Deloitte.

Marketing
Leveraging data for reincarnation

02

Contents

Foreword

Interplay of technologies such as social media, cloud, analytics and mobility, to augmented reality in front end and analytics at the back end, is changing the way marketing is done and the digitally savvy consumer is targeted using various mediums at any time of the day and everywhere. This will be further accentuated by proliferation of sensors and internet of things.

Marketing is the core component of any business whether it is selling goods or providing services. No matter how good the product is until the organization is able to market it appropriately, it cannot thrive. Humans have been increasingly using technology to improve the efficiency and to achieve enhanced outputs. So is the case with marketing, it has been evolving over the years. But in the recent years, it has completely metamorphosed and undergone a paradigm shift. Marketing is no longer a one way street, it is gradually becoming circular with information flowing rapidly and freely between marketers and consumers. Gone are the times when the organizations were reactive to the customer complaints, now they need to anticipate the customer pain and proactively move to resolve and delight the customers. Increased computation skills, advanced analytics and the availability of abundance of data available to the marketers, provide opportunity to the consumers, marketers and corporates to benefit from this information by being part of consumers emotions. To deliver a unique customer specific experience, target marketing based on customer profiling, previous history of searches, shopping, and location based preferences, etc. are gaining traction. This is the key to build and enhance the brand and get continuous feedback from the consumer. With this power, the marketing strategy can be calibrated on a dynamic basis which could avoid disasters for the brand. Organizations are moving from data driven organization culture to insights driven organization culture to generate higher return on investment on their marketing spend.

The purpose of this report is to promote discussions and share our point of view on the recent developments and trends in the marketing, analytics and digital world. Deloitte believes this report provides you with insights into the key changes undergoing the marketing function and the role technology is playing, including the digital interface needed.

Hemant Joshi

Message from CII

We are witnessing an era of continuous change accompanied by volatile and uncertain environment. Technology has completely changed the definition of several held beliefs. Customer is truly the king in this era of digital technology with an unprecedented access to information, connectivity to networks, and freedom of expression with multiple channels to receive and pass on the information. Social media is the new place to do business, express and form opinion, create visibility for   a brand and generate demand at the touch of fingertips .The dynamics of marketing are evolving virtually at speed of thought.

The markets have walked into smart phones and suddenly the geographical boundaries have acquired a new meaning. Availability of information in a never before transparent way has changed the way the consumers think, decide and act creating an open market. Increasing awareness of consumer rights, influencing opinions, visible brand association and an abilty to influence the power of a brand in a direct and impactful way define the new consumer power.

The markets are in true sense dynamic and we can safely say that the rules of marketing have changed. Marketers have to meet the challenge of defining and delivering an evolving value proposition constantly to the consumer.

The question in front of marketers is not if but how they will use the technology effectively to achieve their goals. The race to stay relevant has acquired a new and constantly changing dimension in form of different platforms and communities of communication. The real time information of customer behaviour through big data analytics is delivering never before customer insights enabling a dynamic response to customer needs. Digital marketing is set to rewrite the rules of engagement in market place.

We are happy come up with this report which will focus on the importance of Digital Marketing in the present scenario. I am sure this report will be useful to each one of us.

Shishir Joshipura
Chairman CII Pune Zonal Council,
Managing Director, SKF Limited

1

Shifting marketing paradigm

Marketing, traditionally, has been driven by the 4Ps—Product, Price, Place, and Promotion. It then got extended to include 3 more Ps— Process, Physical environment, and People.

People was the key element to be added in the whole mix. Initially, it started with the inward facing thought of looking at the employees and internal stakeholders to understand whether the organization has enough skills to support the product or services. The reasoning was to create an internal competitive advantage against the other market players. The second aspect of this element was to discover whether there is a large enough audience in the target market for the products and services an organization is producing or servicing.

Gradually this element is shifting more and more towards learning and understanding the customers; both from a ten thousand feet above, for a holistic view, and also down to each and every customer transaction and interaction with enterprise. What is shifting is not the marketing paradigm but the methods or a set of procedures which traditional marketers swore by. With the help of an ever advancing technology, the spotting of a need, finding the potential buyers or knowing what will work best has been made an act of pure or at least cognitive science than just implementing past experiences or in many cases gut-feel.

1.1 So what is enabling this change?

In a resource-constrained environment, today's leading companies need to carefully plan how they will leverage customer data, advanced analytic techniques, and an elegantly visual customer insight-generation capabilities to improve customer acquisition, expansion, and retention.

Four recent trends have affected the way customers interact with companies and prompted development, across industries, of broader capabilities to acquire, retain, and expand customer relationships more effectively.

New economic realities: The current marketplace is markedly different than it was a decade ago. Globalization has led to convergence in buyer preferences across countries and industries. Clothing retailer L.L. Bean (www.llbean.com), shoe producer Nike (www.nike.com), and electronics maker Sony (www.sony.com) are just a few companies that sell global products— products marketed in all countries essentially without any changes. For example, Apple's iPad qualifies as a global product because of its highly standardized features and the company's global marketing strategy and global brand[1]. Information is increasingly transparent, and customers increasingly have their own voice and an array of choices. The variety of suppliers, channels, products, and services offered has created a reality where customer acquisition, expansion, and retention are increasingly difficult.

Data, data everywhere: Marketers have been dependent on the enterprise data for customer intelligence before the social media era. Now we can have multi-faceted customer data like purchase histories, browsing trends, and lifestyle changes.

1   Global Business Environment. See: http://catalogue.pearsoned.co.uk/assets/hip/gb/hip_gb_pearsonhighered/samplechapter/0273752634.pdf

The traditional know-how and workflows are changing and evolving due to the continuous integration of social media into daily processes, increasing competition in the markets and the explosion of data and information available to the marketers to optimize their spending and marketing strategies.
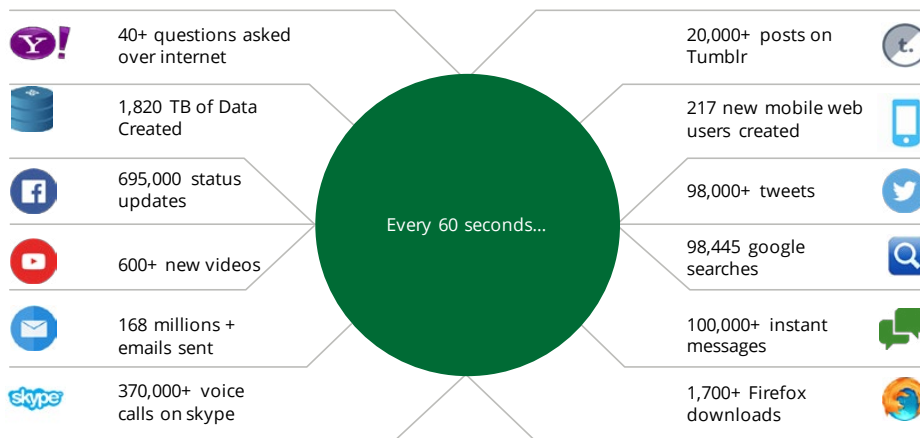
Powerful advancement in technology: The volume of consumer data and available software and hardware with which data can be analyzed have placed new power in the hands of companies that choose to leverage such tools. As more organizations

a groundswell of market momentum and acceptance thanks to a series of well-researched and well-written popular press articles and books. This interest level has been substantiated by market-leading companies that have effectively adopted analytic management techniques. Having said that, scientists were into analytics before it was cool. Any conversation about the new world of business analytics should come with a caveat— it's not really new. Businesses have been engaging in analytics for years—decades, even. It may be more accurate to say that analytics is

sciences leading the vanguard of analytics. Universities, research labs, and other science-focused organizations have been applying and refining analytics approaches to solve some incredibly complex problems through the years, in everything from molecular biology and astrophysics to the social sciences and beyond. In many cases, they don't even use the word "analytics." For them, it's all science.[2]

These four trends have affected the business environment and the way companies develop relationships with their customers. They have shifted focus from risk-averse internal focused activities that have limited upside to truly transformational corporate strategies that leverage customer insights and analytics. These combined developments have changed the traditional goal of marketing which was to familiarize potential customers to a product and then somehow convince them to buy it; to drive attention towards segmenting down to a bunch of likely customers and then sell them products they may not even be aware they want.

Figure 1: Data generation every 60 seconds

40+ questions asked over internet	20,000+ posts on Tumblr
1,820 TB of Data Created	217 new mobile web users created
695,000 status updates	98,000+ tweets
600+ new videos	98,445 google searches
168 millions + emails sent	100,000+ instant messages
370,000+ voice calls on skype	1,700+ Firefox downloads

Every 60 seconds...

Source: Go-Globe.com

turn to evidence-based management, the skills and experiences necessary to leverage the data along with tools and hardware available are being rapidly developed.

Relevant and accessible examples of success: Advanced analytics have received

experiencing a major renaissance, ushered in by big advances and investments in technological and data capabilities. As a result, business analytics has reached a next level of maturity. Business isn't the only field notable for major advances in analytics through the years. If anything, there may be a stronger case for the

2 Analytics Trends 2016, the Next Evolution | Deloitte US. See: http://www2.deloitte.com/us/en/pages/deloitte-analytics/articles/analytics-trends.html

1.2 How is marketing changing?

1.2.1 From 'Spray-and-Pray' to Deep Customer Connections

Customers are increasingly frustrated by the generic offers they are bombarded with from marketers, and most marketers continue their "spray and pray" mass marketing techniques of the past, seeing little reason to change. But today's customers only want interactions that are relevant, personalized, and based on a consumer's situation and preferences. Companies that fail to provide relevant offers will be left behind. This idea does not seem to be ground breaking, but the companies who act on it grow big. With real time marketing this concept has evolved to the next level with smart marketers giving audience the information they need most when they are most likely to need it or what we call next best offer/action.[3]

1.2.2 From Guess-Work to Actionable Data

In the earlier days of marketing it was a lot of dart throwing — marketers were working on very little direction and mostly intuition. But in the recent times there has been an explosion of information from social media. Elaborate systems have been set up to monitor each and every consumer point. We are not only analyzing the present but also predicting the future with some of the most advanced statistical and machine learning techniques. With the access to data and dedication to optimization combined with real time marketing, marketers can target customers at an individual level and meet their needs based on reliable and trusted information.

1.2.3 From Selling to Storytelling

Brands have realized that the more they self-promote, the more consumers tend to tune them out. It is human psychology to want to engage with someone who takes interest in you, asks questions, and genuinely wants to learn about you instead of someone who gives all the impetus on self-promoting. The most successful brands are the ones that listen as much as they talk if not more. Therefore, in recent time, the focus of marketers has been on reading between the lines and responding to the exact needs of customers as and when they need it.

Figure 2: Changing modes of marketing
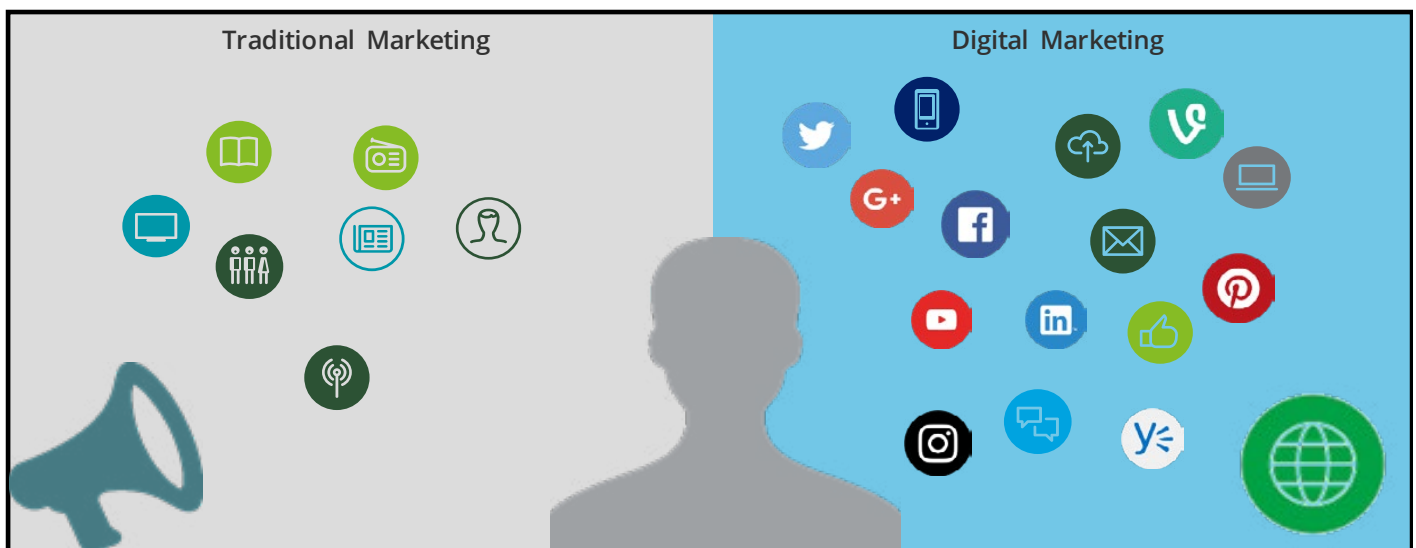
Source: Deloitte Analysis[4]

---

3   Marketing's 3 Biggest Paradigm Shifts: a Deep Dive. See: http://www.evergage.com/blog/marketings-3-biggest-paradigm-shifts-deep-dive

4   Will traditional marketing die in the long run? See: https://www.linkedin.com/pulse/paradigm-shift-from-traditional-marketing-digital-so-die-bharadwaj

2

Opportunities galore

We have made references to changes in the marketing strategies because of data explosion, advanced analytics, and technological advancements. But how can marketing executives take advantage of this evolved environment? What are the opportunity areas and what could be the challenges?

2.1 What are the opportunities?

Now what would data analytics make organizations do better? Why should they embark on this tedious and often challenging journey?

Advanced analytics provides marketers with an opportunity to deal with the challenges being faced by them and to gain an edge over the competition. The field is increasingly being used by marketers for the following purposes:

01. Market forecasting: Statistical techniques are used to develop a predictive model to gauge the market size for a given product or service. This forecast can be used by business to make wise and justifiable business decisions, ranging from amount of goods manufactured to the amount and location of new stores to be opened. If a firm operates in multiple markets— some growing, some decaying, and some more or less stagnant— which are all dependent on geographical location and seasonality, then knowing these trends can have a huge impact on the marketing spends in terms of amount as well as the mode of marketing.
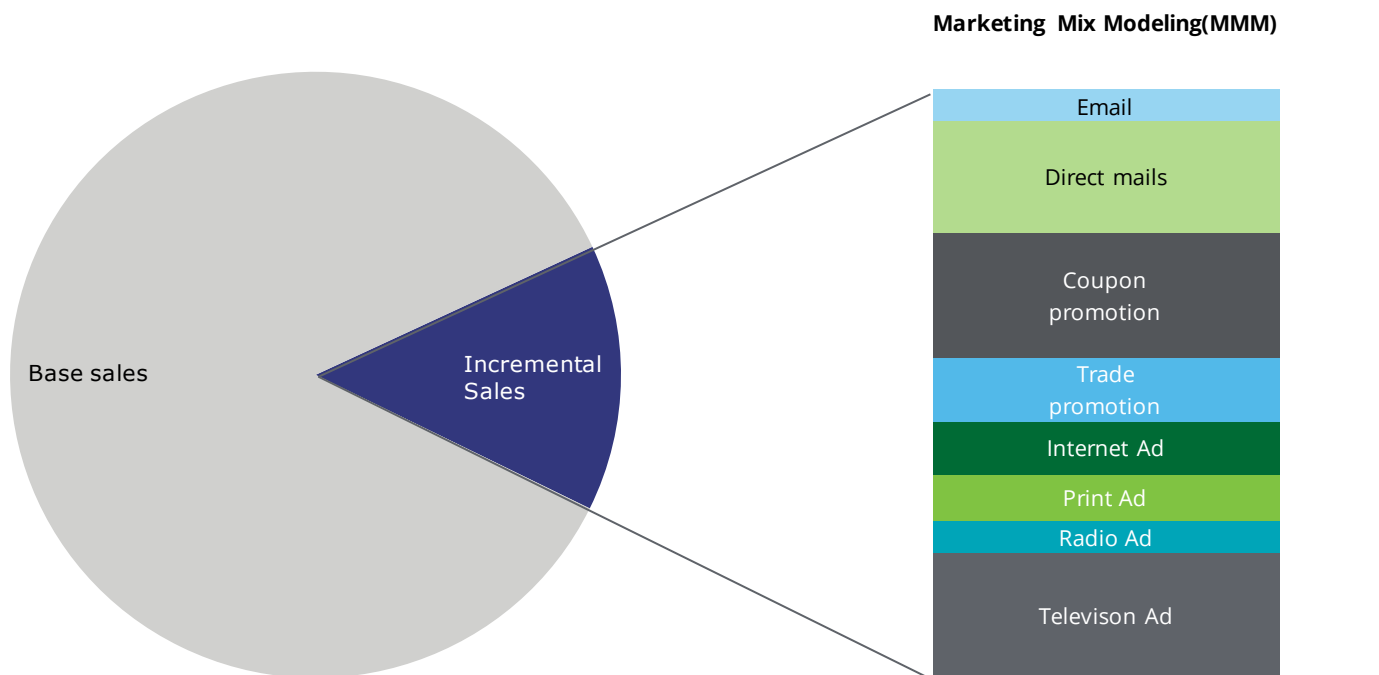
02. Quantifying customer needs and motivations: With the increase in social networking data and the enterprise data in recent times tracking not only the actions of customers but also their moods and sentiments, marketers are using quantitative laddering and other approaches to track consumers' unmet needs and desires and to lure them to products which they never knew they desired. Marketers can no longer survive by targeting the population as a whole; instead each consumer needs to feel that the advertisement or campaign is specifically targeted to meet their specific needs and wants. Hence, marketers are increasingly segmenting their consumer groups in order to make them feel special and to provide the right offer to the right customer at the right time. Firms are increasingly using predictive analytics to gain insights into when customers are most likely to defect, to determine the lifetime value of customers, and to predict the most logical products to be sold to customers. This allows firms to target more profitable customers and to deal with each segment of customers depending on their predicted tendency.

03. Enhancing brand equity: Firms spend millions in establishing and maintaining their brand image in the market. With increasing competition and several new brands emerging in each field, the value of brand image is quickly gaining importance. But just throwing money around to develop a brand in the market is not enough—firms are increasingly using predictive analytics to understand which brand predictions are most predictive of brand choice with the help of econometric brand choice models. In today's market, a single firm might brand its products differently to target different segment of customers.

04. Product positioning and pricing optimization: This is probably the most applied and popular technique in the field of advanced analytics currently being used by marketers today. The degree of which this has been adopted in the market is itself evidence of its usefulness. It involves locking the desired set of attributes in order to optimize the volume of sale and profitability. Marketers are increasingly using 'what if' analysis to understand the impact of changing prices and introduction of new products to understand the impact on overall profits for the company.

05. Marketing mix and marketing efficiency modeling – This is an area in which advanced analytics has been making significant inroads. Today, each firm is presented with an arsenal of modes of marketing ranging from leaflets in newspapers to google ads to sponsoring major events. Market mix modeling is an effective technique to showcase the effectiveness of these marketing campaigns to the marketers and allows them to allocate their marketing budget much more wisely and predict the increase in sales even before launching the campaign. The increment in sales observed by any company can be specifically broken down to its various causal factors.

Figure 3: Marketing Mix Modeling (MMM)

Marketing Mix Modeling(MMM)

Base sales

Incremental Sales

Email
Direct mails
Coupon promotion
Trade promotion
Internet Ad
Print Ad
Radio Ad
Televison Ad

Source: Deloitte Analysis

2.2 Issues faced by the executives

Amid all that potential, companies continue to struggle to build truly fact-based cultures. While analytics has grown in importance and relevance in recent years, its acceptance and impact have been curtailed by a number of barriers to widespread adoption.[5]
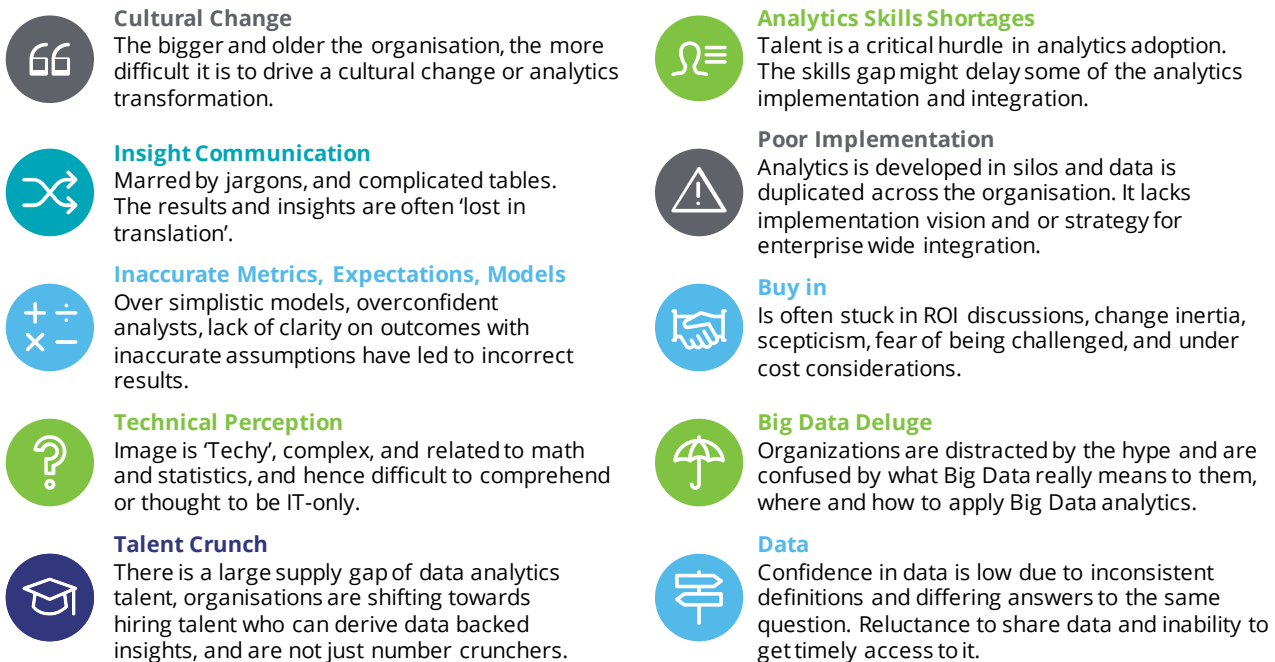
There are a number of key hurdles to overcome in order for analytics to play a more significant role in the enterprise—starting with the quality of the data itself. Many companies continue to struggle with the amount of data at their disposal, and how best to categorize, synthesize, access, and analyze it—and then to implement decisions that stem from those findings.[6]

Just like the space race and nuclear race among the countries in the past, this age is all about the analytics race between companies, with each one of them striving towards becoming analytics enabled, as it is perhaps the most important

evolutionary step any organization can take in the current times. The rewards to achieving data driven decision making are also huge and can provide a considerable boost to the bottom line. If the advantages are so clear and significant, why is it that not all organizations are taking significant steps to incorporate advanced analytics to their strategizing and decision making process? The answer is that in order to leverage the benefits of advanced analytics the organizations must overcome several challenges while experiencing end to end development and deployment of predictive models and further during business implementation.

A few of the major issues being faced by organizations in incorporating advanced analytics to their marketing strategy are explained in the figure below:

Figure 4: Issues faced in incorporating advanced analytics

Cultural Change
The bigger and older the organisation, the more difficult it is to drive a cultural change or analytics transformation.

Insight Communication
Marred by jargons, and complicated tables. The results and insights are often 'lost in translation'.

Inaccurate Metrics, Expectations, Models
Over simplistic models, overconfident analysts, lack of clarity on outcomes with inaccurate assumptions have led to incorrect results.

Technical Perception
Image is 'Techy', complex, and related to math and statistics, and hence difficult to comprehend or thought to be IT-only.

Talent Crunch
There is a large supply gap of data analytics talent, organisations are shifting towards hiring talent who can derive data backed insights, and are not just number crunchers.

Analytics Skills Shortages
Talent is a critical hurdle in analytics adoption. The skills gap might delay some of the analytics implementation and integration.

Poor Implementation
Analytics is developed in silos and data is duplicated across the organisation. It lacks implementation vision and or strategy for enterprise wide integration.

Buy in
Is often stuck in ROI discussions, change inertia, scepticism, fear of being challenged, and under cost considerations.

Big Data Deluge
Organizations are distracted by the hype and are confused by what Big Data really means to them, where and how to apply Big Data analytics.

Data
Confidence in data is low due to inconsistent definitions and differing answers to the same question. Reluctance to share data and inability to get timely access to it.

Source: Deloitte Analysis

5 Crunchy questions for sticky issues .Using analytics to outsmart competitors. See: https://www2.deloitte.com/ug/en/pages/deloitte-analytics/articles/crunchy-questions-for-sticky-issues.html

6 Deloitte Analytics Advantage Report 061913 – Documents See: http://docslide.us/download/link/deloitte-analytics-analytics-advantage-report-061913

A further explanation of the issues which should be addressed on priority is given below[7]:

01. Executive ownership: In the absence of a clear vision and a leadership advanced analytics, efforts might be stalled at the modeling stage. The leadership needs to be aligned with the question "What do we want to get out of this transformation?" There needs to be well orchestrated effort between technical preparation, cultural shift and change management; all of this driven by the expected business insights derived out of transformational initiative. Without the accountability for a targeted return on investment, organizations might end up spending a lot of time "doing" instead of "getting things done".

02. IT involvement: IT needs to be involved in the implementation process so that the applications can be used in real time or day to day operations of the organization. They also help answer key questions such as:
Are analytical solutions conforming to best practices and consistent standards? Are environments available to enable development of proof of concepts and the ability for industrialization into enterprise solutions?

03. Data issues: Many organizations don't even attempt to implement advanced analytics as they are under the impression that either they don't have enough data or, if they do, the data is not clean enough or actionable. Many do not realize that to implement predictive analytics we don't need perfectly cleansed and organized data. Predictive analytics is not accounting, but rather a statistical process where there are several ways to cleanse the dirt and mine the diamonds out of coal.[8]

04. End user involvement: Ultimately all the initiatives depend on the user adoption and how they have latched on to the program. End users need to be empowered and enabled to ride on the wave by showing them the art of possible. The success of any analytics project is linked to changing the decision making process and demonstrable benefits that can transform the organisation, particularly when they translate to financial returns. To involve the end-users, organizations can take multiple measures, one of the effective ones is creating a sandbox environment. An analytics sandbox is an environment which provides a core set of analytical tools and access to business data to enable exploration through various analytical techniques to identify new insights. The environment is separate from the production for standard BI and reporting to enable resource intensive analysis to be conducted without impacting critical production activities. The sandbox can be enhanced to enable users to load their own data for more advanced ad-hoc analysis using new internal and external data sets. In addition, in some more advanced cases users can install their own technologies into their own sandbox environments to enable truly customised analytical insight to be generated – and potentially industrialized later.

---

7   The Biggest Digital Challenges and Opportunities Facing Businesses Today. See: http://digitalmarketingmagazine.co.uk/articles/the-biggest-digital-challenges-and-opportunities-facing-businesses-today/2705

8   5 key marketing challenges. See: http://www.smartinsights.com/managing-digital-marketing/resourcing-digital-marketing/five-main-marketing-challenges-2014/

3 Analytics at the core

We have discussed data analytics in the previous sections but embarking on the journey raises a few questions— what is analytics, what should be the top concerns of the CMO to engage users on this journey, and, most importantly, how should the ROI be calculated?

The age is all about smart marketing, the prime component of which is insights-based decision making. Companies are being forced to move from data driven marketing to insights driven marketing or perish. The truth is that many business leaders already know the inherent value of analytics insights for optimizing marketing spend and driving smarter decisions.

Let us try to understand some of these important questions, beginning with defining analytics.

3.1 Analytics defined

Analytics is using data, statistical and quantitative analysis, explanatory and predictive modeling, and fact-based management to generate predictive insights to make smarter decisions that improve the performance of businesses and drive strategy to outlast the competition.

Predictive and Prescriptive Analysis: The enterprise should move beyond reports with historical views and towards real-time and potentially future-looking predictive analytics

- **Historical Reports** – In the past, the business was content with receiving reports with rearward facing, structured data. (traditional BI)

- **Real-Time Analysis** – As computing capabilities improved, real-time analysis of larger data sets became a possibility.

- **Predictive Monitoring** – The next step in the evolution of analytics is identifying patterns in data to simulate and predict outcomes.

- **Prescriptive Analytics** – The end-game of Real Analytics is using both structured and unstructured data to prescribe optimal outcomes with objective, data-driven analysis (could give sentiment analysis combined with enterprise data to target high-value customers).

**Figure 5: Spectrum of Analytics**
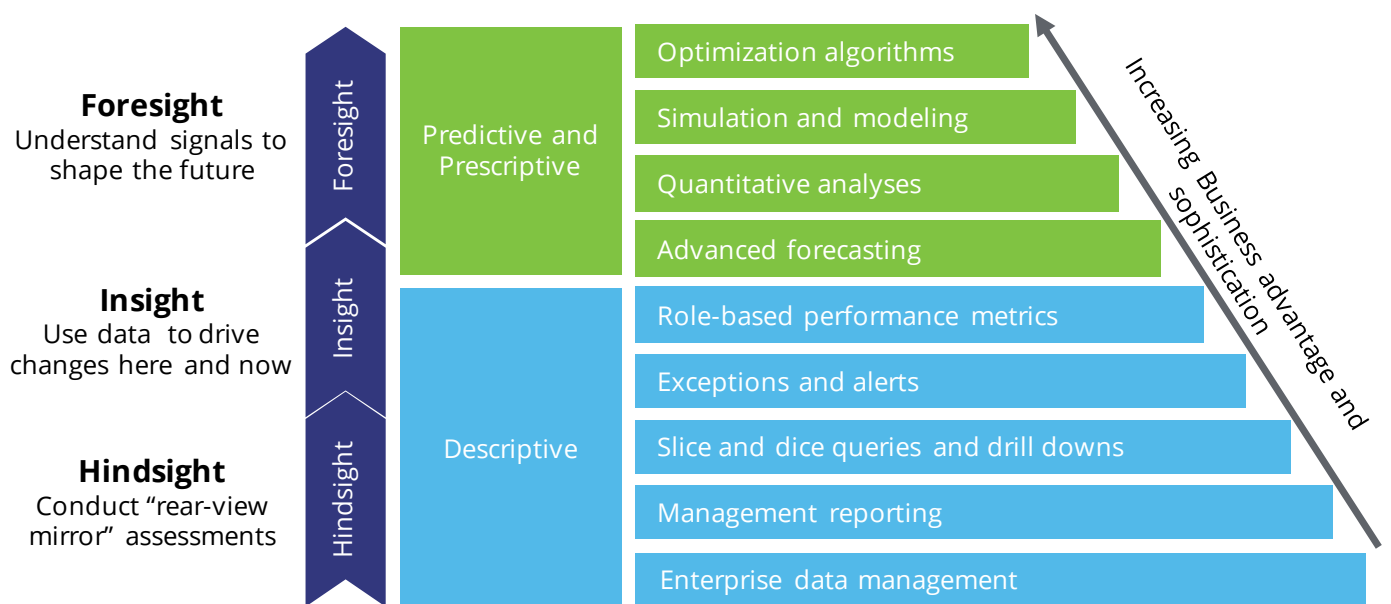
Source: Deloitte Analysis

3.2 How to reincarnate the marketing function?

Despite all these hurdles, the carrot still lures almost all companies making them attempt, if not holistically adapt, an insights driven approach to marketing. Virtually every company is on an analytics journey to become insight-driven and position for the "Insight Economy" in 2020, where analytics and data-driven insights are leveraged for competitive advantage.[9]

**Figure 6: Analytics' evolution over the years**
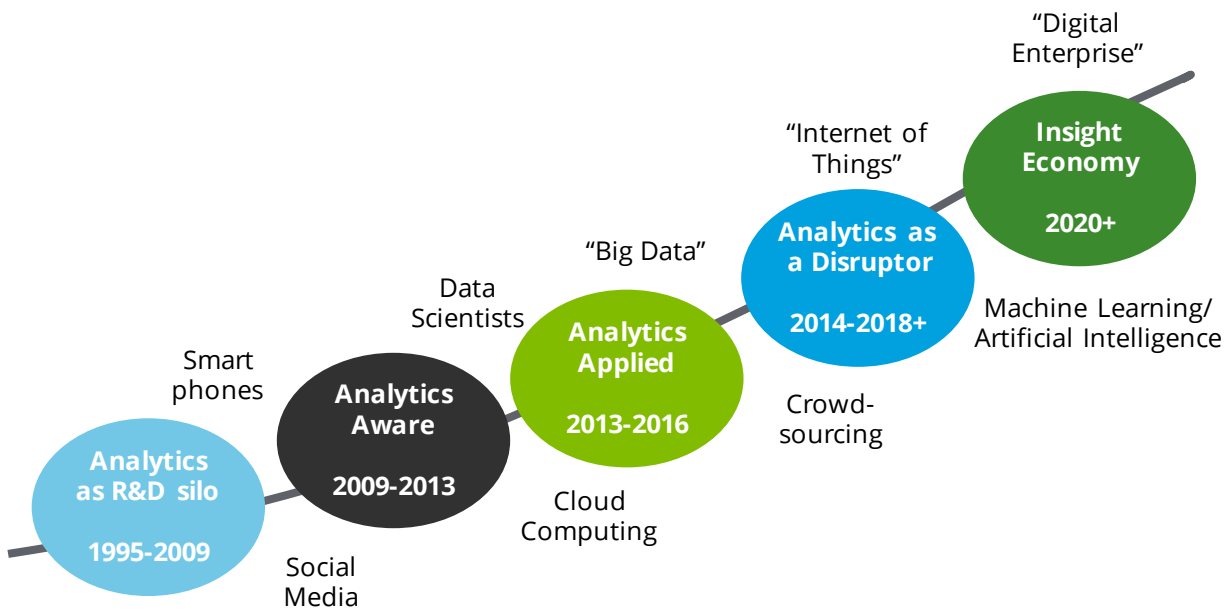
Source: Deloitte Analysis

The huge amount of data stored with companies is essentially unmined ore which, on first glance, looks worthless, cumbersome, and difficult to store. To a wise person, however, it proves to be a source of invaluable insight which answers many, if not all, questions that a business person asks. . The truth is that raw data, if utilized properly, can help answer questions ranging from "who do I sell to?" to "how do I sell?" to "what do I sell?" The procedure for converting this raw ore to gold involves data mining, modeling and development, deployment, and ultimately implementation in actions and decisions.

Figure 7: From Information to Value
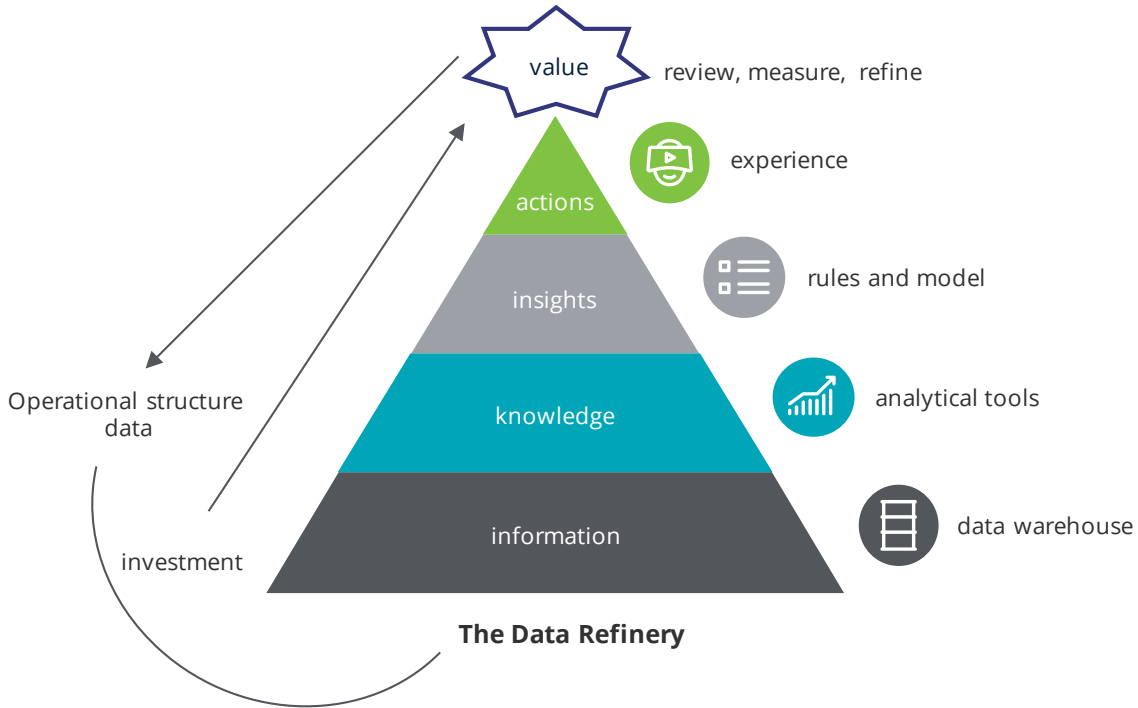
Source: Deloitte Analysis

Insight marketing takes the right proportion of both human intellect (imagination and experience) combined with sufficient amount of data and analysis to back up the hypothesis. It is not about taking the right decisions but all about taking wise decisions. Marketing is a social science— nothing is ever 100% predictable let alone probable. Behind the curtain of straight facts and numbers lies a complex web of gears twisting and turning many of which are invisible even with the best of intentions of adding the data sources into the model.

**Figure 8: Data based insights feed human decision making**
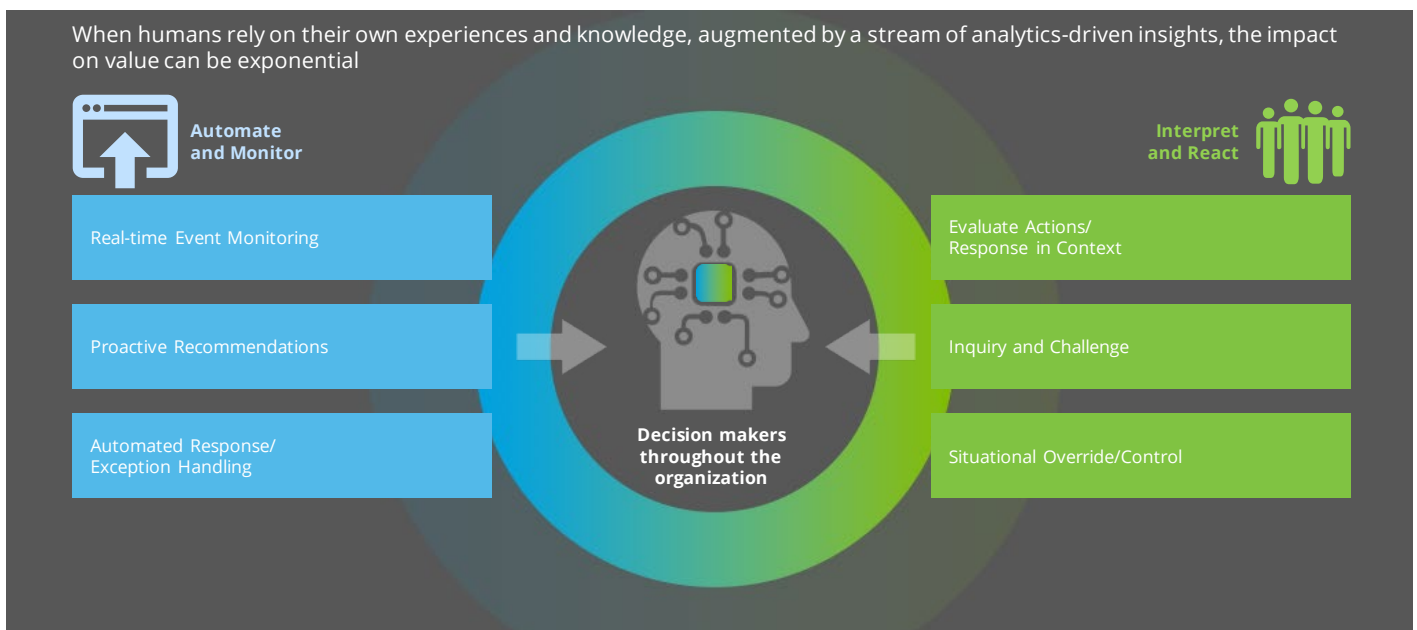
Source: Deloitte Analysis

All this talk about insight driven marketing leads to a very basic question, "What is insight driven marketing and how do we achieve it?"

Given below is an infographic which demonstrates a very simple yet effective 5 steps approach to embark on the journey of becoming an analytics driven marketing function.

Figure 9: 5 steps approach to becoming an analytics driven organization
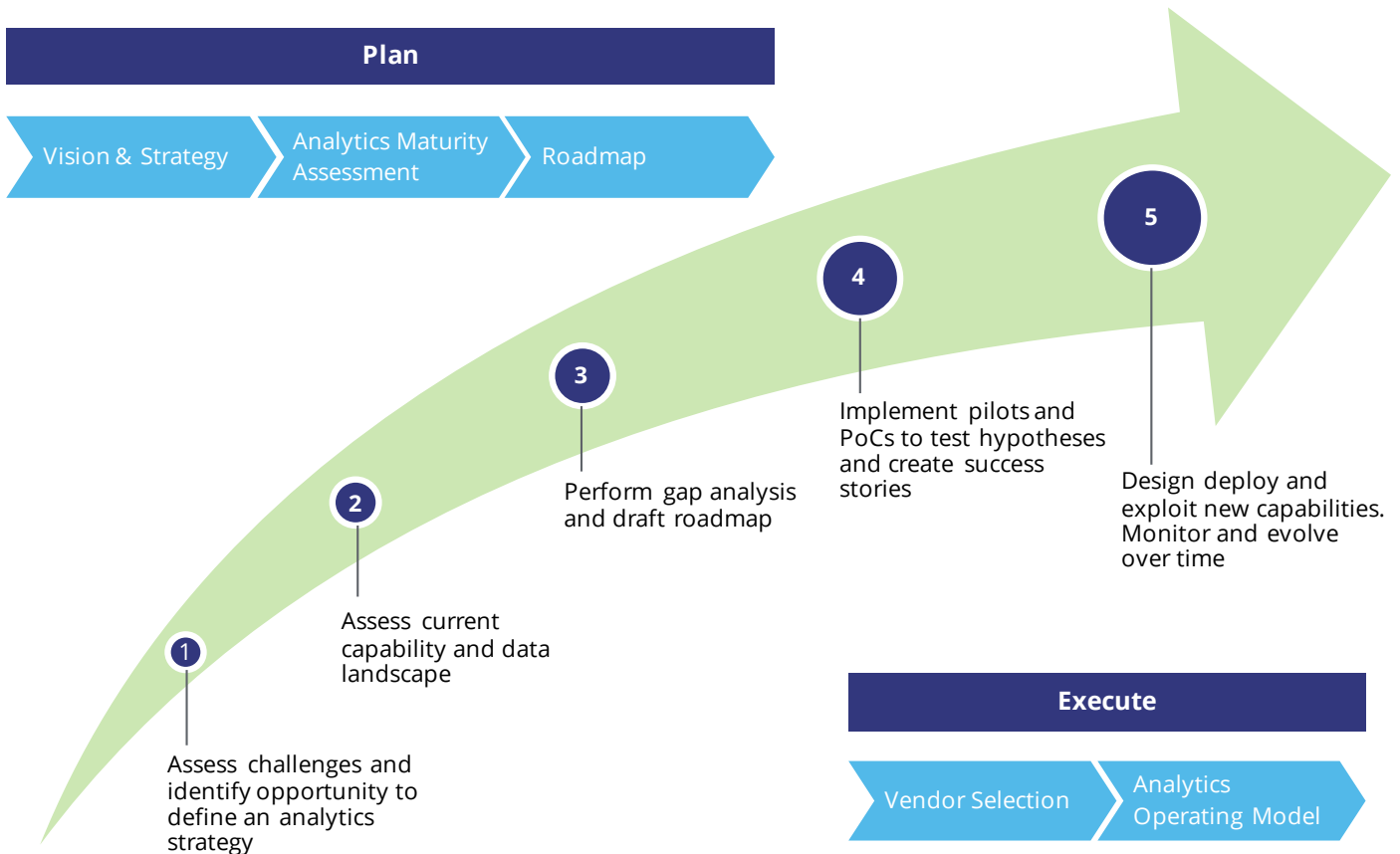
Source: Deloitte Analysis

While planning the journey there are a few elements and questions that need to be considered.

Figure 10: Defining analytics strategy

| To begin this conversation, the CMO can either consider	To garner support for an Analytics strategy, it must be clearly defined	In defining the Analytics strategy the following questions should be addressed
• What **business issues** do you need to address, and how could analytics provide a solution? • OR what business improvement **opportunities** can analytics support, and how could you harness these to benefit your business?	• What level of **validation** of concept and benefits do you want to carry out, before you decide whether and how to proceed to use Analytics? • How will you define the **business case** to support the development of an Analytics strategy? How will you demonstrate how the benefits justify the investment needed?	• What scale and breadth of **activity and capability** do you want to develop for analytics, and over what timeframe? • What are the **options** to implement the capability you need?

Source: Deloitte Analysis

Mature analytics driving marketing functions are the ones which embed analysis, data and reasoning into their decision making processes. They do not view Analytics as a project with a start and end date but rather see it as a core capability across the function to provide insight, tackle their most complex business problems, and to address the growing analytical trends.

Additionally, by asking the right questions and the application of more advanced analytical techniques, decision making processes can be made more efficient, focusing human input on making decisions and acting on them, rather than collecting and analyzing data.

Figure 11: Decision making process and action accordingly
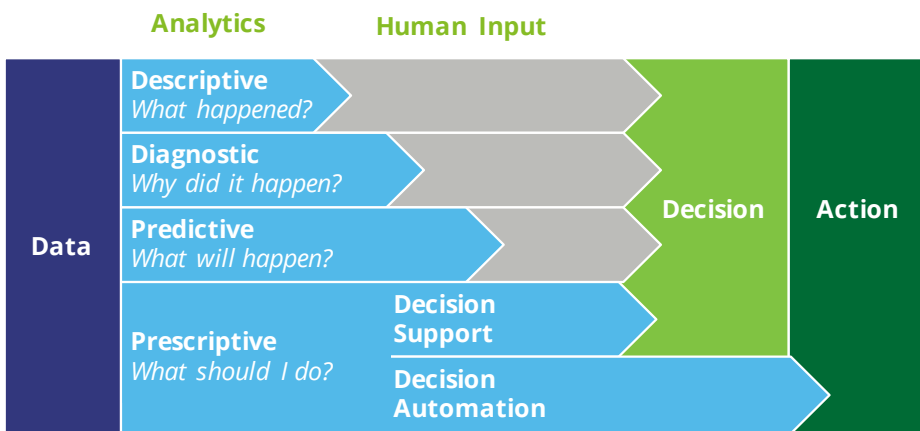
Source: Deloitte Analysis

They ask the right questions to themselves and are more analytical, which improves the decision making process and helps identify the most appropriate action:

Table 1: Analytics vs Non-Analytics

| Outlook	Non-analytics driven	Analytics driven
Past	What has happened?	Why and how did it happen?
Present	What is currently happening?	What is the next best action?
Future	What is going to happen?	What does simulation tell us— the options; the pros and cons?

4

Make it happen

4.1 Enabling data foundation

Analytics revolves around data— the better and more refined data we have, the better will be our analysis. Hence, for a fruitful analysis we need to consider as many sources of relevant data as possible. In the older days this data referred to structured tabular data but today data refers to not only internal structured data but to unstructured and external data as well. With the increase in computing power, organizations are interested in analyzing both internal and external data to identify previously unknown relationships that will drive operational efficiency, increase sales, and provide a competitive marketplace advantage.

Figure 12 : Sources of Internal & External Data
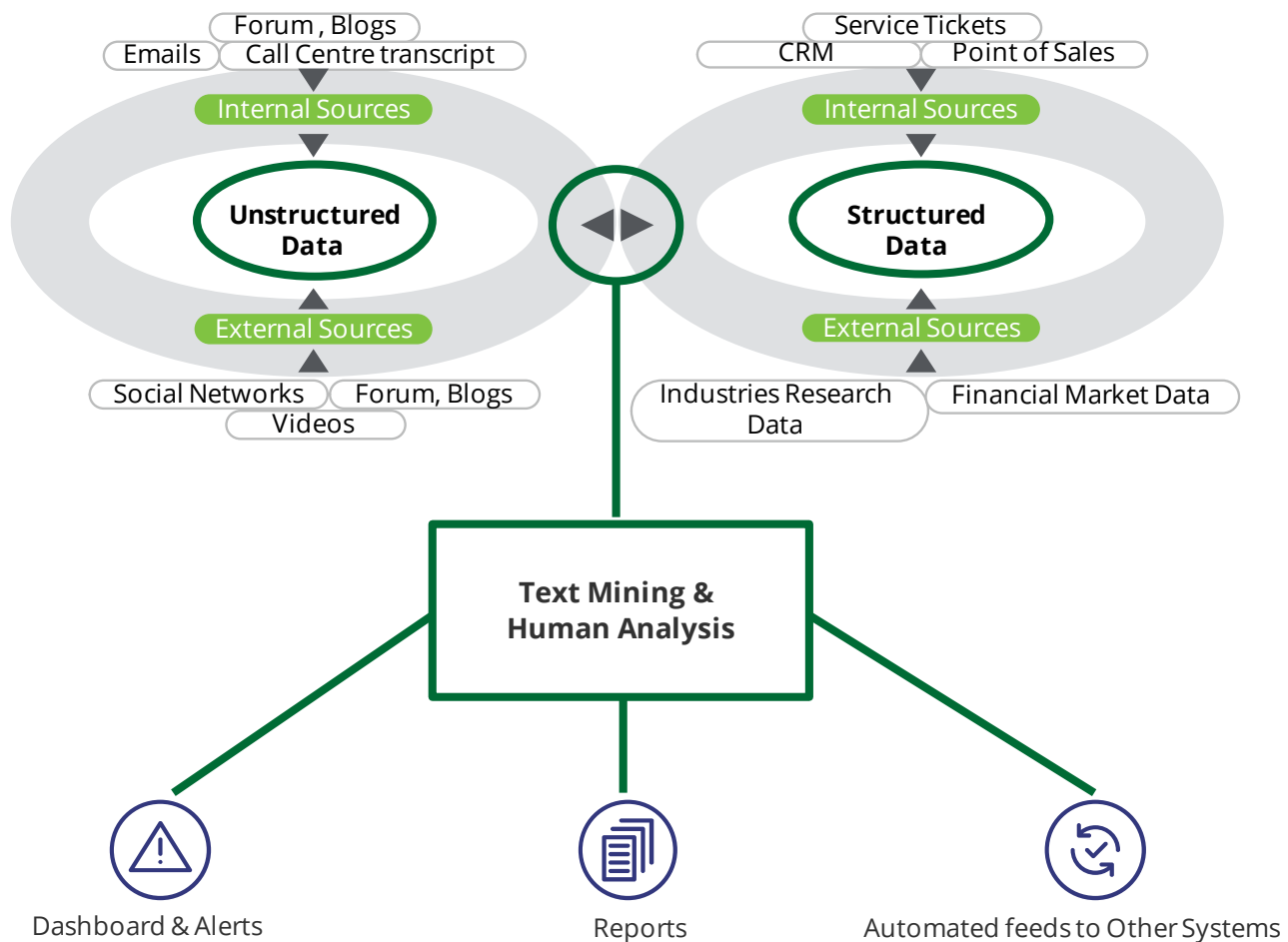
Source: Deloitte Analysis

4.1.1 Internal data

Marketing involves the task of obtaining leads and converting them into real customers. The procedure from obtaining leads to making sales to customers involves several data points which could be used by the company to gain insights. Knowledge is power and recognizing which internal data might be used to add most worth to the business is a critical question. In order to form a successful marketing strategy, to make sure marketing efforts pay off, each organization needs to utilize the following four sources of internal data to its advantage:

01. **Finance**: Minimizing your expenses and production costs would lead to increased profits. Hence, it is essential to monitor overhead costs and production costs and ensure that they are well within budget and that each expense line item is justified by a logic or necessity. Analyzing the expenses also allows us to weed out unprofitable items and increase the profitable ones. Further, analyzing finance provides us insight into the budget that is available for marketing.

02. **Customer engagement**: Undoubtedly the most important component of any marketing campaign is the customer where the policy is "the customer is always right". Hence, we need to continuously monitor customer interactions. This analysis not only helps us segments customers on the basis of their preferences and behaviors but also helps us determine marketing strategies specifically targeted to that group. Specific marketing strategies serve two very useful purposes. One, they increase the profits by increasing sales and, second, they provide a feel good factor to the customers as they promote a sense of bonding and belonging to the brand.

03. **Data trends**: Connecting the sales trends and the marketing data is the way forward to making profitable marketing decisions. Unlike in the past where marketing was more or less a one way street, this is no longer the case. The impact of marketing on sales can be closely studied and be further broken down to the contributing factors with analysis such as marketing mix modeling (MMM) analysis. Additionally, we can use internal data to compare and determine the existing customer base and the prospective customer base, and identify the potential means and strategies to tap into the desired demographics using the existing data and the forecasted data.

04. **Resource**: Every company needs to inventory its available resources periodically such as suppliers and services. This data can be further analyzed to determine the offerings that are currently missing in the company and the potential market that could be tapped into. Additionally this might help us in improving the marketing strategy and determining what works and what doesn't.
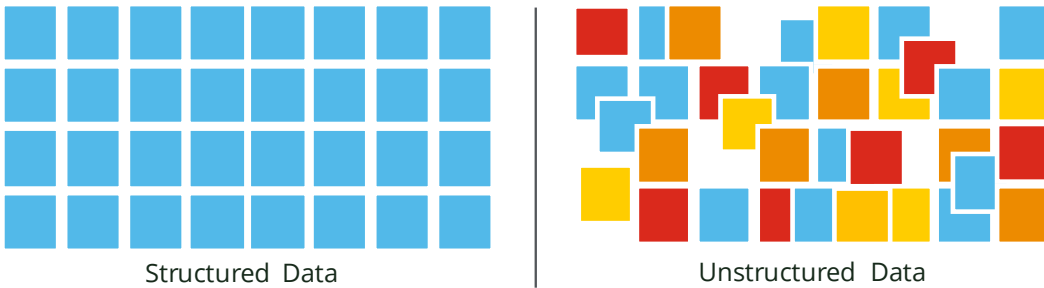
4.1.2 External Benchmarking

Benchmarking is a term often used to describe performance assessment which seeks to assess the performance of any organization against its competitors and against the best in the class. Only internal data analysis without external benchmarking might not bear the desired fruits or useful insights.[10] For example, it is meaningless to know that return on investment on BOGO campaign is 121% if the rates for the comparable organizations are unknown. Until we know our shortcomings and our strengths w.r.t. our competition we hold no real shot at improving. Hence, we need to compare specific measures of performance against data on those measures in other "best practices" organizations.

Benchmarking is a technique that uses quantitative or qualitative data to make comparisons between different organizations or different sections of organizations. It is generally a continuous process in which organizations measure, compare, and improve their procedures and policies. Most often organizations take the easy way out by benchmarking only the quantitative parameters of performance which are easy to measure such as financial performance and marketing spend. But the truth is, a lot of information lies in the qualitative less tangible measures of performance which might have a huge impact in the long run. An assessment of these features is more difficult and is most commonly done by direct observation or by surveying users, but with the increase of open data sources and social networking sites, where users reveal their thoughts and preferences openly, this is quickly gaining impetus. Exhaustive benchmarking should include both quantitative as well as qualitative measures of performance to enable continuous quality improvement. For the best results, before starting on the journey of benchmarking, organizations need to decide the activities or policies they want to benchmark and compare with others along with the organizations they want to compare them with.
External data Benchmarking is useful for the following reasons:

- An organization can identify how its practices compare with the best practices in the market.

- It helps organizations learn what practices actually work and might prove to be beneficial if successfully implemented.

- They provide a standard for appraising existing practices and improving them.

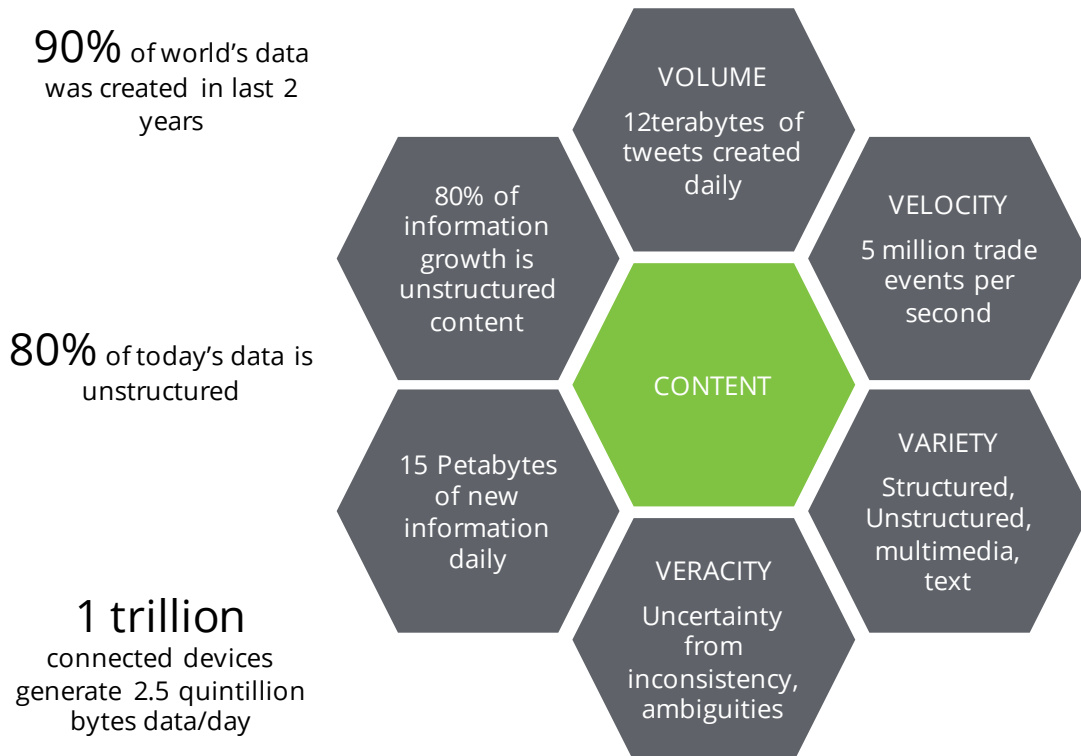- They help decision makers establish a strategy and set a road map for the future.

---

10 External Benchmarking. See: http://www.whatishumanresource.com/Human-Resource-benchmarking

Figure 13 : Structured Data & Unstructured Data

Structured Data   Unstructured Data

Source: Deloitte Analysis

Figure 14: Data explosion

90% of world's data was created in last 2 years

80% of today's data is unstructured

1 trillion connected devices generate 2.5 quintillion bytes data/day

VOLUME
12terabytes of tweets created daily

80% of information growth is unstructured content

VELOCITY
5 million trade events per second

CONTENT

15 Petabytes of new information daily

VARIETY
Structured, Unstructured, multimedia, text

VERACITY
Uncertainty from inconsistency, ambiguities
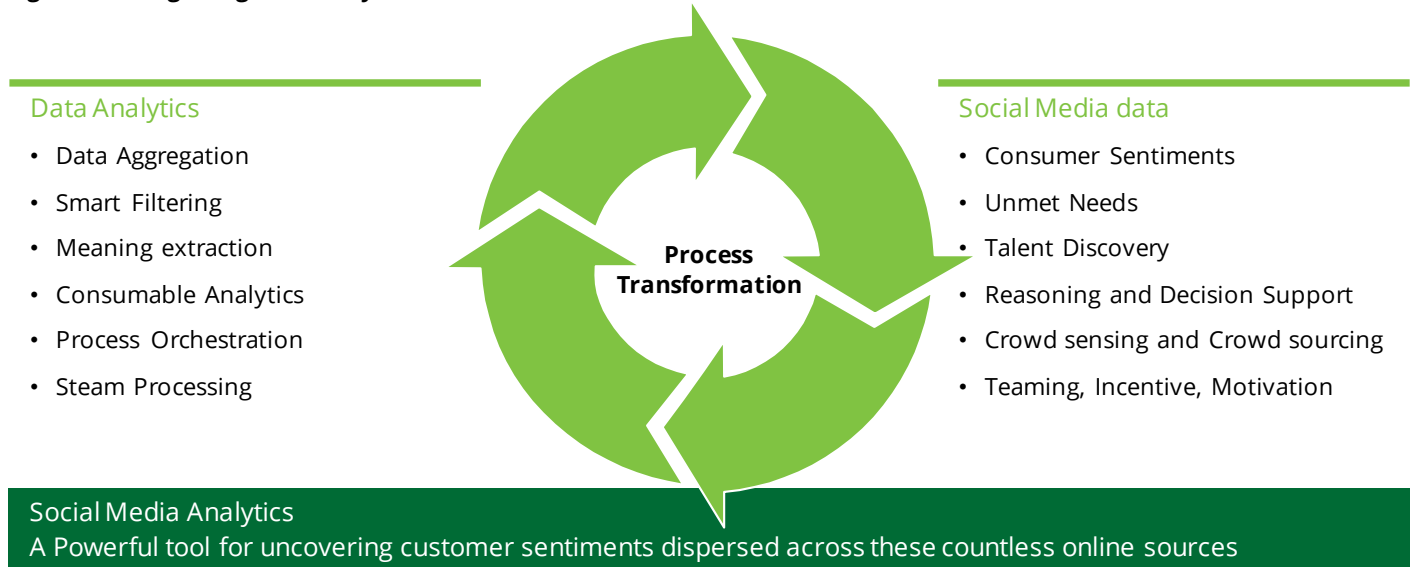
Source: IBM annual report, 2013[11]

In the recent times there has been an upsurge of data. A major contributor to this sudden burst has been the unstructured data from social media and customer feedbacks. A large amount of information is embedded in social networking streams such as Facebook and Twitter, blogs, news feeds, and comments from rich media sites. This large amount of data is very helpful in a better understanding of customer attitudes and characteristics. All this data is in unstructured format, making natural language processing not only a priority but nearly a necessity for every organization. Social Media Analytics has been effectively used in various industries like Finance, Energy, Utilities, and more. Companies have increasingly started integrating data analytics with social media data to gain insights into consumer sentiments, unmet needs, talent discovery, reasoning and decision support, crowd sensing and crowd sourcing and in many more areas of analysis.
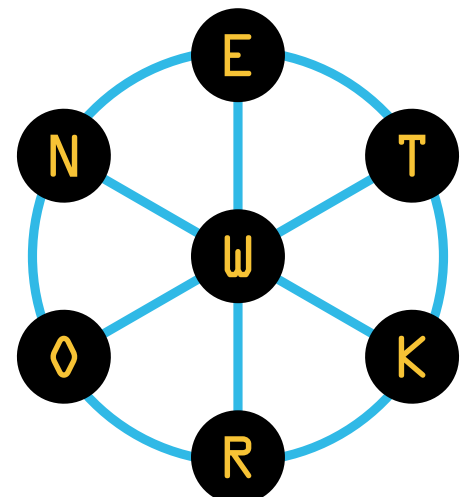
11 IBM annual Report 2013. See:https://www.ibm.com/annualreport/2013/bin/assets/2013_ibm_annual.pdf

Figure 15: Integrating data analytics & social media data

Data Analytics

- Data Aggregation
- Smart Filtering
- Meaning extraction
- Consumable Analytics
- Process Orchestration
- Steam Processing

Process Transformation

Social Media data

- Consumer Sentiments
- Unmet Needs
- Talent Discovery
- Reasoning and Decision Support
- Crowd sensing and Crowd sourcing
- Teaming, Incentive, Motivation

Social Media Analytics
A Powerful tool for uncovering customer sentiments dispersed across these countless online sources

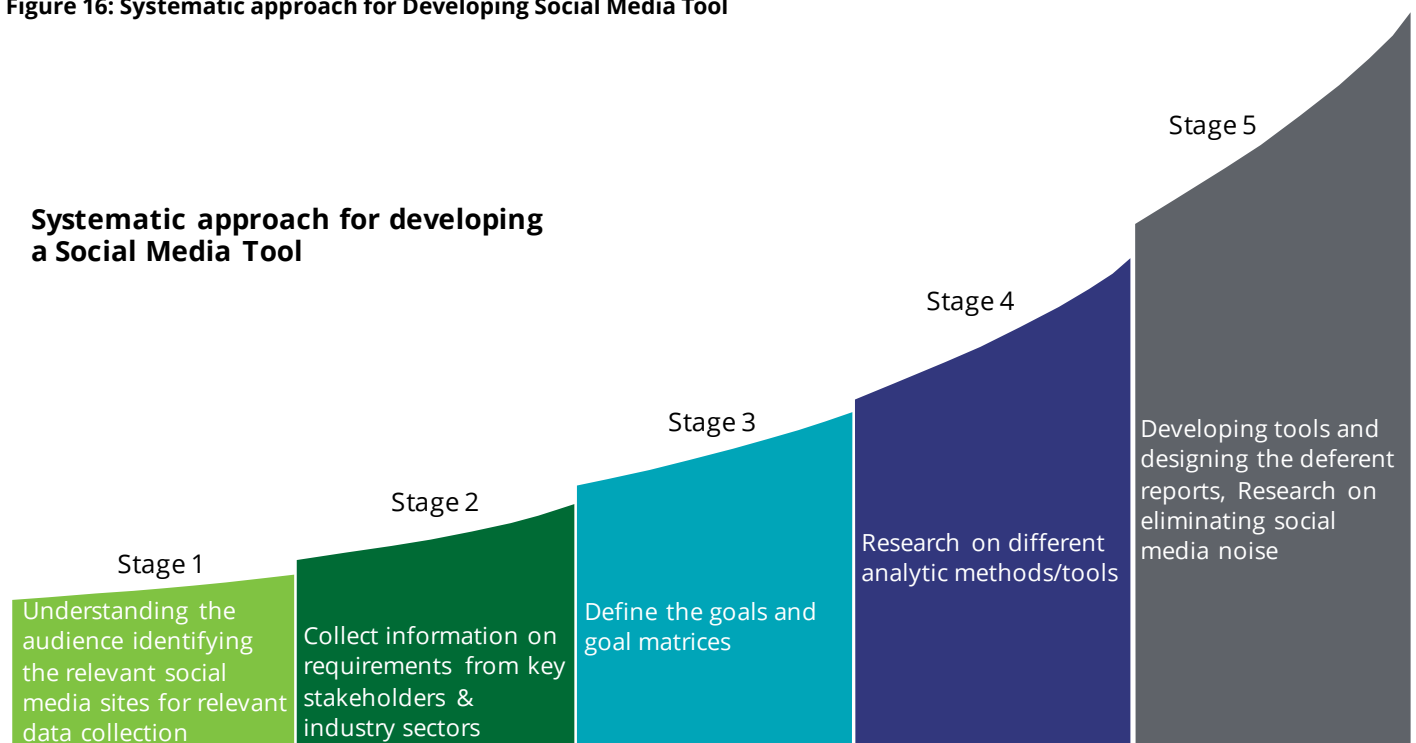Source: Deloitte Analysi

Social media analytics is the practice of gathering data from blogs and social media websites and analyzing that data to make business decisions. The most common use of social media analytics is to find customer sentiment in order to support marketing and customer service activities. The primary step in the process of social media analytics is identifying the business goals for which data is going to be collected and analyzed. Once the business goals have been identified, key performance indicator (KPI), for objectively evaluating the data, is defined. For example, for a provider, customer engagement can be measured using the number of followers on twitter or any other social networking site. There are many software tools for analyzing the unstructured data found in the social networking sites like Twitter, Facebook, etc. Many of these tools use text mining to classify and analyze the data to reach valuable conclusions.

Figure 16: Systematic approach for Developing Social Media Tool

Systematic approach for developing
a Social Media Tool

Stage 5

Stage 4

Stage 3

Stage 2

Stage 1

Understanding the audience identifying the relevant social media sites for relevant data collection

Collect information on requirements from key stakeholders & industry sectors

Define the goals and goal matrices

Research on different analytic methods/tools

Developing tools and designing the deferent reports, Research on eliminating social media noise

Source: Deloitte Analysis

4.2 The science behind

4.2.1 Advanced statistical techniques

Marketers are increasingly using advanced analytics techniques to optimize the campaign spends. The target is majorly achieved by the following means:

01. Segmentation and Clustering:
Marketers have long since abandoned the "one size fits all" approach—instead they are looking at more granular clusters obtained by studying the characteristics and behaviors of individuals such as age, sex, past purchases, marital status, etc. Unsupervised segmentation techniques such as k-means, Euclidian hierarchical clustering etc. are used for the purpose. These techniques are also used to bucket the customers on the attributes— for example, a variable like age can be bucketed to classify the complete population of customers in two-three groups as desired, allowing a more insightful analysis of the data.

02. Correlation: Many attributes pertaining to customer behavior might be highly correlated—for example, in many cases, age and buying capacity are highly correlated with older age group having higher buying capacity. Techniques such as Pearson correlation can be used to find such correlations and better understand the preexisting data and probably discard a few attributes which are primarily determined by other leading factors. This allows marketers to target their campaign to the audience primarily on the leading factors.
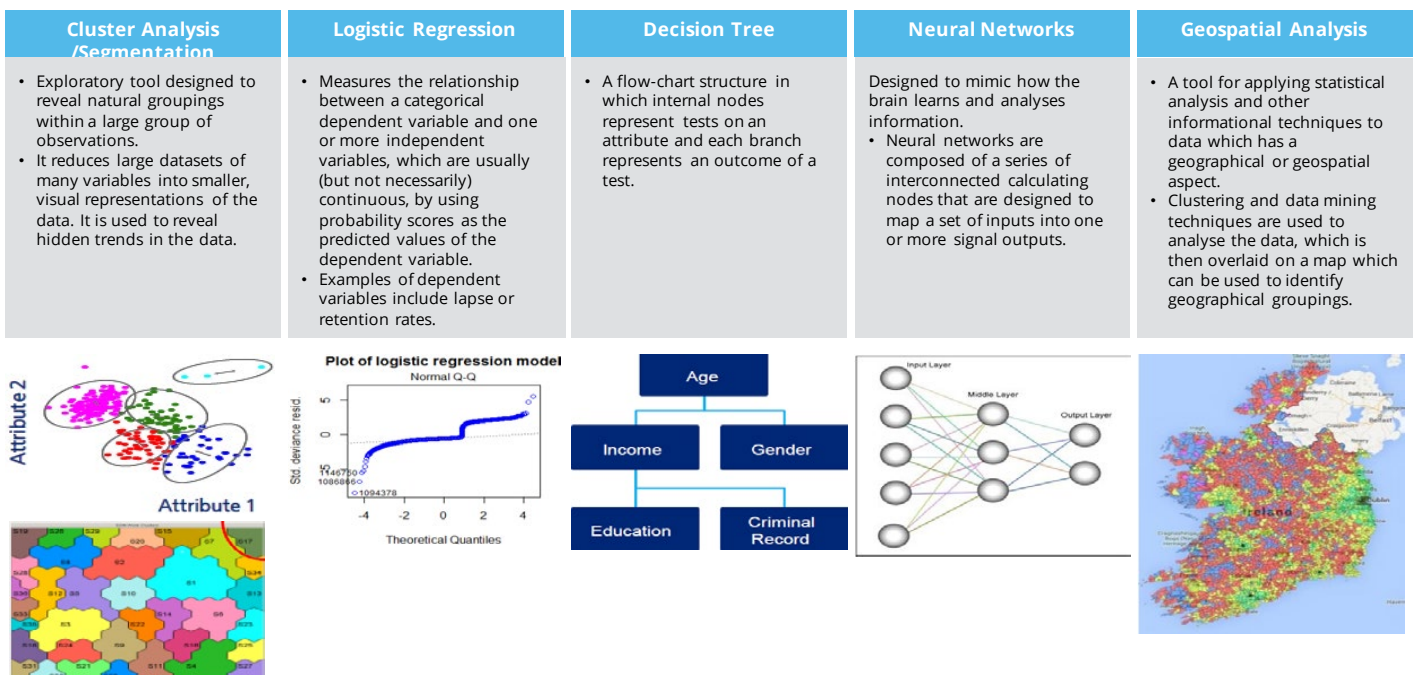
03. Sales forecast: Using advanced analytics organizations today can get a glimpse at the probable future sales which helps them optimize not only the supply and production but also the marketing strategy and the marketing budget they should incorporate for the coming periods. The techniques such as ARIMAX (Auto Regressive Integrated Moving Average with exogenous Input Model) not only consider the past sales and the seasonality but also the additional factors such as festivals, promotions, events etc. This allows the marketers to further perform 'what-if' analysis considering different prices and promotions for the items in order to optimize the profits.

04. Modes of marketing: Today each organization has an arsenal of means of promotion to pick from and it is very important that the marketing spend be allocated to each of these modes wisely. The emerging technique of Marketing mix modeling (MMM) has made a huge impact in this field in recent times, providing feedback pertaining to the effectiveness of each campaign to the marketers allowing them to make better decisions.

05. Customer retention: Marketing is not only about acquiring new customers, but also retaining them. Survival analysis of the customers in order to gauge customer lifetime value (CLTV) is performed by marketers in order to optimize their performance. Generally, customers are divided into four categories: high value-high risk, high value–low risk, low value–high risk, and low value–low risk. All these four categories are treated differently in terms of the priority given to them and the policies developed.

Figure 17: Advance Analytics Techniques

Advance analytics is a broad term which describes a variety of statistical techniques used to develop models that predict future events or behaviours.

Cluster Analysis /Segmentation	Logistic Regression	Decision Tree	Neural Networks	Geospatial Analysis
• Exploratory tool designed to reveal natural groupings within a large group of observations. • It reduces large datasets of many variables into smaller, visual representations of the data. It is used to reveal hidden trends in the data.	• Measures the relationship between a categorical dependent variable and one or more independent variables, which are usually (but not necessarily) continuous, by using probability scores as the predicted values of the dependent variable. • Examples of dependent variables include lapse or retention rates.	• A flow-chart structure in which internal nodes represent tests on an attribute and each branch represents an outcome of a test.	Designed to mimic how the brain learns and analyses information. • Neural networks are composed of a series of interconnected calculating nodes that are designed to map a set of inputs into one or more signal outputs.	• A tool for applying statistical analysis and other informational techniques to data which has a geographical or geospatial aspect. • Clustering and data mining techniques are used to analyse the data, which is then overlaid on a map which can be used to identify geographical groupings.

This graphic provides a description of some analytical techniques which can be used to generate insights.

Source: Deloitte Analysis

4.2.2 Machine learning

The technique that is making automation of complex tasks, self-driven cars, rescue robots, and bomber drones possible is none other than machine learning. It is a comparatively new technique that allows computers to learn from past data and further evolve and grow when exposed to new data. With the increasing computation capabilities, machine learning techniques are quickly gaining impetus over statistical techniques. They are increasingly being used by marketers to predict future sales, optimize spending, and customize their approach to target specific customers. The advantages to using machine learning techniques are that they require little to no insights from the user, the computer churns a huge amount of data, and the end results are insights which the user might not have even expected. Also, the results from machine learning techniques become more and more robust and reliable with the increase in data which is quite appropriate considering the explosion of data in the recent times.
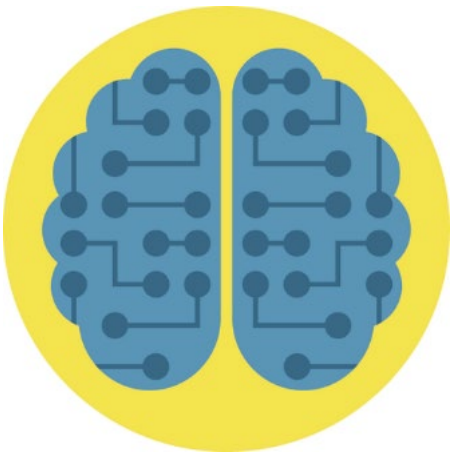
To consider an example, in the past, for classification the data scientists used CART (classification and regression trees) which, although insightful, were not always reliable and hence could not be trusted. With the evolution of machine learning, a new technique named "random forest" has emerged which basically constructs n number of trees, taking into consideration random number of variables and records and assigns weightage to each of these trees. As this technique works on the principle of using 'random', it is much more accurate and robust.

There are basically three types of machine learning techniques:

01. **Supervised learning**: This algorithm comprises the target variable for a sample number of records on the basis of which it is predicted for the remaining records. Examples of Supervised Learning include regression, Decision Tree, Random Forest, KNN, Logistic Regression etc. It is extensively used in predicting customer turnover risks in order to take preemptive measures to retain them.
02. **Unsupervised learning**: This algorithm does not have the target variable for any sample records and aims at clustering or segmenting the records on the basis of their characteristics. Examples of Unsupervised Learning include apriori algorithm, K-means etc. This technique is used to segment customers in several brackets in order to launch campaigns specifically targeted to each group.
03. **Reinforcement learning**: Using this technique, machines are trained to learn and train themselves using trial and error. The machines learn using past errors and try to correct them in the future. An example of Reinforcement Learning is Markov Decision Process. This technique is only now being incorporated by organizations for budgeting and planning.

4.2.3 Right offer for right customer

The motto of marketing in modern times has been "right offer, right channel, and right time". This is the whole objective behind customer segmentation into various categories. With the possibility of real time analysis the capability is taken even further, providing marketers with the capability to target customers at the specifically desired time, luring them to the products they need or want and sometimes even to products the customers never knew they wanted. A question arises whether it is possible to predict what the customers want before they even know they want it. Well, of course not. The whole aim to predict their next step using past data, trends, and their characteristics, and to then present them with the desired opportunities and offers at precisely the right point.

Figure 18: One size does not fit all
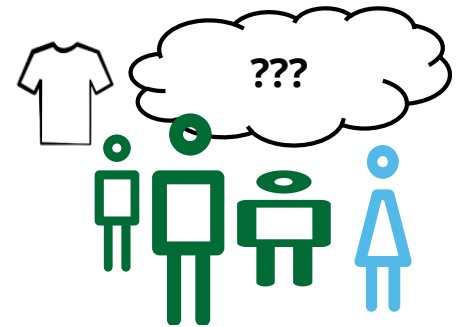
Source: Deloitte Analysis

There are several categories of data that could be used for the purpose of segmenting and targeting the customers such as:

01. **Demographical data**: The demographical data for each customer such as age, gender, and marital status, geographical address etc. can help us better understand the class of customers the product is a hit among and in which class it has been lagging behind.
02. **Habits**: The data pertaining to past purchases such as the time, amount, and the items purchased can provide us a lot of insights into the behavior of a customer and help predict his/her future actions.

The advantages of right customer segmentation are higher customer satisfaction, increased profits, and lower customer turnover.

4.3 Delivering digital

Data visualization focuses on presenting data in the most meaningful way, for quick delivery of insight to support decision making. A visualization is worth a billion data points. Without visualization, the pace and adoption of analytics is not likely to go anywhere. Visualization involves making best use of graphical means to reinforce human cognition and facilitate understanding of insight. With technological advances that make it easier to routinely collect enormous amounts of data, there is an ever increasing need to understand large volumes of information at once.[12] Clients need to improve the way information is communicated to enable greater business agility and gain significant competitive advantage moving forward.

Visualization comes with several added benefits but similar to technology adoption, there's a right and a wrong way to use it. Any approach should look at six steps to create effective visualisations

Purpose: Why is this visualisation being created? What business questions does it need to answer?

Audience: Who is it the visualisation created for? How will it be viewed? For how long?

Content: What are the most important metrics? What are the relationships that matter?

Structure: Is the most important information clearly shown? Is the layout enhancing the message?

Insight: Does the visualisation answer the user's questions? Does it align with the purpose?
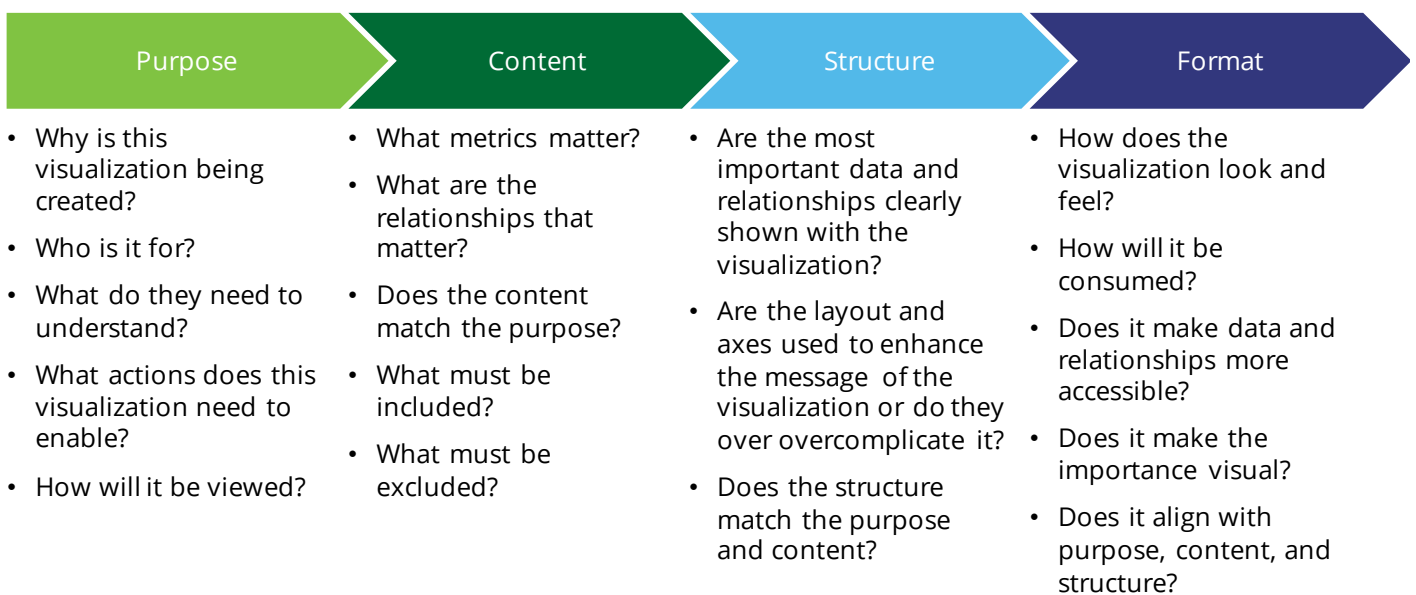
Visual: How does the visualisation look and feel? Is it visually appealing?

Figure 19: Approach To visualization
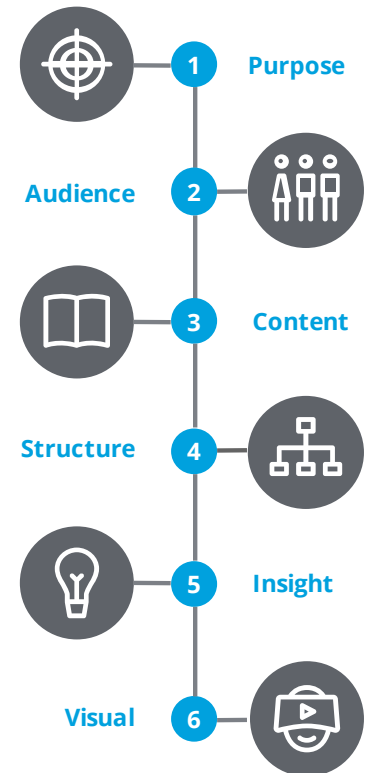
Source: Deloitte Analysis

Successful visualization design ensures **P**urpose, **C**ontent, **S**tructure and **F**ormatting have been considered

Purpose	Content	Structure	Format
• Why is this visualization being created? • Who is it for? • What do they need to understand? • What actions does this visualization need to enable? • How will it be viewed?	• What metrics matter? • What are the relationships that matter? • Does the content match the purpose? • What must be included? • What must be excluded?	• Are the most important data and relationships clearly shown with the visualization? • Are the layout and axes used to enhance the message of the visualization or do they over overcomplicate it? • Does the structure match the purpose and content?	• How does the visualization look and feel? • How will it be consumed? • Does it make data and relationships more accessible? • Does it make the importance visual? • Does it align with purpose, content, and structure?

12 Deloitte: Internal Audit and Technology Sustainable Development. See: https://chapters.theiia.org/ Philadelphia/Events/ChapterDocuments/ISACA%20-%20Sustainable%20Analtyics.pdf

4.3.1 Tools and technologies

Just like any other technology there has been an upsurge of BI reporting tools available in the market along with significant improvements in their capabilities and end user convenience. The new BI reporting tools being used in the market have the capability of handling a large amount of big data and perform near real time analysis. The reporting is no longer rigid and hard to comprehend; instead, it is becoming more and more customizable allowing the user to pick and choose the parameters s/he wants to study at the granularity s/he desires.

There are various types of reporting being used by organizations worldwide:

01. Analysis: These reports show the data for what happened in the past. Their main purpose is to convert the exhaustive data available with the organization to a readable format which can be easily comprehended by the decision makers in order to take suitable actions. This can be done by any means necessary such as spreadsheet analysis, ad-hoc queries, or any visualization tool.

02. Monitoring: This type of reporting focuses on monitoring near real time data and information and triggers alerts in case there are any discrepancies or any parameter is out of bounds allowing the user to take corrective actions. With the increased amount of data available with the organization there has been a considerable increase in the use of such type of reporting.

03. Predictive: While the previous two types of reporting focus solely on the past, this third category is all about the future. With the increase in accuracy and relevance of predictive analytics, naturally this form of reporting too has been gaining an impetus. Organizations are increasingly using predictive reporting to gauge their future performance and perform what-if analysis to come to most advisable decisions.

4.3.2 Universal access

Most of the jobs today require a high level of mobility, even more so in the field of marketing. Hence the concept of universal access becomes even more relevant. A person no longer needs to go to office to login to view a report/dashboard, they need to be made available to him/her anytime, anywhere in the world and on any device.

The concept of cloud computing has made it possible for users to access all the reports they wish to see on the go on their laptops, iPads, or even mobiles. All the major BI reporting tools in the market are already configurable on mobile devices and even the ones that are not are takingv

1600 Maps and graphs	**1801** Pie charts	**1861** Map of Napoleon's invasion of Russia	**1940–1990** PC and World Wide Web	**2012** Big data and mobile analysis
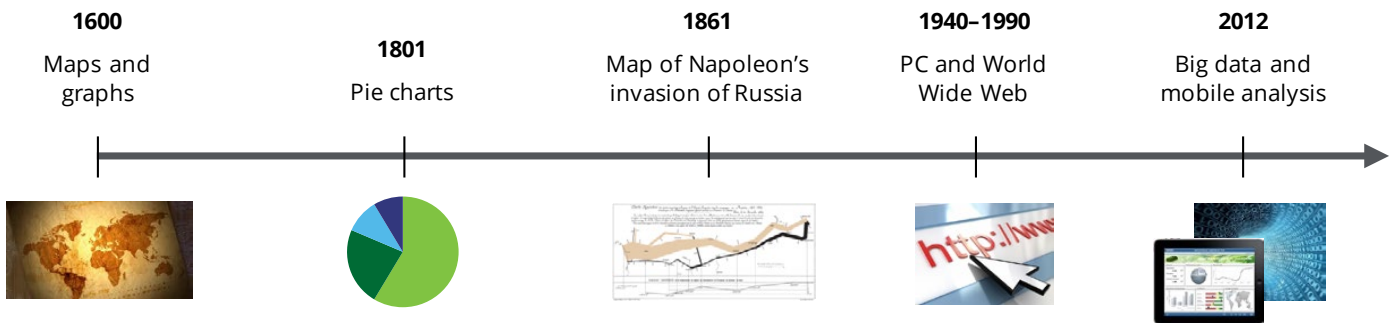
5

Enabling an exponential organization

We started the paper with the people dimension and discussed the importance of understanding the customer (external people). This section will again be emphasizing on people but on internal stakeholders—the right organization to support analytics driven function.

Most analytics projects fail or do not live up to expectations because stakeholders did not envision that it is not only data and technology, i.e., gathering data from source systems and feeding into an analytics solution. An analytics vision needs to support the overarching business strategy, embedding insight into the underlying drivers which move an organisation towards its goals.

To deliver successful analytical insight, fundamental building blocks of People, Data and Technology need to be in place and informed by an Analytics Strategy. We have discussed data and technology in previous sections at length. Ultimately the success of Analytics within an organisation will depend upon the extent to which individuals commit to the idea of trusting in, and being aided by, Analytics insight. Additionally, any investment in technology, processes and data will fail to deliver the required return if the organisation is not well structured to make best use of the new resources. To embed analytics in the DNA of the organization, five key areas need to be thought of:

01. **Leadership** for Analytics ensures visible senior executive sponsorship. Alignment and advocacy of analytics is critical to the success of change programmes.
02. **Capability development** involves identifying analytics capability requirements and devising a development strategy.
03. Designing an **analytics organisation** to foster development, collaboration and innovation with the right balance of centralisation and proximity the business.[13]
04. Recognising analytical talent as a **distinct talent segment** and managing them in accordance with their growing importance with a distinct career model.
05. Deploying a structured approach to **manage change** to ensure the success of any analytics programme or transformation, including a strategy for communications.

13 Deloitte: Impact of HR Analytics .See: http://www.hrosummits.com/ hrosummiteu/wp-content/uploads/2013/11/EB-Analytics.pdf

Figure 20: Key areas for successful analytics insights

Change Management

Leadership

Capability Development

Embedding Analytics

Organization Design

Talent Management

Communications

Source: Deloitte Analysis

5.1 Talent management

Typical issues and starting point with the analytics talent management are:

- Analytics capabilities are in short supply both within the organisation and externally

- Analytical talent is not recognised or managed as a strategic resource and distinct, critical talent segment

- Analysts are dispersed across functions and business units, often without a clear view of how many they have and where they reside in the organisation

- Analysts have vague or inconsistently applied performance expectations and measurements

- Lack of alignment between Analytics workload and organisation's strategy

- Analytics talent is not being fully utilised and are focused on low value projects rather than solving the most pressing business issues

- Low engagement and high attrition among Analytics talent

These issues can be addressed by incorporating the following points in the talent management strategy:

- Develop a talent strategy to attract, motivate, engage and retain Analytics talent, aligned to the Analytics vision and business strategy

- Understand the values, expectations, development and engagement needs of Analytics professionals

- Produce a strategic workforce plan and model the organisation's current and future Analytics talent requirements, identifying gaps and challenges

- Evaluate external Analytics talent supply and determine if alternative sources need to be explored

- Assess and prioritise talent solutions to address these gaps (e.g. recruitment and staffing, learning and development, career management, performance management and reward) and develop an implementation roadmap

- Communicate the talent strategy and approach to Analytics talent in a timely way

- Periodically evaluate the effectiveness of the talent strategy and adjust accordingly

5.2 Capability development

Typical issues and starting point with the analytics capability development are:

- The organisation lacks the internal Analytics capabilities to realise its vision and does not have the base skills to develop the required capabilities

- Skill requirements change rapidly as new Analytics tools and techniques emerge

- Analytic skills are concentrated in too few employees, with an absence of training to help the rest of the organisation make use of their Analytics methodology and insights

- Those with Analytics capabilities lack the soft skills and understanding of the business to effectively communicate and engage with business decision makers

- Most of the organisation lack an understanding of how to leverage Analytics for business value

- Independent, uncoordinated efforts in different functions to keep pace with advances in Analytics and technology. This leads to inconsistent adoption and challenges in gaining full business benefits from Analytics

- The amount of training required is underestimated, undermining investment in Analytics tools and technology

Proper design, development and delivery of analytics trainings can resolve these issues:

- Design and deliver development programmes or specialist training modules to enhance Analytics capabilities in distinct talent segments: professional analysts, business users, leaders and rest of the organisation

- Implement a blended learning approach, leveraging a variety of methods to address different development needs and learning styles

- Build on or create informal networks, collaboration tools and social media to promote informal, just in time learning

- Speed up the effective use of Analytics and encourage further capability development by sharing expertise

- More effectively use the expertise of Professional analysts and early adopters to create impact and facilitate behaviour change

- Use Analytics to evaluate the effectiveness and impact of Analytics training provision on related behaviour change and organisation outcomes

- Use analysis to identify where greatest return on training spend is achieved and prioritise future investment accordingly

5.3 Leadership development

Typical issues and starting point with the analytics leadership development are:

- Absence of visible senior executive sponsorship and advocacy of Analytics, making it difficult to gain commitment for data driven approaches within the organisation

- No clear leadership accountability for the organisation's Analytics capabilities and agenda

- Lack of understanding among leaders and senior managers of how Analytics can be leveraged to solve business problems and drive value

- Leaders do not have an awareness of the data and analysis available, and lack the capabilities to engage with and challenge Analytics specialists

- Inconsistency and lack of leadership alignment, with some using and enthusiastically advocating Analytics, whilst others resist preferring to continue make decisions based on instinct and experience

- Leaders are unable to articulate a compelling case for use of Analytics and fail to overcome resistance from their teams

Leadership development would require to consider the points below:

- Undertake a diagnostic survey and focus groups to measure alignment and commitment to the Analytics vision and desired behaviours

- Identify misalignment between levels and different parts of the organisation – playing back findings to leadership

- Develop an action plan to address misalignment and initiate desired cost management behaviours

- Develop Analytics capabilities to support decision making and inform executive and board-level strategy

- Educate leaders on the data available, what can be done with it, how to best use the insight that a new Analytics capability provides

- Identify data and insight that can solve pain points and create value

- Coach leaders and facilitate them through guided Analytics sessions to illustrate the value of applying structured and data driven decision making to a business issue

- Enhance skills to enable leaders to better engage in discussions with quantitative experts, coaching on the right questions to ask and challenges to raise

5.4 Change management and communications

One of the most important aspects of good adoption of any new initiative is the communication and change management:

- Culturally, the organisation favours 'gut instinct' or familiar retrospective reports rather than data to drive insight and make decisions

- Tendency to make decisions and take action without fully understanding the underlying cause or what additional issues may result from uninformed actions

- Organisational culture does not encourage sharing of information

- Previous Analytics programmes have failed to deliver the expected benefits because the business is not ready for go-live and plans are not in place to sustain the change

- Employees continue to use the same reports or tools in their business processes – taking them away creates anxiety and uncertainty

- Lack of understanding of how Analytics is being used throughout the business or its potential application to solve challenges and improve performance

Organizations need to manage stakeholders, culture change and communications:

- Identify stakeholders and those impacted by the Analytics programme or transformation. Work with stakeholders to define the desired Analytics culture and the supporting behaviours

- Evaluate levels of awareness and commitment

- Identify existing and prospective communications

- Undertake a diagnostic survey to create a concrete, tangible understanding of current state of culture. Identify aspects of culture that are essential for delivering on the business strategy and Analytics vision. Recognise the gaps between the current and desired culture

- Determine actions to close the gaps - use extrinsic (e.g. performance management and reward) and intrinsic (highlighting how it will make life easier) incentives

- Develop and execute the communications and engagement strategy, communicating frequently to raise awareness of Analytics tools and insights. Reiterate the importance of Analytics, as well as the benefits that are personally relevant and exciting to each individual (e.g. improved performance and hence compensation, increased productivity, less time spent on repetitive tasks)

- Establish guiding teams with leadership support at relevant levels of the organisation to steer the effort, buffer initial resistance and move things forward

- Showcase 'quick wins' to bring Analytics to life, using case studies illustrate how tools can be used to solve business problems and improve performance

5.5 Organization design

Typical starting point for the organizational design are:

- Analytics talent is scattered across departmental silos and in some cases businesses lack clear visibility of where their Analytics talent resides within the organisation, resulting in
  - difficulty in setting enterprise-wide Analytics priorities
  - lack of collaboration, mutual learning, sharing and innovation of best practices between Analytics teams
  - ineffective deployment and development of Analytics talent
  - inconsistency in data conventions and processes and a lack of systems integration, inhibiting meaningful analysis

- No clear leadership accountability for the organisation's Analytics capabilities and agenda

Effective organization design can be achieved by thinking through the points below:

- Evaluate 'as is' structure of Analytics capabilities and determine the most effective organisation design considering the company's strategy and goals, Analytics priorities, level of Analytics maturity and supply and demand of capabilities across the organisation

- Determine the appropriate home for Analytics – e.g. IT, Corporate Strategy, Finance, Marketing or a centralised model

- Define Analytics leadership and reporting structures, considering C-suite accountability, such as a Chief Analytics Officer

- Work with the business to develop a detailed design of role profiles, KPIs, accountabilities and reporting lines

- Build consensus and stakeholder engagement throughout the process to accelerate business and culture change

- Undertake an impact assessment to identify changes for people, processes or technology

- Develop a strategy and detailed plans to transition to the new structure

- Provide implementation support to ensure an effective transition and minimal disruption to business as usual

5.6 Role of CDO

Traditionally considered the CIO's gambit, embedding analytics should now be a responsibility of the whole business, but owned and driven by one individual. CDOs are increasingly being hired by firms in order to play the role of a catalyst and driver of change, bringing in a new way of thinking and acting in areas where inception of digitization would be too slow.

Synergy with existing business transformation programs, leveraging current operating models, and balancing growth and risk requirements across company siloes tend to be the primary drivers for executives taking responsibility for the data analytics driven organization agenda.

With the upsurge in the amount of technology used and its relevance, the role of chief digital officer is becoming increasingly critical. The Chief marketing officer can no longer stand alone as s/he did in the past—there needs to be a strong harmony between the two. One hand washes the other; on one hand, the chief digital officer provides insights to the chief marketing officer by allowing him to view his data in a more user-friendly way and, on the other hand, the chief marketing officer provides the chief marketing officer with his demands and is a major influencer in the decisions taken by the chief digital officer. Effective CDO's require a balance of business knowledge, technology acumen, and people skills to smoothly navigate the technical and political hurdles of shepherding valuable enterprise data.[14]

Chief Digital Officers are increasingly focused on building an interconnected analytics ecosystem—an approach that recognizes the data linkages between different parts of the business and makes more efficient use of data-focused resources.

For CDOs, a key is to modernize existing data assets and information delivery processes with an eye toward operationalizing analytics—the ultimate goal for many business leaders pressing for more actionable insights from analytics. Without a relentless focus on the entire analytics enterprise, funding and long-term interest will likely waver, and early initiatives may fail to deliver the expected value, essentially becoming science experiments rather than sustainable tools for generating value.

CDOs are expected to be connected to all CXOs on the issue of analytics. That means CDOs need to have command of a wide range of business strategies—not just the technology to support them.

CMO being one of the key influencers in CDOs decision making, there needs to be a strong alliance between the two in order to build the business case for analytics technology investments.

In today's environment, the convergence of transactional data with third-party sources, social, mobile, and unstructured information offers many Chief Marketing Officers a seductive path to value and opportunity. For others, it's a headache waiting to happen.

14 Chief Data Officer. See: http://analytics-magazine.org/chief-data-officer-new-seat-in-the-c-suite/llp;0-'
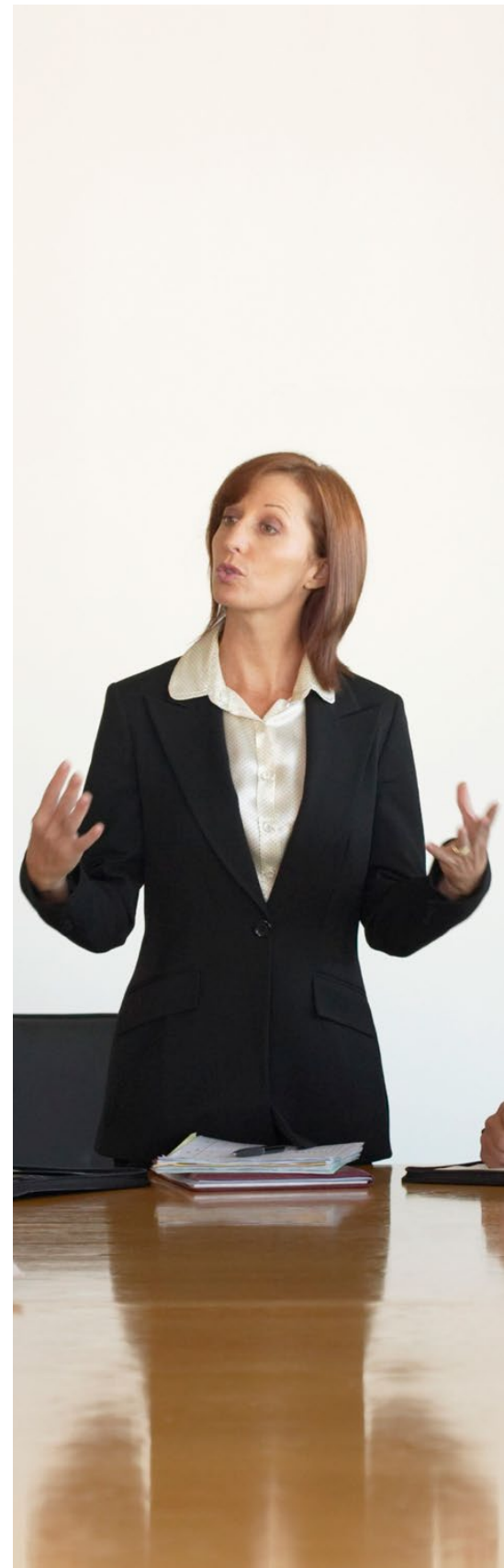
Figure 21: CDO description

CDO Profile

- Executive **champion** of data as a strategic business asset and driver of revenue at the executive level
- Ability to **negotiate** with business units and technology groups to drive results and advance the data agenda
- **Conflict resolution** amongst different functional groups and business units on data priorities and strategies
- **Business domain knowledge**, including expertise at the intersection of risk, finance and customer domains to drive business value
- Awareness of **regulatory environment** and challenges to help enable compliance and risk management through effective use of data
- Demonstrated **information management** skills and focused on applying mathematical models to company data for business insight
- Is responsible for the digital transformation and a company's efforts toward that end

Source: Deloitte Analysis

CMOs have a vast array of data they can use to acquire new customers, cement loyalty, and build brands. The possibilities for data mining and advanced analytics are virtually endless, while the resources needed to turn information into actionable insights are limited. Very effective marketers avoid spreading themselves too thin by focusing on the crunchy questions that can drive better decisions.

CMOs who try to apply advanced analytics to the full range of marketing decisions run the risk of falling short. With resources spread thinly across too many complex issues, they end up with more data than they know what to do with— and not nearly enough insight. The limited supply of analytics talent makes the situation even more challenging. Effective CMOs keep their ultimate marketing goals front and center as they cherry-pick the high-impact questions that will help solve their most pressing business issues. Once the questions have been put forward by the CMO, both CMO and CDO need to work together in order to gauge the firm's capability to answer those effectively and benefit from the responses. These choices would ultimately shape the goals for CDO, ultimately benefitting the company by increasing its revenue.

Concluding remarks

The pace and complexity of business is ever increasing and finding new areas of growth, efficiency or competitiveness means ensuring that the right people have access to the right information at the right time to make the right decisions.

With the volume of data available to organisations, both internally and externally, marketing functions can easily get caught up in the hustle and bustle of analysis and lose sight of improving the customer understanding/experience and decision making process.

A mature marketing organization is one which embeds analysis, data and reasoning into their decision making processes, they do not view Analytics as a project with a start and end date. They see analytics as a core capability across their organisation to provide insight to support the decision making process; to tackle their most complex business problems, customer segments and products; and to address the growing analytical trends.

In addition, by asking the right questions and the application of more advanced analytical techniques, decision making processes can be made more efficient, focusing human input on making decisions and acting on them, rather than collecting and analysing data.

Marketing functions need not only to maintain the ecosystem but keep up with the latest technological and scientific advancement in order to constantly innovate the ways to connect with customers and find out the needs which could not be unearthed by traditional means.

Contacts

Monojit Mazumdar
Partner

Saurabh Singh
Senior Manager

Anu Peisker
Manager

Navneet Singh
Consultant

Deloitte

Deloitte Touche Tohmatsu India LLP
706, B Wing
ICC Trade Towers
Senapati Bapat Road
Pune - 411016, Maharashtra
Tel: +91 (0)20 66244600
Email: inideas-tmt@deloitte.com

Confederation of Indian Industry

Prashant A N
Director & Head – Pune Zone
Confederation of Indian Industry
Office D, 10 Floor, Godrej Eternia – C, B Wing
3, Off Mumbai Pune Highway, Wakdewadi
Shivaji Nagar, Pune – 411005
Tel: 91-20-66075800 / 01
Fax: 91-20-66075822
Email: ciipune@cii.in

Deloitte.