

A STUDY ON IMPACT OF EMBEDDING BUSINESS INTELLIGENCE ON MARKETING MIX

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Abstract:

Embedding Business Intelligence functionality into an existing software application enables users to access and interact with those analytical features within a framework that they are already accustomed to, thereby increasing ease-of-use and lowering resistance to adoption. The face of marketing has changed dramatically since that timely truism was uttered. Business Intelligence Software can track campaign performance to help you understand which strategies, tactics, mediums and messages resonate with your target markets and audiences. The specific contribution of the current paper is we will analyze the importance of embedded business intelligence software and its impact it has on marketing perspective of a business function.

Key words: Business Intelligence,

INTRODUCTION

Business intelligence (BI) is a technology-driven process for analyzing data and presenting actionable information to help executives, managers and other corporate end users make informed business decisions. BI encompasses a wide variety of tools, applications and methodologies that enable organizations to collect data from internal systems and external sources; prepare it for analysis; develop and run queries against that data; and create reports, dashboards and data visualizations to make the analytical results available to corporate decision-makers, as well as operational workers. BI systems can also help companies identify market trends and spot business problems that need to be addressed. BI data can include historical information stored in a data warehouse, as well as new data gathered from source systems as it is generated, enabling BI tools to support both strategic and tactical decision-making processes. Business intelligence combines a broad set of data analysis applications, including ad hoc analytics and querying, enterprise reporting, online analytical processing (OLAP), mobile BI, real-time BI, operational BI, cloud and software-as-a-service BI, open source BI, collaborative BI, and location intelligence.

ORIGIN

Business intelligence, as it is understood today, uses technology to gather and analyze data, translate it into useful information, and act on it “before the competition.” Essentially, the modern version of BI focuses on technology a way to make decisions quickly and efficiently, based on the right information at the right time. In 1968, only individuals with extremely specialized skills could translate data into usable information. At this time, data from multiple sources was normally stored in silos, and research was typically presented in a fragmented, disjointed report that was open to interpretation. In the late 1990s and early 2000s, BI services began providing simplified tools, allowing decision makers to become more self-sufficient. The tools were easier to use, provided the functionality needed, and were very efficient. Business people could now gather data and gain insights by working directly with the data.

Business Intelligence vs Analytics

Currently, the two terms are used interchangeably. Both describe the general practice of using data in making informed, intelligent business decisions. The term Business Intelligence has evolved to represent a range of technologies supporting decision-makers within businesses. Analytics, on the other hand, has come to represent a broad range of tools for processing data, and acts as an umbrella phrase, covering data warehousing, enterprise information management, business intelligence, enterprise performance management, and governance

MEANING

The term Business Intelligence (BI) refers to technologies, applications and practices for the collection, integration, analysis, and presentation of business information. The purpose of Business Intelligence is to support better business decision making.

DEFINITION

BI(Business Intelligence) is a set of processes, architectures, and technologies that convert raw data into meaningful information that drives profitable business actions. It is a suite of software and services to transform data into actionable intelligence and knowledge.

“a self-contained architecture that enables non-technical users to autonomously execute full-spectrum analytic workflows from data access, ingestion and preparation to interactive analysis and the collaborative sharing of insights.”

Business intelligence (BI) refers to the procedural and technical infrastructure that collects stores and analyzes the data produced by a company’s activities. Business intelligence is a broad term that encompasses data mining, process analysis, performance benchmarking, descriptive analytics, and so on. Business intelligence is meant to take in all the data generated by a business and present easy-to-digest performance measures and trends that will inform management decisions.

OBJECTIVES OF THE STUDY

1. To study the concept of Business Intelligence.
2. To study the impact of Business Intelligence on 4P’s of marketing.
3. To study embedding of Business Intelligence and it’s positive and negative aspects on marketing mix paradigm.
4. To understand how various companies use business intelligence as a tool to enhance their operations

RESEARCH METHODOLOGY

Data is collected using primary and secondary sources. Primary data is collected through face to face interview with company’s IT related employees executives and secondary data is collected through books and websites.

Need and Importance of Business Intelligence

Adopting business intelligence into their business models include faster, more accurate reporting and analysis, improved data quality, better employee satisfaction, reduced costs and increased revenues, and the ability to make better business decisions.

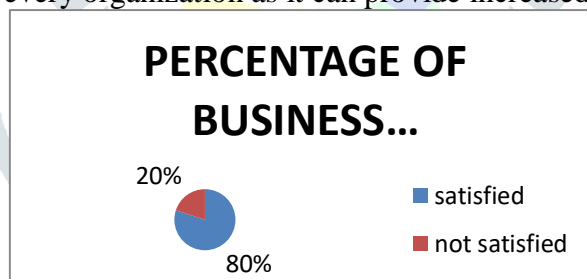
To support functions as diverse as hiring, compliance, production and marketing.

Gain Insights into Consumer Behavior:

One of the main advantages of investing in BI and skilled personnel is the fact that it will boost your ability to analyze the current consumer buying trends. Once you understand what your consumers are buying, you can use this information to develop products that match the current consumption trends and consequently improve your profitability.

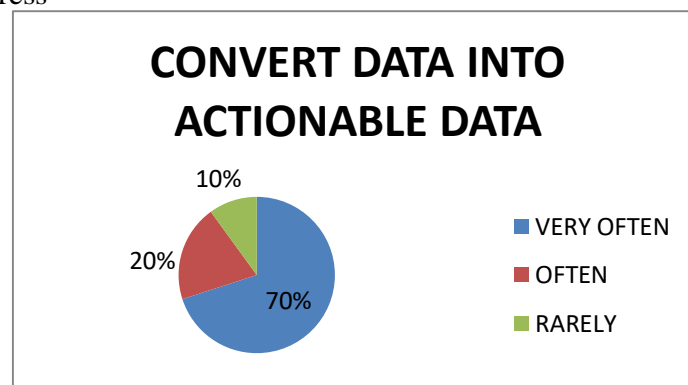
To Improve Visibility:

Good BI should be at the heart of every organization as it can provide increased control.



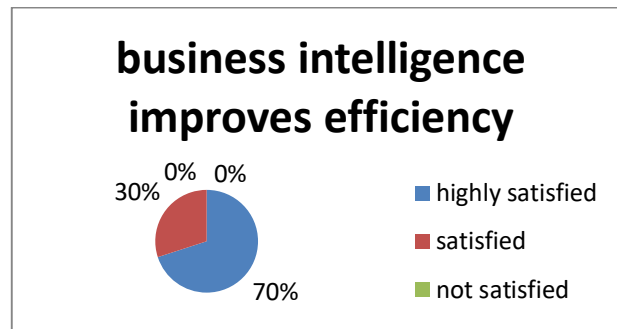
To Turn Data into Actionable Information:

A BI system is an analytical tool that can give you the insight you need to make successful strategic plans for your organization. This is because such a system would be able to identify key trends and patterns in your organization’s data and consequently make it easier for you to make important connections between different areas of your business that may otherwise seem unrelated. When conducted a survey 70% think that the data collected can be used immediately in business progress



To Improve Efficiency:

One of the most important reasons why you need to invest in an effective BI system is because such a system can improve efficiency within your organization and, as a result, increase productivity. You can use business intelligence to share information across different departments in your organization. However 90% of the business organizations think that business intelligence tools can improve efficiency of the business leading to the flourishing of the business activities.



To Gain Sales & Market Intelligence

Whether you are a sales person or a marketer, you probably like to keep track of your customers – probably using a CRM to help you. CRM stands for Customer Relationship Management. It refers to software that handles all aspects of an organization's interactions with its customers. In other words, it collects the data about your customer and tries to make sense of it, presents it to you in various tables and charts. That may include the entire sales cycle, from winning new customers, to servicing and tracking existing customers, to providing post-sales services. CRM systems are now more involved in decision-support processes than ever before. In our next articles, we will look at how BI can help increase your sales efficiently and gain a further insight into your current market as well as market entry support.

BUSINESS INTELLIGENCE FOR MARKETERS

Business intelligence tools analyze massive amounts of information to provide important insights into patterns that indicate the desires and attitudes of clients. Marketing teams can capitalize on this information, organizing campaigns that more precisely target the right audience, and gain a better understanding of which initiatives generate the greatest revenue.

Dashboards and Visualizations

Like the dashboard of a car gives the driver a visual of the most important information he needs to keep driving safely and successfully, a business intelligence dashboard provides a marketer with an overview of the progress of the company. The great benefit of a good dashboard for marketers is that it is easy to use and understand, and cuts through much of the junk data or unnecessary information by highlighting important measurements. It is also simple to turn data into these visuals, which in turn can be easily shared.

Predictive and Prescriptive Analytics

Predictive analytics is the process of uncovering data that reveals future trends. Marketers are always seeking actionable insights from their data, and the forecasts produced by predictive analytics offer direct suggestions for future action. One major way this is achieved is by providing information that can support the sales team. Information about individual customers can inform their approach – or even just inform their automated email campaign – and lead to increased revenue.

Marketing Technology Integration

Business intelligence tools can contribute significantly to a fully integrated marketing approach. Customers are going to be using all available channels and resources to research and discuss a product, and ultimately to make the decision of whether or not to buy that product. Marketers must be sure they are, in turn, integrating data from all available platforms to design ideal interactions. When the customer uses the app and checks in on Facebook at a location near that store, he receives a discount to shop there. After making a purchase, he receives an email with coupons and an invitation to discuss the brand on social media.

Social Analytics

Social analytics tools gather information from user conversations and actions across social media channels and the rest of the Web. It offers the marketing department insight into the behavior and sometimes even the thought-processes of customers. The field can be subdivided into two primary categories: web analytics, which examines page browsing statistics, and social media analytics. Social media analytics mines information from posts, link shares, comments, and other engagements on Facebook, Twitter, blogs, comments sections and more. This data provides marketers with a unique window into the hearts and minds of consumers. This can improve consumer engagement, as companies learn more about who their target audience is and what they want.

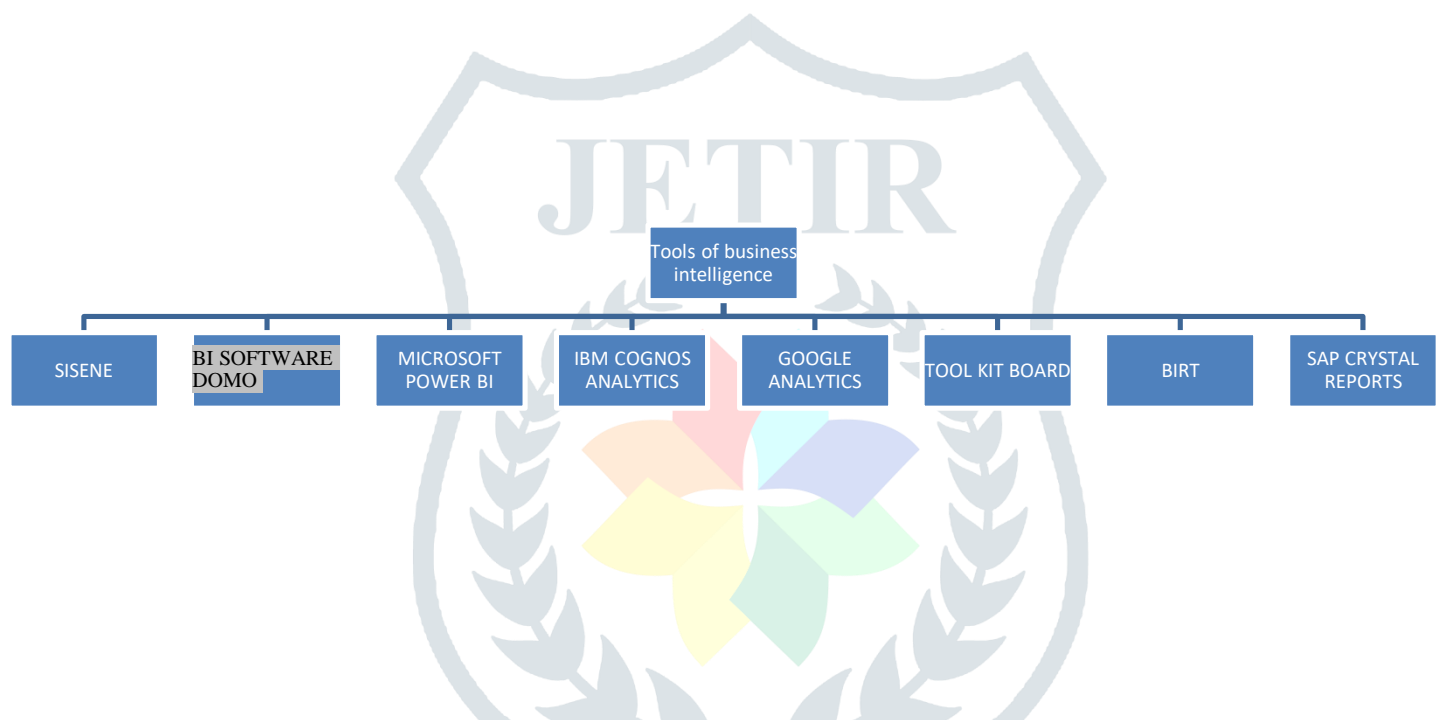
Marketing KPIs

Marketers rely on key performance indicators, measurements of success in important categories, to determine the most important influences on business performance. KPI's monitor the efficiency of a marketing campaign through metrics such as Cost Per Lead Acquisition. Determining the cost of each lead, where the most expensive leads came from, and where the most valuable leads came from, can provide valuable insight into best practices. It can also answer the question of how resources should be allocated.

Unifying Customer Data

Important data on customers can come from many places and from many different campaigns; whether the information be handwritten on a comments card or filled out in an online registration form, it is most valuable when it is all gathered together and used to inform marketing decisions. Customer data unification is important to marketers for a simple reason: the more accurate data the company has, the better they are going to be able to engage the customer. Without unified data, marketers might be communicating inaccurate, out of date, or distasteful messaging to customers

Tools of business intelligence



Sisense This solution capable to effectively simplify complex data analyses, and make big data insights accessible even for startups and small companies. The competitive edge of Sisense is primarily its capacity to collate data from multiple sources without pricey preparations (sources can be Salesforce, Google Analytics, AdWords, and many more). Users will also enjoy the tool's very efficient use of in-chip technology in a database that processes data 10 times faster than traditional systems.

Business Intelligence and Reporting Tools (BIRT)

BIRT project is a flexible, open source, and 100% pure Java reporting tool for building and publishing reports against data sources ranging from typical business relational databases, to XML data sources, to in-memory Java objects. BIRT is developed as a top-level project within the Eclipse Foundation and leverages the rich capabilities of the Eclipse platform and a very active open source community of users.

SAP Crystal Reports is designed to work with databases, collate and filter data for analysis. The system presents data in the form of reports, generating such based on data captured from a variety of sources. Its report wizards help users in coming up with reports and completing common reporting tasks. The solution uses cross-tabs, formulas, conditional formatting and sub-reports in data analysis, allowing users to uncover less than obvious data relationships.

BI software Domo is a cloud-based system that provides organizations with excellent solutions to the most challenging problems. This is done by enabling decision makers to view data in real time, all from a singular dashboard. It has a visually pleasant interface, dashboard widgets and displays, which are complemented by very useful sparklines and trend indicators.

Microsoft Power BI is designed to help businesses analyze data and provide actionable insights. The solution essentially turns business information into understandable visuals allowing decision makers to come up with sound decisions. It identifies trends in real time, aiding business on the path to growth. With the system, businesses can be tracked with answers provided by its dashboards. What's even better is that Microsoft Power BI can be accessed from any device.

IBM Cognos Analytics is designed to help businesses determine and make decisions quickly and effectively. It enables users to create and configure dashboards and reports all from a single system. The solution is highly-scalable, able to grow together with organizations. It can be deployed either on-premise or from the cloud.

Google Analytics imposes BI standards, sporting analytical features that cater to both mobile and traditional users. It uses a variety of funnel visualization methods and creates data summaries on robust dashboards. Its native tracking codes can load much larger JavaScript files from its web server, to each it sets individual variables.

toolkit Board is a BI and performance management software rolled into one. It is designed to provide business intelligence, business analytics and corporate performance management to midsize and enterprise-level businesses. The system is capable of capturing data from virtually any source and come up with full reporting as well. Such reports can come in formats such as CSV and HTML, among many others.

Benefits of business intelligence on marketing mix

MARKETING MIX



Business intelligence can provide valuable insight into a company's operations, and using a BI solution to gather information about the marketing department of your online business could prove lucrative. Small Business Trends reported that business intelligence can provide useful information to refine and target advertising and other marketing strategies on virtually any platform, whether in print, on TV or over the Internet. With such far-reaching capabilities, integrating BI into marketing campaigns may seem daunting, but it doesn't have to be. Here are a few ways business intelligence can lend itself to your marketing department:

Look at the right data

Business intelligence software can help you look at nearly any facet of your business. With so much information at your disposal, it may be a challenge to determine which metrics are the most important for your marketing department. The Huffington Post suggested starting with the basics – the number of site visitors, how long they spend browsing the site and which pages they viewed. You can also look at how people are arriving at your site, whether they found it through an organic search, a social [media](#) channel or other avenues. All of these insights can help you find strengths and weaknesses that may shape new initiatives and lead to improvements in site conversions and an uptick in sales.

Analyze customers and their behavior

Marketing data can provide a clear picture of your customers, making it easier to tailor your online services. For instance, if the majority of your site traffic is coming from landing pages and blog posts, you can concentrate your efforts on those aspects, while spending less time on another part of your site experience that isn't seeing as much activity. This information can also be used to drive your content. Analyzing the popularity of blog posts can help clue you in to which topics are more engaging, so you can refine your content strategies to improve site visits and conversions.

Track progress of external strategies

Social media offers an easy and effective way for companies to reach their audience, and business intelligence can improve the return on investment. The Huffington Post suggested tracking data such as Facebook likes and Twitter retweets to get a better understanding of how effective different posts are. For instance, if a beauty retailer is sharing photos of celebrities without makeup on, and they're not garnering much attention, the business may want to figure out a different option to engage customers.

Disadvantages of business intelligence**Cost**

Business intelligence at times can be a little too much for small as well as for medium sized enterprises. The use of such system can be expensive for basic business transactions.

Complexity

Another disadvantage of BI could be its complexity in implementation of data. It can be so intricate that it can make business techniques rigid to deal with. In the view of such premise, many business experts have predicted that these intricacies can ultimately throttle any business.

Unguaranteed Success

A market analysis does not guarantee an accurate diagnosis of a market. It merely analyzes a fragment of the market covered in the research, which would not be a fair representation of the whole market. It may not also be possible to have a single market analysis covering all the parameters in the market such as price, demand and consumer preferences.

Data Misinterpretation

Data misinterpretation from a market analysis can be detrimental to your marketing campaign. It can lead to wrong marketing decisions or create unrealistic financial projections. Therefore, before making decisions based on the information gathered from a market analysis, you should seek the advice of a professional market analyst. The analyst can identify any pitfalls and help you avoid an inept marketing

BUSINESS INTELLIGENCE PRACTICES IN MULTINATIONAL COMPANIES**Netflix**

Recently, Netflix CEO Reed Hastings stated that their biggest competitor is sleep. You read that right.

They are so good at what they do, that the only thing stopping their customers from using their service is the need for sleep. He further said that "When you watch a show from Netflix and get addicted to it, you stay up late at night. We're competing with sleep, on the margin."

But what keeps people from coming back to Netflix? The ability to know which types of show you're most interested in. After finishing a good movie or series, Netflix will show you TV shows or movies related or similar to what you've already shown interest in and entice you to watch more, thus preventing you from cancelling your subscription.

By fully understanding their customers, even on an individual level, they were able to provide the products that customers will likely watch. But on a larger scale, data effectively tells them which TV shows and movies to buy, what to keep, and what to remove from their roster.

Amazon

Amazon, a hybrid tech meets Retail Company is one of the best examples of successful use and implementation of Business Intelligence.

Amazon, one of the key innovators of Big Data and Business Intelligence, not only provides recommendations based on users' search and purchase history (which is what many companies now, like Netflix, do). Amazon will start the process of shipping a product before you even buy it!

Anticipatory Shipping, as their patent is called, is the process of shipping an item to a customer in anticipation of the purchase. Amazon is so confident in their Big Data that they know you will order a product before you even confirm it. By the time you click the button to close the sale, your product is already on its way.

Harnessing the relationships in their data means that they are not only making decisions on past events, but can undertake precision forecasting to drive operations and customer experience.

Tesco

For retail stores like Tesco, it's always a challenge to move things off the shelf, especially for perishable items that could be wasted.

To combat this, Tesco introduced its loyalty program with Club card starting in the mid-1990s. This card, while many competitors use it only to promote discounts and coupons, was used by Tesco to gain insights.

The results They were able to increase coupon redemption by save almost 100 million pounds in stock that could have been expired using predictive analytics, and optimize their stock-keeping system.

The data they were able to gather helped them form insights about customer behavior patterns and have used this information in a lot of aspects of the business, from marketing to inventory, and probably, even staff scheduling.

These large companies used data and Business Intelligence to their advantage and helped them grow to be industry leaders. On the other hand, as a small business organization,

Starbucks gets in on business intelligent

The Seattle-based coffee chain Starbucks is also a prominent user of BI technology. Through its popular Loyalty Card program, Starbucks is able to amass individualized purchase data on millions of customers. Using this information and business intelligence software, the large coffee company can then predict what purchases and offers an individual customer is likely to be interested in. The company informs customers of the offers it believes they will want to take advantage of via mobile devices. This system lets Starbucks draw existing customers into its stores more frequently and increase its volume of sales. In this capacity, BI has a use similar to traditional CRM systems. In fact, many businesses choose to combine BI and CRM systems to get the most out of their data.

Amex

One of the areas of business in which BI has been most effective is the finance industry. American Express has been a pioneer of business intelligence in this sector, using the technology to develop new payment service products and market offers to customers.

Rather impressively, the company's experiments in the Australian market have rendered it capable of identifying up to 24% of all Australian users who will close their accounts within four months. Using that information, American Express can take effective steps to retain those customers who would otherwise be lost.

BI software also helps the credit card company detect fraud more accurately and thereby protect customers whose card information may have been compromised.

CONCLUSION

Big data for business intelligence is especially important for SMEs. By having better insight into the specific markets and consumer trends, they will be able to carve out specific niches in these tough markets. For many businesses, applying the right price to their products is crucial for marketing and sales success. Big data is essential for determining the right price for particular products and services at customer levels. Informed analytics can help to identify how certain factors drive prices for different customer segments and products. As consumers become more informed, investing in customer relations has become as important as having the right products and services. Big data and affiliated technologies enable businesses to pinpoint consumer trends and attain client responsiveness. Insights gained from data mining and analytics enable marketers to implement relationship driven marketing strategies. This can create greater customer loyalty and experience. An indirect benefit of this is that loyal customers usually become brand ambassadors for the businesses. Thus embedding of business intelligence in marketing paradigm have proven to enhance operation and ease in use of technology By helping marketers to understand customer behavior better, the marketer is able to be proactive, and make a prognosis of their needs in advance.

Bibliography:**Text Books:**

- Kotler Philip Marketing Management Analysis, Planning, Implementation and Control, Prentice Hall, New Delhi
- Majumdar, Ramanuj : Product Management in India, Prentice Hall, New Delhi.
2. Ramaswamy, V.S. and Namakumari, S : Marketing Management, Macmillan India, New Delhi
3. Srinivasan, R : Case Studies in Marketing : The Indian Context, Prentice Hall, New Delhi.
4. Still, Richard R, Edward W, Clundiff and Norman A.P.
5. Govoni : Sales Management : Decisions, Strategies and Cases, Prentice Hall, New Delhi

Websites

- <https://www.yellowfinbi.com/blog/2014/10/yfcommunitynews-an-embedded-bi-case-study-for-the-marketing-industry-shedding-light-on-a-very-da-175612>
- <http://www.dataversity.net/brief-history-business-intelligence/>
- <https://www.ccstechnologygroup.com/real-world-examples-of-business-intelligence/>
- <https://financesonline.com/15-best-business-intelligence-tools-small-big-business/>
- <https://www.linkedin.com/pulse/business-intelligence-concept-tools-techniques-ishwar-saswade>
- <https://www.linkedin.com/pulse/why-business-intelligence-bi-important-your-company-yass>

