ABSTRACT

Big data has taken the world by storm. Everyone from every industry is not only talking about the impact of big data but is looking for ways to effectively leverage the power of big data. This challenge has heightened with the huge amount of unstructured data flowing from every direction, bringing along with it the increasing pressure to make data driven decisions rather than the gut-driven decisions. This article sheds light on how big data can be an enabler for smart enterprises if the organization is able to address the challenges posed by big data. Enterprises need to equip themselves with relevant technology, desired skills and a supporting managerial attitude to swim through the challenges of big data. It also highlights the need for all enterprises making the journey from 1.0 stage to Enterprise 2.0 to master the art of Big Data if they have to make the transition successful.

Keywords: Analytics, Big Data, Business Intelligence, Data Driven Decision Making, Enterprise 2.0, Knowledge Creation, Social Media, Unstructured Data

INTRODUCTION

All organizations use data ever since recorded history. Irrespective of whether you are a business, educational institution, research and development setup, a government or a political party fighting an election, data (often) is the foundation on which decisions are made. While all of them understand the benefits of possessing relevant data and having the ability to analyse it, all of them also appreciate the challenges in being able to do so.

Businesses small and large have always struggled with getting appropriate data about their products, customers and competitors. When they are small it is not a major problem but as the numbers of products, customers and competitors increase not only obtaining data becomes a challenge but storage, retrieval and analysis become even larger issues. The problems of other types of organizations in respect of data, information and knowledge are not very different.

The complexity and nature of the problem has become even more acute with the arrival of the Internet era a couple of decades ago. In the past most data was transactional and therefore structured. Even then there were designs and...
drawings that were pictorial. But in today’s times the proportion of structured to unstructured data has more than reversed. The Internet era has created new types of large and real-time data; much of those data are non-standard such as streaming and sensor-generated data. The rise of digital and mobile communication has made the world become more connected, networked, and traceable and has typically lead to the availability of such large scale data sets (Rainie & Wellman, 2012). Data from social media networks, sensors and a whole lot of newer equipment has added to the complexity of collection, storage as well as analysis to result in meaningful decisions. And now these decisions need to be taken in real time.

Big data has become ubiquitous in today’s environment and is impacting the enterprises across industries with lightening speed. From political parties to healthcare companies, everyone is dealing with a huge amount of data and wants to benefit from the magical lamp that is big data analytics. Mobiles, internet, sensors, social media and other newer equipment have opened a vast world of information for the companies to gain value from and experience an unprecedented business potential.

It is not the presence of big data that has revolutionized the scenario but the power that can be unleashed from this big data that is redefining the competitive landscape of entire industries. It is not the amount of data but what can be done with this data that the organizations are being challenged to explore. It is all about asking the right questions at the right time.

But still a gap has been witnessed between the potential of big data and its realization. Companies have not been able to fully leverage the power of big data, owing to various organizational and technical reasons. Addressing the challenges of big data is critical to realizing its potential. Enterprises need to identify these gaps and deploy innovative technologies and required skills in order to fully utilize the potential of big data and become a smarter enterprise that is in real time contact with its stakeholders and its environment viz. an Enterprise 2.0.

Big data is a combination of data-management technologies that have continuously evolved over time. Big data enables different organizations to manage, store and manipulate huge volume of data with right speed and at the right time in order to gain absolutely right insights. The key to understanding big data is that data has to be managed so that it can meet different business requirement. A lot of companies are at the beginning stage of their big data implementation. Most are even using different techniques to collect vast amount of data to find whether there is any hidden pattern existing within data that might indicate some crucial change. Some data might indicate that the customer’s buying patterns are changing with time. Also new elements are there in the business that ought to be addressed before it is too late. In order to implement a big data solution it is necessary to have the infrastructure in place to support the distribution, scalability, and management of the data.

A wealth of digital information is being generated daily, having great potential value for many purposes if captured and aggregated effectively. In the past, data warehouses were largely an enterprise phenomenon, with large companies being unique in recording their day-to-day operations in databases, and warehousing and analysing historical data to improve their businesses. Today, organizations and researchers in a wide variety of areas are seeing tremendous potential value and insight to be gained by warehousing the emerging wealth of digital information, popularly referred to as “big data,” and making it available for analysis, querying, and other purposes. (Borkar et al, 2012).

Another factor posing new challenges is the fact that all these streams of data are not independent of each other and organizations have to derive meaning out of the intersection of all these data streams that not only have large volumes but also wide variety and high velocity and has been defined as Big Data by modern data scientists. The era of Big Data has begun. Computer scientists, physicists, economists, mathematicians, political scientists, bio-
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