YOUR BIG DATA JOURNEY

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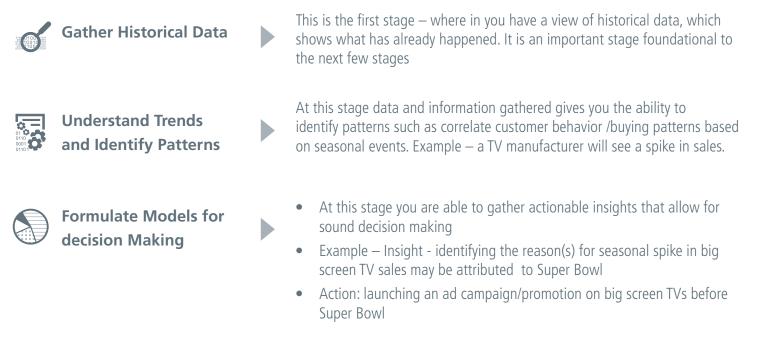Share This Ebook!

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Introduction

- The market place today may be characterized as chaotic at best , and I say so endearingly, not only because it increases the realm of possibility but lends itself to innovation and evolution organically. From the study of Darwin's theory of evolution we know that natural selection is exactly that. It has an inbuilt mechanism guaranteed to ensure the survival of the best/fittest as Darwin would put it. I draw this parallel not to sound morose, because it really is not that, on the contrary there is good news. The technology landscape is changing more rapidly today than it ever has, and most, if not all, minor or major transformations can be understood , interpreted and gauged to predict the direction of change. The need therefore is for businesses to define their own method to keep a pulse on this madness. In order to not become redundant, irrelevant , laggards and in worst case obsolete. While great minds are at work in all organizations to keep up with this rapid pace of change, identifying the right technology enabler must be a key element of that strategy.

- I have spent more than 10 years in the technology industry sometimes at the cutting edge and other times as an observer from the outside and have been taken by the Big Data buzz. Now that is no surprise considering it is what everyone is talking about. But I have to be honest that it all seemed so out there and like any 'curious mind' would, I decided to do some research of my own and de-mystify 'Big Data'. For starters understand why it might be beneficial to business and will it pass the litmus test to give you the 'Bang for your Buck'. I will reserve my judgment for now.

- It is no secret that organizations today 'sit' on heaps and piles of data, which has the potential to transform businesses with simple yet profound insights into customer behavior, buying and selling patterns, marketing campaign effectiveness, supply chain glitches and optimization opportunities therein; the list goes on.

- Let's take a road trip into the bowels of study and utilization (or shall I say under utilization) of data by an organization. I will leave the size (of the organization) out of this equation and make only one assumption i.e. there is a level of automation of processes and procedures, which produces a certain amount of transaction data on a daily basis.

Progressive Empowerment with Data

Gather Historical Data

This is the first stage – where in you have a view of historical data, which shows what has already happened. It is an important stage foundational to the next few stages

Understand Trends and Identify Patterns

At this stage data and information gathered gives you the ability to identify patterns such as correlate customer behavior /buying patterns based on seasonal events. Example – a TV manufacturer will see a spike in sales.

Formulate Models for decision Making

- At this stage you are able to gather actionable insights that allow for sound decision making
- Example – Insight - identifying the reason(s) for seasonal spike in big screen TV sales may be attributed to Super Bowl
- Action: launching an ad campaign/promotion on big screen TVs before Super Bowl

Establish a Framework for Predicting

- At this stage you have a well established, proven model with which you can predict what might happen next and you are able to forecast trends.
- Example - Trend Spotting: Building a marketing or a sales strategy around seasonal spikes. Annual budget and resource plan to factor in the seasonality.
- Predicting – Based on percentage change/spike in sales and performance of football teams it may be predicted, which states will show the highest inflection.

Defining a Big Data Strategy

1.0 Build a Business Case

2.0 Create Awareness in IT circles

3.0 Identify the Right Big Data Solution for You

4.0 Manage Change

5.0 Engage and Monitor Returns

Define

- WHY- The Project Charter/ Objective.
- WHAT - Problem Statement- for example -low returns on Marketing investment, high Operations costs, inefficient or sub-optimal supply chain
- Build a list of 'known' issues/ root cause
- Gaps/Unknowns- what additional insights will help diminish/root out the problem

Create Awareness

- Your IT organizations, whether large or small, will play a supporting or even a leading role in some cases. Therefore it is imperative to educate the IT teams
- This does not involve training on Big Data technology (not right off the bat)

One size does not fit all- define 'HOW'

- Study your technology landscape, understand already available data
- 'Marry that up' with your business objectives
- Define KPIs that will provide actionable insight
- Propose a Model and architecture
- Build a solution that's right for you

Change Management

- Ensure successful communication
- Business User Training
- Knowledge Transfer to IT team(s)
- Technical Support

Ensure ROI

- Monitor and tweak as necessary
- Refining impacted/Strategy (sales, marketing, operation) strategy
- Evaluate results against predictions , quantify ROI

Understanding Barriers to Adoption

Data has been produced and stored since the first systems were invented and the rate of growth has been exponential especially in recent times. However, its use (for analytics) has not matched that pace, partially because of the available technologies but also due to a lack of understanding of the power it holds in terms of the information, which can turn into insights (very quickly). Therefore it is imperative to 'tackle' these barriers and devise best strategies to address them, because no matter how good the technology, if its not adopted by users it doesn't reach its highest potential to serve.

Big Data projects are often seen as time consuming and expensive with little ROI

Lack of awareness of Big Data Technology i.e. right solutions to specific problems

Lack of understanding of 'How' technology works

Common Pitfalls

Biting more than you can chew

Given the vast amounts of data that exist in most organizations the key to success lies in defining focus; not only for problems that need solving but also for boundaries of data. Keep a keen eye on co-relations and inter-relations among/between data sets and problem areas.

Failure to define A specific Business Problem(s)

Technology and the cost associated to it ought to solve a business problem. It cannot exist in a vacuum. One of the common mistakes businesses make is adopt a technology without careful consideration of the business problem it is meant to solve.

A less than robust Resource Strategy

IT and data-management teams are under pressure to maintain daily operations, deliver new reports and analyses, and incorporate new capabilities. Overburdening teams/individuals with too many roles or short-staffing the day-to-day work is not the way to go.

Viewing Big Data Solutions as classic IT Solutions

Big Data solutions are living breathing 'organisms' that need to adapt to changing business needs and market. Therefore a conventional approach to software management falls short. Build the spirit of innovation and evolution into your project teams and know its going to be iterative.

Overinvesting – Not identifying a Non-starter quickly enough

Not testing your model against 'production' like data can cost you dearly, Testing the efficacy of your model will boost confidence and ensure it looks just as good in action (if not more) as it does on paper.

Best Practice & How to Avoid Pitfalls

Right sizing the scope

Defining multiple clusters of inter-related functions will allow for a more carefully thought out solution to each problem. More often than not these will converge or intersect to a greater or smaller extent.

A Clear Problem Statement

Defining the problem that needs a Big data solution is the first step to a successful outcome. Take the time to identify, understand and build consensus. There will often be more than one problem(s). Repeat step 1 for each.

Commit to Delivering a Solution: Build a Resource Strategy

Lack of designated resources with the right skill set can be the single most important cause of time and cost overhead. Build a big data group separate from preexisting BI, data warehousing, and data management teams. Start small – a combination of business and IT users and leaders to shape projects would be the right place to begin.

Avoid Overinvesting - Identify a Non-starter & Course Correct

Take your Big Data Solution model for a test drive. Apply a set of test data to it to see how well the rules perform. This will help you identify the norm as well as the outliers.

Learn as you Go – Adapt as you Learn

A viable Big Data solution can be called so if it stands the test of time including market fluctuations and ever changing customer needs. Therefore it is imperative that the solutions be looked upon as living entities that need to grow and evolve to stay relevant and produce the necessary results in business.

Conclusion

The growth of unstructured data, while on one hand has opened up diverse possibilities, on the other presented a challenge of how to decipher, demystify and leverage data in a manner most effective to your organization.

Leaders at organizations use the 'Information' lens constantly in the endeavor to look within and without to help shape their strategy and impact the overall health of businesses/units they manage/lead. While this is an ongoing process, establishing a sound strategy based on a model/framework is perhaps the first and defining step. To expand the realm of possibility (of what you can do with the information) use of technology becomes a significantly important lever.