategic); Ensuring Big data analytics to be embedded in supply chain operations in order to make improve decision making across the organization (Operational); and finally, Hiring a blend of interdisciplinary people with an unique mix of analytical skills and knowledge in the business in order to produce actionable insights from big data (Human Resource) (Edwards et al., 2001).

ALIGNING BIG DATA WITH LOGISTICS MANAGEMENT

Today's business scenario is changing real time basis - accelerated economic development across the world has created global business networks that need seamless flows of good (Grimes, 2000). With this global competition, companies focus on core competencies and try to minimize as much as possible in their own vertical integration. In addition to that, variations of a particular product are ramped up to satisfy any time demand while at the same time the product lifecycle shortens. As a result, complexity and dynamics of global supply chains are taken to a higher level of importance (Smith, 2000). Customers expect real time at par services like dynamic shipment routing, just-in-time supplies and same-day

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