Readiness for the Big Data Analytics?

DataMente® Associates

Big Data is not a buzzword but a key innovation in the IT arena. It has been widely accepted as the future of data universe and something which will significantly impact the business for years to come. Organizations need to understand the Big Data technology, assess their organization readiness and develop a successful adoption strategy.

Insights about your business, competitive landscape, prospective and existing customers and other important socio-economic factors have a critical role in today's business environment. These insights enable organizations to plan, execute and surge ahead of the competition. Insights are derived from the different kinds of data available either internally or externally. Organizations realized this fact long ago and for most part of their existence in last few decades focused on collecting the data. Given the technology advancements, the volumes of data generated internally and externally have grown by massive proportions making it impossible to manage using old systems and processes.

IDC annual report mentioned that 80% of the world's existing data was generated in last 2 years. Most of that data is in unstructured format like sensor outputs, RFIDs, images and videos streams which cannot be stored and processed using the traditional systems. To add to the challenge, tactical approach to enterprise IT has created multiple data silos for various kinds of in-house applications. Often, these data silos lack sufficient integration making the use of data difficult. The challenges of massive data volumes available and generated every second, unstructured data in various formats and multiple data silos without proper integration have made organizations to look for suitable alternatives.

Big Data is a response to this challenge faced by organizations. Big Data refers to the technology which provides the ability to store and manage massively large volumes of data from different possible structured and unstructured sources and to process them in a very short time. Organizations hear about Big Data every day in news, journals, conference discussions and gatherings. Big data is taken in many different ways such as a huge innovation in the IT world, a panacea for business decision making, an unnecessary hype or just an irrelevant thing. Irrespective of how one takes it, Big

Organizations have access to massive amounts of structured and unstructured data from internal and external sources. Big Data enables the use of such structured and unstructured data for key business decisions

Data remains a significant IT innovation and has been already accepted by big firms like Facebook, Netflix, Amazon, JPMC, Bank of America and Walmart. Appropriately put in Mckinsey special report, Big Data will be the next frontier for innovation, competition and productivity for many years to come.

With a prominent role of Technology and the increased use of data in business decision making, organizations independent of size and scale need to act.

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The advantage of being an early mover is well understood and the price of a late or no response could be lethal in the utterly competitive business arena. When everything we see or do is data, it becomes critical for organizations to adopt a technology which will help to get the best value from the data they have access to.

Organizations ask two main questions around Big Data. First question is what is in Big Data for them and second what should be their strategy of Big Data adoption. Well, the answer is not straightforward and before going further it is worth stating that Big Data is a paradigm shift and will require a mindset change within organizations for a successful adoption.

Big Data brings a disruptive approach to data management and processing and is fundamentally different from traditional means. The paradigm shift brings some great advantages with it making Big Data indispensable for every small and big organization. In the Big Data approach, organizations can integrate and store data from all accessible sources and formats in a way to make it centrally accessible. Imagine if your organization is able to leverage all

Big Data brings a disruptive approach. It does not pre-filter the data and builds a rigid data model. It is all inclusive and stores the available structured and unstructured data.

the data lying internally in PDFs, images, document scans, data warehouses, videos and external social media sites, news feeds and public sources. It will be a real advantage to have this. Then there are no pre-defined schemas and no need to build and provide data for every application within your organization. In other words, Big Data enables organizations to centrally manage all the data available and let the applications extract what they need. This can lead to huge savings in IT budget which is currently spent on implementation, upgrade and maintenance of hundreds of IT systems.

Data in itself does not have any real value unless it provides insights and assists in decision making. Big Data Analytics can be made real-time and customized.

Data in itself however big and vast is not useful unless it provides insights to key business challenges. That is why the role of Big Data analytics is so much important. Data analytics on a bigger and integrated data source will be far more productive than on individual silos. A variety of advanced analytical algorithms can be applied on the integrated data which would otherwise be less efficient on a limited data. Applications aimed at identifying fraud or customer diligence will be far more productive. Analytics can be more customized and real-time as well. Imagine if the shopping coupons are generated in real time and based on a customer's shopping history.

Is your organization ready for Big Data move? The answer depends on many factors including nature of the business, size and scale, IT maturity, industry, budget and most importantly the
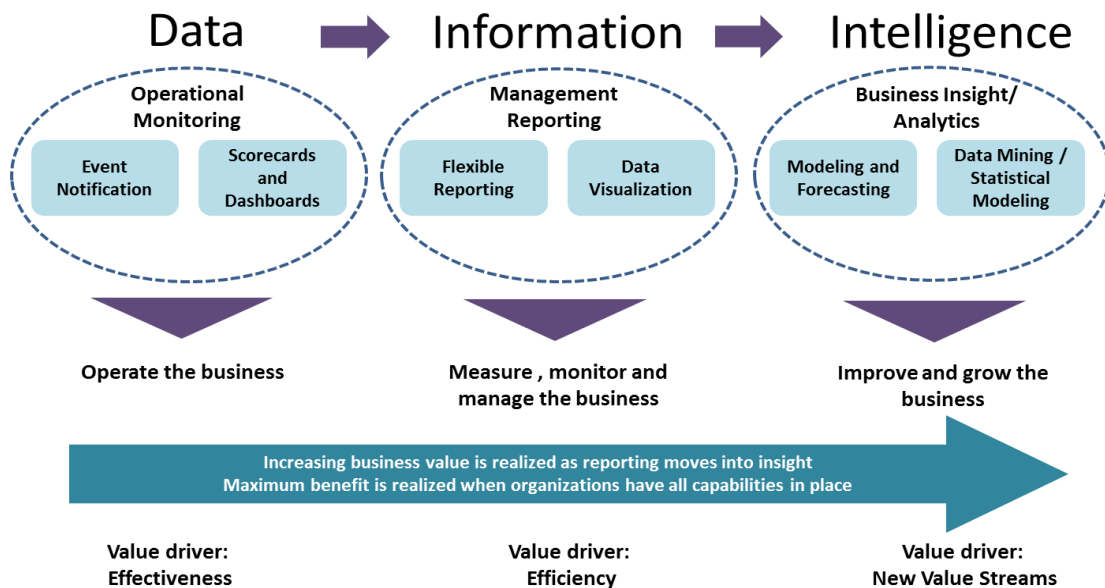
immediate business priorities. But in simple terms, organizations should consider adopting Big Data, if any of these two things are present. First if organizations generate data much more than what they can presently manage and second if they are looking for increased use of data analytics in day-to-day business decision making. Organizations who are already using analytics for business decision making should not feel satisfied. It is very much possible that such organizations are excluding vast unstructured data from analytics processes. Based on certain estimates, an average organization has 15-20% of its data in the structured format and 80-85% in the unstructured format. Including the unstructured data into the mix can make the analytics far more accurate and productive. Small and mid-size companies should realize that Big Data is applicable to their business too. It will enable them to handle much more data than they can handle and bring unstructured data from various internal and external sources.

A key step in the Big Data journey is to define the Use Cases. Use Cases are nothing but the real world business problems like providing enterprise customer view to enable robust customer diligence or fraud identification and reporting to avoid losses and reputational damage. Technology is the tool to solve the business problem and not a goal in itself. Big Data technology demands a big investment and Use Cases help justify that. Well understood Use Cases help determine why Big Data is the right way to go with.

Data → Information → Intelligence

Operational Monitoring
- Event Notification
- Scorecards and Dashboards

Management Reporting
- Flexible Reporting
- Data Visualization

Business Insight/ Analytics
- Modeling and Forecasting
- Data Mining / Statistical Modeling

Operate the business

Measure, monitor and manage the business

Improve and grow the business

Increasing business value is realized as reporting moves into insight
Maximum benefit is realized when organizations have all capabilities in place

Value driver: Effectiveness

Value driver: Efficiency

Value driver: New Value Streams

Enterprise Data Intelligence

An effective approach for Big Data deployment will need to address cost, implementation strategy and operational issues. There are no generic answers here and each organization will need to develop their own. Generally, organizations choose

to go with a pilot implementation in a less critical function followed by a full scale implementation. Success of the pilot implementation is what drives the full scale implementation and it also helps to utilize the lessons and avoid the mistakes performed during pilot program. In addition, Implementation strategy needs to account for the future requirements, expansion, accessibility and integration with other major data sources. A successful strategy aims to build on what organizations already have and a gradual phase out of legacy systems instead of a completely new and go-at-once solution. This also ensures a lower implementation cost and wider acceptance within the organization.

Who will pay for the pilot and subsequent implementation phases is a question many a times. More often, Big Data implementations have multiple stakeholders and can plan a pooled budget. Advanced planning for the risk of budget overages can be helpful in future project delays.

On the operational part, organizations need to consider data privacy, security and compliance aspects. Integrated data has a lot of advantages but organizations need to give a thorough consideration to data privacy regulations and organizational policies too. In many organizations, certain divisions have strict data privacy policies and other internal functions cannot even access the data without exception approval. Some countries have regulations prohibiting the transfer of data outside their borders. Such restrictions need to be addressed in the strategy. Data Security is another important area. Encryption and other measures should be implemented to meet data security requirements. Compliance to prevailing regulations governing the data management should also be incorporated in the strategy and any exceptions be dealt with utmost care.

Big Data is a key innovation in the IT space and has already been accepted by big organizations. It is a new frontier for innovation and will continue to be for many years to come. Businesses need to timely respond to this technology and leverage for achieving key business goals. Big Data readiness assessment along with a well-defined deployment approach will go a long way towards successful adoption of Big Data at your organization.

DataMente provides consulting services related to the Big Data analytics and enablement. Key services include readiness assessment, vendor selection, architecture design, data standardization and institutionalizing analytics for clients across various industries. For more details contact info@datamente.co