

**BIG DATA & BUSINESS ANALYTICS DIGITAL GLOBAL TRANSFORMATION –
MAKING OF MODERN WORLD**

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***Abstract:** This research review paper points out how digital transformation that could contribute to global transformation. The trend of globalization continues to get world smaller as a result companies finding solutions by transforming into globally integrated enterprises. Many companies focus of their global transformation initiatives is on merger and acquisition integration, optimizing business processes, and aligning their people – talent and skills – appropriately around the world. The path can be long taking years and requiring continuous transformation but Digital Transformation can reshape globalization with transmitting information, ideas, and innovation around the world and broadening participation in the global economy. This paper shares role of big data & business analytics for digital transformation also shares digital transformation models for making of modern world.*

Many businesses are looking at how new digital technologies can help them transform existing businesses, drive new business growth and stay ahead of current and emerging competitors. This research has aim, to study the impact of digital transformation on performance of the business and to assess the effectiveness of the key technologies and practices. Digital Transformation Business Impact Scorecard, this Scorecard on the key performance indicators (KPIs) that organizations typically use to measure the impact of digital transformation on business agility, business growth, customer focus and operational efficiency. Increased flow of data and information are changing the dynamics of globalization. Big data & Business analytics reshaping the future digital transformation & inclusive growth of economy.

***Keywords:** Digital Transformation, Big Data, Business Analytics, Globalization, Inclusive Growth*

INTRODUCTION

The digital revolution has changed how your customers work, how they communicate, how they interact with your organization and critically, how they make decisions?

The effective use of data is becoming the basis of competition. Business has always wanted to derive insights from information in order to make better, smarter, real time, fact based decisions. It is this demand for depth of knowledge that has fuelled the growth of big data tools and platforms. Big data will fundamentally change the way businesses compete and operate. Companies that invest in and successfully derive value from their data will have a distinct advantage over their competitors — a performance gap that will continue to grow as more relevant data is generated, emerging technologies and digital channels offer better acquisition and delivery mechanisms, and the technologies that enable faster, easier data analysis continue to develop. The digital economy is significantly redefining how companies manage their business. Understanding how people, process, and technology can set the business on a path towards outperforming and dominating competitors. While adding value to every customer's experience. The future is about using technology such as machine learning, IoT, Big Data, block chain, data intelligence, or predictive analytics to decide where to steer a business.

Research question of this paper discusses how big data & analytics fit next digital transformation. Why digital transformation matters? How to use Digital Transformation model? Many business leaders new to these technologies wonder how to leverage these technologies to create digital innovation. This paper gives solution for how key performance indicators (KPIs) used to measure the impact of digital transformation on business agility, business growth, customer focuses and operational efficiency. How a big data & analytics platform helps for digital transformation?

REVIEW OF LITERATURE

Data, Analytics & Digital Transformation has gained great research interest in both academia and practice. The volume of available data has grown exponentially, more sophisticated algorithms have been developed, and computational power and storage have steadily improved. The convergence of these trends is fuelling rapid technology advances and business disruptions. While existing literature demonstrates new levels of research interest in the area and how business leaders have engaged in digital transformation journeys, there is

evidence of a lack of common understanding of this concept. Most of the companies are focusing only a fraction of the potential value from data and analytics. Data and analytics are changing the basis of competition. Data is now a critical corporate asset. It comes from the web, billions of phones, sensors, payment systems, cameras, and a huge array of other sources—and its value is tied to its ultimate use. Data and analytics can enable faster and more evidence based decision making. The value potential is everywhere, even in industries that have been slow to digitize. These technologies could generate productivity gains and an improved quality of life—along with job losses and other disruptions. Machine learning can be an enabling technology for the automation of 80 percent of those activities. Breakthroughs in natural language processing could expand that impact even further are being shaken up due to Data and analytics , and the effects will only become more pronounced as adoption reaches critical mass. An even bigger wave of change is looming on the horizon as deep learning reaches maturity, giving machines unprecedented capabilities to think, problem-solve, and understand language. Organizations that are able to control these capabilities effectively will be able to create major value and distinguish themselves, while others will find themselves increasingly at a disadvantage.

Data has become a critical corporate asset, and business leaders want to know what the information they hold is worth. But its value is tied to how it will be used and by whom. A piece of data may yield nothing, or it may yield the key to launching a new product line or cracking a scientific question. Access to big data has changed the game for small and large businesses alike. As a substitute of using small focus groups and general demographics to extrapolate target market activities, modern companies can now access specific information. Big data can help businesses solve almost every problem with a working, research driven solution.

RESEARCH METHODOLOGY

This research review paper is exploratory & aims connecting current literature to design model for current business improvement. Digital transformation often includes establishing big data analytics capabilities. Successfully introducing big data analytics requires substantial organizational transformation and new organizational structures and business processes. This research paper has suggested digital transformation solutions with big data analytics & digital transformation score card. The real benefit of big data come through connecting digital touch points to consumer insight.

PURPOSE OF DIGITAL TRANSFORMATION

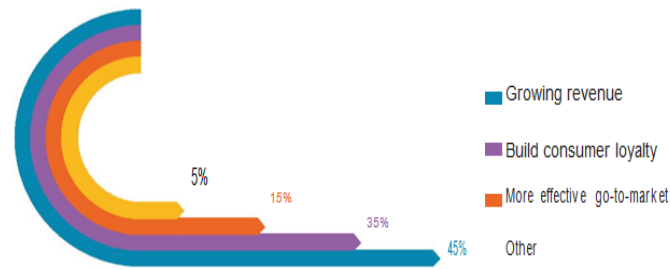


Fig:1 Purpose of Digital Transformation

BIG DATA & BUSINESS ANALYTICS

Big data analytics is the process of examining large and varied data sets -- i.e., big data -- to uncover hidden patterns, unknown correlations, market trends, customer preferences and other useful information that can help organizations make more-informed business decisions.

The technical components of the infrastructure layer provide research opportunities, typically to computer scientists and engineers: data capture, streaming, storage, archiving, and parallel computing. Many of the innovations in this layer are driven by industry: Hadoop/Map Reduce, SAP's HANA, NoSQL databases and cloud services. 4 V's of big data: volume, variety, velocity and veracity. Researchers can build on the vast existing literature that looks at what drives different infrastructure implementation choices.

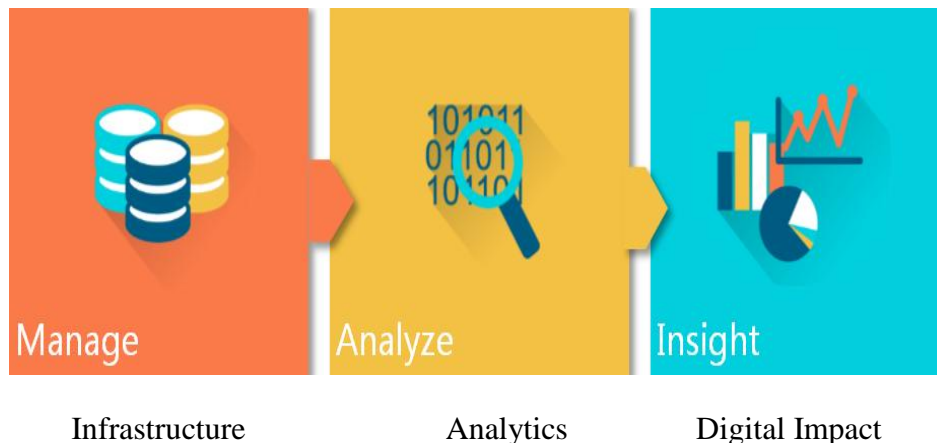


Fig2: Big Data & Analytics

BUSINESS ANALYTICS

The transformation path from big data to information to knowledge, have a lots of analytics techniques and approaches. Variety of the data is key. It is useful to look at the range of big data analytics through the following categories:

- Exploration including visualization
- Prediction
- Prescription

The vast amounts of data, the diversity and the increasing presence of unstructured data make the analysis difficult. Exploration and visualization become essential parts of the analytics process. Methodologically researchers have become well versed in exploratory techniques from both statistics and machine learning.

Data visualization is the presentation of data in a pictorial or graphical format. It enables decision makers to see analytics presented visually, so they can grasp difficult concepts or identify new patterns. With interactive idea, we can take the concept a step further by using technology.

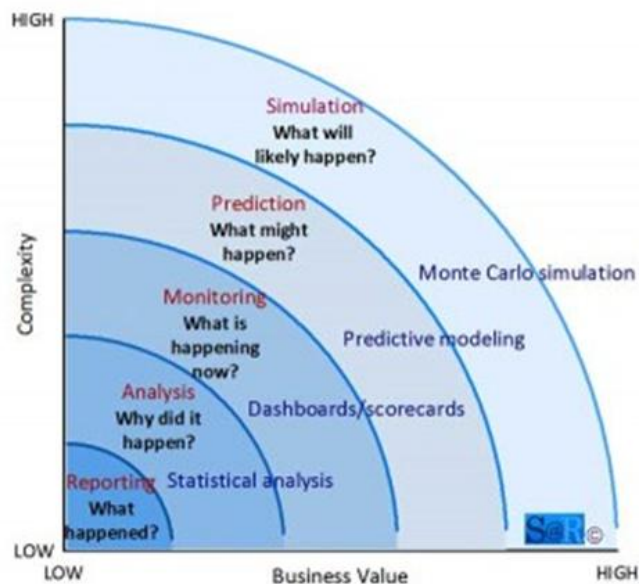


Fig3: Analytics Model

DATA TO ANALYTICS FOR COMPETITIVE ADVANTAGE

Descriptive analysis or statistics does exactly what the name implies they “Describe”, or summarize raw data and make it something that is interpretable by humans. They are analytics that describe the past. Descriptive analytics are useful as they allow us to study from past behaviours, and realize how they might affect future outcomes.

Predictive analytics are about understanding the future. Predictive analytics provides companies with actionable insights based on data. Predictive analytics provide estimates about the likelihood of a future outcome. Companies use these statistics to forecast what might happen in the future. Predictive analytics try to take the data that you have, and fill in the missing data with best guesses. They combine historical data found in ERP, CRM, HR and POS systems to identify patterns in the data and apply statistical models and algorithms to capture relationships between various data sets.

Prescriptive Analytics, relatively new field of analytics allows users to “prescribe” a number of different possible actions to and guide them towards a solution. Precisely, these analytics are all about providing advice. Prescriptive analytics aim to measure the effect of future decisions. These analytics go beyond descriptive and predictive analytics by recommending one or more possible courses of action. Basically, they predict multiple futures and permit companies to assess a number of possible outcomes based upon their actions. Prescriptive analytics use a combination of techniques and tools such as business rules, algorithms, machine learning and computational modelling procedures. These techniques are applied against input from numerous different data sets including historical and transactional data, real-time data feeds, and big data. Prescriptive analytics are relatively complex to administer, and most companies are not yet using them in their daily course of business. When implemented accurately, they can have a huge impact on how businesses make decisions, and on the company’s bottom line. Larger companies are successfully using prescriptive analytics to optimize production; scheduling and inventory in the supply chain to make sure that are delivering the right products at the right time and optimizing the customer experience. Explore digital transformation where analytics has a critical role as an engine powered by Big Data to reach new speeds and heights faster using resources such as simpler user interfaces, cloud computing, and data provisioning. Provisioning includes data integration, quality, security, and governance for master data, metadata, and third-party data.

DIGITAL TRANSFORMATION MODEL

This research paper found the groundwork for digital transformation well underway among the enterprises surveyed. Organizations are digitally transforming key areas of their organizations shown as below:

Literature review focused research on understanding how digital transformation drives business value. Recognizing that digital reshapes all aspects of the current enterprise, companies that take a restricted view of digital revolution make themselves “vulnerable to new entrants and agile incumbents that can convert working improvements across the full value chain, combined with innovative operating models, into superior, economical, more customized products, faster service, and an improved customer experience.”

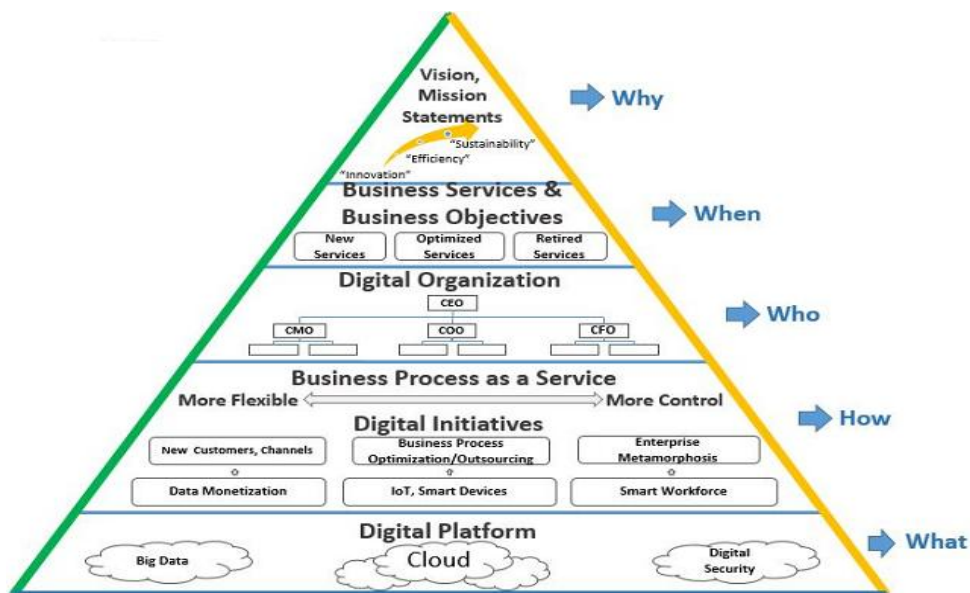


Fig4: Digital Transformation Model

Digital transformation initiatives are about change. Analytics plays the role of the engine propelling an organization's digital transformation efforts with data-driven decision making.

A digital transformation involves three key steps

1. Converting data to insight, where you collect and make sense of your data
2. Infusing insight to action, where you leverage the insight as an action within a business process, be it in your business application or business network
3. Transforming action to outcome, where you reinvent business processes — or even business models — and create a stronger value proposition

RESULTS

The advent of sophisticated digital technologies has turned the traditional way that people communicate, collaborate and do business on its head. With the utilization of modern day intelligence a must, organizations need to embrace the new world of digital by journeying on a digital transformation path. 87% of companies believe digital will disrupt their industry, only 44% are adequately prepared for projected disruption due to digital trends

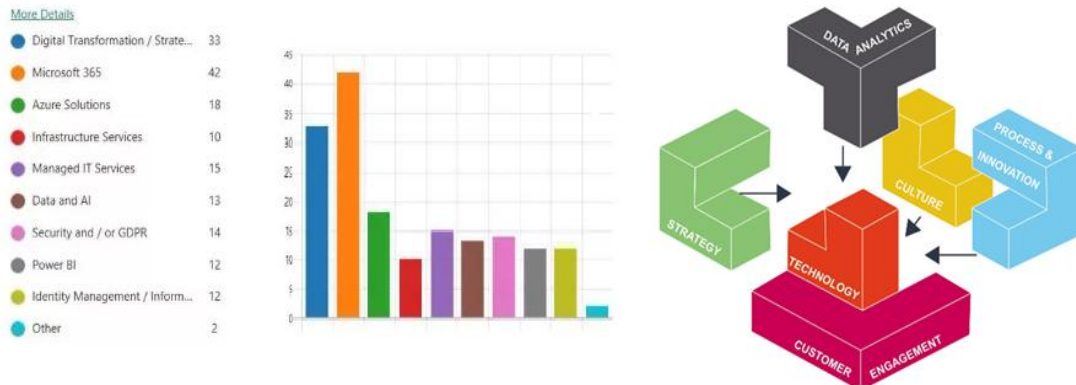


Fig5: Analytics Result

CONCLUSION

After going through theory trying to answer research question: how big data & analytics fit next digital transformation & How to use Digital Transformation model for value creation in the organization? Model suggested in this research can be used by all size companies for digital transformation. From this research we can conclude that depending on which parts of the organization a company desire to change strategic pro-activeness firms can use suggested model to have a success.

SCOPE FOR FURTHER RESEARCH

Organizational cultures must be primed to embrace analytics and the use of data in decision making and processes. Predictive technology isn't new, but today, algorithms really are taking over! Looking to the future, predictive analytics, artificial intelligence, and machine learning are going to completely transform the way companies do business. Over 90% of average business intelligence projects involve gathering, cleaning, and joining data from different sources. Use predictive algorithms and machine learning to assess the likelihood of

future outcomes and steer your business in the right direction. Machine learning is enabling “self-driving” processes that automate the kinds of complex repetitive decision-making. that until now only humans could do. Businesses can step into the new age of ML and begin implementing the technique by letting the machines use Big Data derived from various sources, e.g. images, documents, IoT devices etc to learn. While these machines can computerize lengthy and repetitive tasks, they can also be used to predict the outcome for new data.

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