# Understanding the Role of Business Intelligence in Digital Marketing

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**Abstract**-This document reflects upon Digital marketing, the need for using Business Intelligence in Digital Marketing, the framework for Business Intelligence practices and Business Intelligence from Web Analytics. It talks about the essence of Digital marketing and the various roles of a Digital marketing executive. It then reasons about incorporating Business Intelligence tools and methodologies in regular digital marketing practices which is essential to enhance productivity and maximise gains for any marketing campaign. It then suggests a framework to model Business Intelligence from the point of Data accumulation and provides a brief understanding of the decision-making process. Lastly, web analytics and its suitable usage in analysing data sets is also talked about in this paper. The primary focus of this research is to highlight how useful and indispensable Business Intelligence is to Digital marketing.

**Index Terms-** Digital Marketing, Business Intelligence, Need for Business Intelligence, Business Intelligence Framework, BI from Web Analytics

## I.     INTRODUCTION

Digital Marketing caters to a diverse set of customer needs through numerous marketing channels such as search engines, email, blogs, social network, and product websites to create an effective advertising and communication ecosystem. It can be a separate entity or be a part of traditional marketing efforts. Since the interaction of the client to the product from the initiation phase takes place on a digital domain, data harnessing of such communications is automated but can be difficult to handle at the same time. Digital marketing is an umbrella term for the marketing of products or services using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium[1].

Data driven decisions are valued more in any organisation, thereby it becomes essential to pass every business effort through an analytical tunnel to measure and predict outcomes fairly. Business Intelligence provides an optimised environment to execute such operational assessment. This research is aimed at understanding how Business Intelligence tools can be used in amalgamation with Digital marketing campaigns and elaborates the study by suggesting a framework for such an association.

## II.     DIGITAL MARKETING

Digital Marketing caters to a diverse set of customer needs through numerous marketing channels such as search engines, email, blogs, social network, and product websites to create an effective advertising and communication ecosystem. Consequently, there is a good amount of data generation, analysis and recycling being done in order to establish a lucid marketing structure. Most businesses opt for starting with Search Engine Optimisation (SEO) to boost the organic traffic received on their blogs and websites. A data driven SEO strategy might involve mapping out the possible traits of a generic consumer and then focusing on targeting the customer later by optimising the on-page meta descriptions rather than plainly focusing on repetitive content.

Social media has managed to create a biosphere of its own with customers accessing these platforms daily. The focus of digital marketers mainly lies in finding a suitable methodology to interact with these consumers on Facebook, Twitter, YouTube, LinkedIn and Instagram. Social media, apart from playing a very important role of being a platform of live consumer presence, is also a new home for advertisers of the digital domain. Pay-per-Click which used to have a base only on search engine pages, has now found home in Facebook news feed and other micro blogging websites as well. Social media has allowed brands to have a direct consumer interaction via influencers who interact with them in return of affiliate marketing links creating mutually benefiting associations. Digital Marketing apart from focussing on drawing attention thrives greatly on being able to measure the Key Performance Indicators (KPIs) as a marketing campaign progresses from initiation and up towards the sales cycle.

| SEO | Social Media | PPC |
|---|---|---|
| • Site visits<br>• Conversions<br>• Impact | • Followers<br>• Engagement<br>• Feedback | • CTR<br>• Conversion<br>• Cost per Acquisition |

| Email | Content/Blog | Referrals |
|---|---|---|
| • Delivery frequency<br>• mails opened<br>• Conversion | • Content visits<br>• Bounce back<br>• Shares | • Retrieved<br>• Site visit<br>• Revenue |

Figure1: KPI indicators

## III.     NEED FOR BUSINESS     INTELLIGENCE

Business decisions rest on the ability of the manger or the team to work on the project at hand by carefully collecting and scrutinizing all the information associated with the business idea.

Having to process abundant information manually can invariably result in partial understanding of subject matter and can lead to actions that incur losses. To avoid this and to maintain an organized workflow, data handling structures better known as Business Intelligence can be employed in routine Digital marketing efforts as a best practice. Business Intelligence refers to technologies and practices that aid in data accumulation, synthesis and its study to present fruitful business information to maximise gains and to avoid losses. The agenda of Business intelligence is to mechanize the process of decision making and reduce the chances of error in judgement. BI tools when handled by experts can procure exemplary solutions in the digital marketing sphere. The main tasks of marketing analytics are to explore customer sales: the effectiveness of a marketing campaign includes the complicated tasks of forecasting, segmenting and jointly analyzing the accounting data alongside data coming from web, mobile, and geographical systems (GIS)[2].Studying customer behaviour is complex and requires to be done regularly. Often, digital marketers are expected to be one step ahead in predicting what the customer desires. A thorough analysis of consumer reactions can be processed using relevant BI tools to scan a great number of consumer feedback left on websites and on social media. Moreover, an organisation's primary aim is to always satiate the customers, but at the same time, it is also essential to acknowledge how its competitors are building their next move. A single product can be developed under varying nomenclature by several companies, here, Business intelligence enables the developers to study competition and then initiate a final decision. BI does not restrict the marketer to only think of the product at hand but encourage the decisions to be well integrated with the likes of the entire company. Data from digital marketers translate further to various levels of the company and BI makes it more comprehensive by breaking the matter into charts, graphs which can be understood by both technical teams and non-technical managerial strata in the workforce.

It's common for a digital marketer to be flooded with indefinite amounts of data absorbed from various sources, thereby, it becomes essential to give attention to the absolute superior documents. For this purpose, the BI interface is expected to highlight problems in dire need of a solution so that data sets can be examined swiftly, and accurate monetisation of data can be deciphered. An all integrated Dashboard lends such a support to the marketing executive. A CRM system is a good example of a platform which provides information pertaining to every lead in the sales funnel, every action initiated by the lead and its journey towards a successful sales conversion. It also categorises leads based on demographic, region, gender etc. As important as it is to focus on the key performance indicators (KPI) at this point, a digital marketing executive also has the responsibility to analyse the return on investment (ROI) from the campaigns he or she has generated which solely decides the continuation or shelving of a marketing idea. BI tools are agile in examining the time a

potential customer is spending in the marketing environment, what advertisements they gravitate towards, the Click through rates (CTR) and consequently the Cost per Click (CPC).

Fundamentally all challenges faced in the digital marketing environment can be resolved using BI tools as it possesses the capability to be in tune with the dynamic changes experienced by digital media and can provide real-time solutions to reach a final, more promising output.

## IV.    BI FRAMEWORK FOR ONLINE MARKETERS

Main objectives of employing Business Intelligence tools in Digital marketing are:

1) To conduct research and identify right data

2) To keep a check on Return on investment (ROI) from campaigns to justify their existence

While collecting data is no longer a problem, building an effective framework to process it is the real challenge. However, a few pointers can be outlined that lay the idea of this amalgamation in succession:

1)     Handling data collected – The accumulated data can be broadly classified as Unstructured and structured. A digital marketer receives data from numerous sources which are available in raw form to be processed. Most of this data is structured and can be analysed by exporting or integrating social media and analytics engines using BI tools and performing various analytical operations and visualizations with slice and dice, drill down, drill through, filtering and other analytical operations. The content generated and written by users on various social media platforms is not structured, and to access and analyse this data, a business must apply semantic analytics to derive quantifiable data from these unstructured data and make confident decisions[3].

2)     Source and Segregation– Once the data is assembled, it is essential to retreat to its source and analyse what is it trying to convey. For instance, every feedback form generated on a social platform isn't valuable information. Consequently, not all data needs to be processed. Segregation is essential to identify necessary tools that will break it down in further iterations of analysis.

3)     Identifying metrics of judgement- Each type of data needs to be analysed across a set of parameters that evaluate its authenticity to reflect upon the subject matter at hand. Statistical data acquired from page visits, clicks, likes, shares, feedback, comments are some specifications which are analysed to evaluate data from social media networks

4)     Creating a dashboard- In order to analyse trends in the parameters developed previously, firms use Dashboards that can reciprocate and provide numerous customization options to the executive. With the help of a dashboard an executive can align all the metrics in a proper fashion and draw conclusions from them.

6)     Establishing correlation- One thing to identify here is the need of a variable in that specific frame of time. Sometimes an otherwise primary element may not have any implications on

the result that we want to arrive at. If correlation is not handled with absolute caution, one might end up with irrelevant modelling done between several ambiguous variables.

## V.          BUSINESS INTELLIGENCE FROM WEB ANALYTICS

From the perspective of developing an efficient marketing strategy, the Internet provides better insights into sometimes hidden and unavailable data regarding customers, their impacts on business, consumer behaviour and buying decisions[4]. Analysing data procured from the web becomes imperative when a marketing campaign is executed over web-based platforms, namely blogs, websites and social media sites. First step in this process is to infuse the tracking tool with the website source code after which the outcomes generated can be exported to a suitable file format. Obtaining Business intelligence from of a statistical analysis software can buttress the harnessing of useful business information at this point. Sometimes this s plainly used to generate comprehensive displays for otherwise dense subsets that may not be vividly understood by all strata in management. The extent to which one decides to use such tools is entirely in the hands of the analytics expert working for the digital team. Progressing from seemingly linear to much complex correlations of subsets is what makes using intelligence tools productive. Good content is directly proportional to the success of a website. Business intelligence procured from analysis of consequent web sessions from the consumer end matters greatly in the construction of a website. It provides a skeleton to the web engineers to improvise on the theme and code of the web platform. A website becomes a profit generation environment when it becomes monetised with advertisers pitching in to display their content. Not all ads can be of direct relevance on a landing page and this can be judged with drawing patterns in visits and time duration of a session. Every form of communication happening between a client and the website is logged and preserved in the analytics software. Google analytics is a platform that is increasingly being used to monitor web-based content. It's a linear application to run and can be used for examining blogs as well as websites.it provides comprehensive data correlations and helps to alter queries.

## VII.          CONCLUSION

Digital marketing in addition to being a part of most marketing efforts is also a method that can be used in various connotations. Many marketers are progressing towards real time execution of market penetration and thereby a need for the use of Business Intelligence stems in. Business Intelligence with its range of optimization tools and correlation capabilities is certainly what every marketer should incorporate in his or her efforts.

Using BI can be a bit challenging for marketers not technically versed with analytical science but due to the presence of a huge array of tools, this aspect can easily be dealt with. Business Intelligence is proven to provide a performance boost and sets a promising path for reaping greater profits.

## VIII.          ACKNOWLEDGEMENT

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