# OPTIMIZE YOUR DATA STRATEGY

## ACHIEVE TOTAL BUSINESS TRANSFORMATION

The business landscape is always in a state of flux, and has undergone a sea change from what it was even a decade ago

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# 01 INTRODUCTION

New technologies stir and shake existing ecosystems, and to stay relevant in an increasingly fluid environment, companies seek new sources of competitive advantage. The big gains in big data and analytics have unlocked many possibilities with data, and companies now look at data-driven strategies as a key source of competitive differentiation.

# 02 EMERGING TRENDS RELATED TO DATA

The following characteristics now define the dominant trends in business, related to data:

- Fast and comprehensive decision-making: Today's businesses operate in a fast-paced environment where even a few seconds of delay can make a big difference. To keep pace, enterprises resort to automating their data related processes, to generate instant and real-time insights. A case in point is financial institutions now using predictive analytics and pattern recognition across transactions and events to detect fraud and money laundering in near real-time, rather than catching such anomalies during periodic audits, as was the norm before.
- Richer and more distributed analysis of data: Big data unlocks a world of possibilities, and businesses are now using this in many ways to drive their business forward. For instance, electric utilities company may use big data to optimize its power grid and also offer utilization reports and benchmarks to customers, helping them manage power consumption in a better way. Distributors may offer new business models based on data available from different store locations.
- Data takes center stage in business operations: Today, more and more core operations are driven by available data, made available in real-time. An example is Telcare. It's wireless blood glucose meters uploads results to a dashboard automatically, and connected users, including caregivers and physicians may view the data in their smartphones through an app.

Businesses seeking to leverage these trends for their benefit however have their task cut out. It requires a well laid out data strategy and architecture, and even after rolling it out, it would mature only in stages. It takes considerable discipline to reach such a level.

# 03 DIFERERENT APPROACHES TO DATA-BASED STRATEGIES

Most organizations adopt one of these three broad strategies or approaches when it comes to managing their data:

- Data Collection Approach: The data collectors define data management with what is known and under control. Business managers use available data to gain perspective on how the business is running, and apply this knowledge to support operational shifts mainly aimed at streamlining cost and efficiency. This approach fails to realize the latent potential of data.
- Opportunity Identification Approach: Business managers apply advanced analytic techniques to available data, both internal and external, to identify opportunities. The techniques used may include predictive analysis, streaming analytics and data exploration. However, such techniques are confined to inward analysis, to basically drive process efficiency, and as such realize only a narrow portion of what is available or possible.
- Innovative Approach: Business managers specializing in the art of innovation aim to use data to deliver business innovation rather than simply seek process efficiency. The process may disrupt existing systems. Such an approach complements the agile and fast-changing business technology environment perfectly. Here, the data architecture strategy is geared towards the unique requirements of the business, rather than what is possible with the available infrastructure.

# 04 CAPABILITIES REQUIRED

Big data and analytics today ranks very high in the agenda of any business, thanks to its ability to unlock deep insights and provide performance gains that would transform the business.

Enterprises seeking to exploit data and analytics for their competitive advantage require, at the very least, three mutually supportive capabilities:

1. The ability to identify, combine and manage multiple sources of data.
2. The capability to build advanced-analytics models for predicting and optimizing outcomes.
3. The will and strength to transform the organization, to ensure that the applied data model would actually yield better decisions.

Meeting today's dynamic requirements goes beyond technology that focuses on capture of operational data and effective governance of such data. Enterprises need to bring into its fold a wider array of data sources and establish performance measurement metrics that tracks innovation and transformation metrics, besides efficiencies. For example, a financial firm may seek to implement fraud detection techniques. The company would need to apply the necessary procedures such as event analysis on its internal and external data, as part of the overall operational process. This in turn would require deep processing capabilities, to analyze large data sets for patterns and issue alerts immediately.

# 05 KEY CONSIDERATIONS WHEN FORMULATING DATA STRATEGY

There is no one right way for businesses seeking to optimize their data strategy with a view to transform themselves. Every firm is different, and the strategy that works well for one business may flop for another. However, all businesses would do well to take cognizance of certain basic precepts when formulating their data strategy.

## 1. Keep the Business Objectives in Mind

Many businesses make a fundamental mistake of considering the available data and then pondering on what to do with it. Data is secondary in the grand scheme of things. Businesses need to decide upfront on where they need to reach, and then devise ways on how the data on hand would help them get there.

Performance improvements and competitive advantage comes not from the actual data per se, but by applying analytics models that allow business managers to use available data to predict and optimize outcomes. The most effective approach to building a model usually starts with identifying a business opportunity and determining how the model can improve performance.

It is important for business managers and data specialists to have an understanding of the direction of the business upfront and formulate a long-term and short-term business strategy that factors in how to use data at different stages. Assess the existing data architecture, and make investments to fill the gap

## 2. Choose the right data

The quantum of data is growing rapidly, and side-by-side, opportunities to combine data and expand insights are accelerating. Access to a bigger and better data set unveils what was previously obscure, and allow companies to gain more granular views of their business environment. The ability to see what was previously invisible improves operations, customer experiences, and strategy.

However, companies need to be careful not to get carried away by the ever increasing data volumes. Very often, companies already have the data they need to tackle business problems, but managers simply do not realize it, and even if they do realize it, they are ill-equipped to use such data to make key decisions.

The best approach is to collect and analyze data that furthers the company's objectives. This requires a centralized approach to data, avoiding the trap of silos. For instance, operations executives may not grasp the potential value of the daily or hourly factory and customer service data under their possession. Companies need to take a proactive approach to collect data pertaining to the specific and articulated business problems and opportunities.

Business managers also need to use external data in creative ways. Social media is now a rich treasure house of data, and the way in which a business use the tons of unstructured data there, in the form of photos, video and conversation. The onus is to cull out relevant data from this maze, and for that matter, from the entire gamut of external and internal data. Even from the relevant data, depending on the volumes, there may be a need to prioritize critical data from the rest. This requires trade-offs. Business managers, for instance, may decide to retain data related to customer profiles and use it as an asset to gain a consistent view of the customer, and thereby improve customer service and loyalty.

When formulating a strategy to gather and process data based on such an approach, consider the following factors:

1. Business capability required (from operational to analytic)
2. Time and value of the data (from persistent to disposable)
3. Source of data (from internal to external)

## 3. Change over from Legacy Systems

As enterprises shift from siloed, transaction-oriented systems to more integrated and socially aware systems, processing customer data becomes a big challenge. Many legacy platforms in vogue are incapable of processing big data.

Legacy platforms are rigid monoliths of command and control, and inhibit quick access to data. It delivers a rigid environment ill equipped to support today's complex consumption and analysis scenarios or to cater to the complex business and customer needs for information and insight. It may prevent the integration of siloed information, and remain incapable of managing unstructured data. It also pose a host of limitations in delivering requirements such as automated processes and speed that were premium offerings a decade ago but basic requirements now.

The new-age realities demand that organizations require platforms that

- Provide super fast access to data that drives product and service offers
- Can quickly stand up data capabilities
- Process data at extreme scales
- Create low-latency environments that will thrive and contribute to new business models and capabilities.
- Automate processes to enable quick decision making.

When designing a new age platform, the data sources will determine how to architect for volume, structure, and processing needs. Big data platforms offer no latency, scale, and flexibility, and remains capable of processing extreme volumes of semi-structured and unstructured data. Even existing commercial EDW platforms may be capable of processing high volumes of structured data.

However, a change over to such a modern system may not be possible overnight owing to organizational constraints. Business managers may need to improvise within the existing system. Some level of ad-hocism may be required to identify and connect the most critical data with the analytic engine, mount a cleanup operation to synchronize and merge overlapping data and work around missing information.

## 4. Integrate Data Systems with Other Business Systems

Enterprises often maintain separate data platforms when introducing big data solutions, since the focus of big data solutions is on discovery and analysis of data, especially real-time data for business processes and event processing. Hadoop and EDW's (enterprise data warehouse) platforms are optimized for analysis but best results require integration with traditional business systems and warehouses. The challenge facing organizations when investing in a new platform is balancing the analytic processing power and complexity with desired business outcomes.

# 5. Develop business-relevant analytics

A basic goal of any data driven strategy is to offer tools and interfaces to frontline employees, to equip them with greater insights related to their jobs and improve performance. Analytics and tools need to complement existing decision processes and aid the workforce in their normal course of operations, rather than create disruptions.

However, many a time, the existing system and processes may not be capable of handling big data and there remains a mismatch between the existing enterprise culture and capabilities and tactics required to exploit analytics successfully. In such a scenario, applying analytical insights made possible by big data may require:

- Upgrading the organization's analytical skills and literacy to develop capabilities to exploit big data.
- A multifaceted approach co-opting training, role modeling by leaders and incentives to reinforce behavior, to make a data-driven analytic approach part of the daily routine.
- Adopting transparent methods when applying the new data models in day to day operations, so that the benefits are visible to everyone.

Amidst all the talk of data models are relationships being complex. Businesses would do well not to get carried away with such complexity and create complex models and systems. Success of harnessing data for organizational excellence depends largely on keeping things simple and within the scope and competencies of the workforce even while using advanced statistical methods. Enterprises need to always seek to adopt the least complex model that would improve their performance.

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