THE ROLE OF INFORMATIONAL MARKETING SYSTEM
TO INCREASE BUSINESS ENVIRONMENT COMPETITIVENESS

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Abstract. Big data refers to the vast quantity of data that is currently being generated and captured in a variety of formats and from several disparate sources. Big data is continuously changing the way organizations and people do business, discover insights and interact with one another, even increasing the competitiveness of the business environment. To obtain value from this data, companies need a cohesive set of solutions to capture, process, analyze information and discover new insights to further developing and increasing the associated Informational Marketing Systems. The increase of digital channels has created plenty of new challenges for marketers today, as consumers interact with organizations much differently than they did in previous years. This study aims to explore the role of technology and, more precisely big data as a part of the Informational Marketing System and how it contributes to customers' experience and businesses. This paper provides an in-depth integrated view of big data relevant to opportunities and challenges that marketing encounters. Moreover, this research attempted to help understanding the current state of big data in terms of marketing development and its popularity in this area. Over and above, studies show that analysis is still in early stages in big data applications and practices to marketing, thus, making it necessary to promote more continuous efforts towards the business for big data to develop in the marketing domain. The results of the report showed the vast potential of big data in marketing and further study is required to fully understand and profit from this tool. We concluded that technology changes create an absolutely new type of marketing discipline. Furthermore, it opens new insights into the topic area by highlighting further future studies and research directions.

Abstract. Big data se referă la cantitatea mare de date care este generată și capturată în prezent într-o varietate de formate și din mai multe surse disparate. Big data schimbă în continuu modul în care organizațiile și oamenii își desfășoară activitatea, descoperă perspective și interacționează între ele, chiar crescând competitivitatea mediului de afaceri. Pentru a obține valoare din aceste date, companiile au nevoie de un set coerent de soluții pentru captarea, procesarea, analiza informațiilor și descoperirea unor perspective noi pentru dezvoltarea ulterioară și creșterea sistemelor informaționale de marketing asociate.

Creşterea canalelor digitale a creat o mulţime de noi pentru specialiştii de marketing in prezent, deoarece consumatorii interacţionează cu organizaţiile mult diferit decât în anii precedenţi. Acest studiu îşi propune să exploreze rolul tehnologiei şi, mai precis big data, ca parte a sistemului informaţional de marketing şi modul în care contribuie la experienţa şi afacerile clienţilor. Acest referat oferă o viziune profund integrată asupra big data relevantă pentru oportunităţile şi provocările pe care le întâmpină marketingul. Mai mult, această cercetare a încercat să ajute la înţelegerea stării actuale a big data în ceea ce priveşte dezvoltarea marketingului şi popularitatea acesteia în acest domeniu. Mai mult decât atât, studiile arată că analiza aplicaţiilor şi practicile big data în marketing este încă în stadii incipiente, astfel, este necesar să se promoveze eforturi continue către afaceri pentru ca big data să se dezvolte în domeniul de marketing. Rezultatele raportului au arătat marele potenţial al big data în marketing şi studii suplimentare sunt necesar pentru a înţelege pe deplin acest instrument şi a profita de el. Am ajuns la concluzia că schimbările tehnologice creează un mod complet nou de disciplină de marketing. Mai mult, acesta deschide noi perspective asupra domeniului tematic prin evidenţierea unor studii viitoare şi direcţii de cercetare viitoare.

Key words: *Informational Marketing System, big data, marketing, business environment, customer, information, media, digital, analysis, technology.*

Introduction

Innovation in the business field has the same impact steam had on the industrial revolution. Nowadays, the equation for business success is simple: drive innovation with information technology. Information technology drives innovation and innovation is the way to every company's success.

Without the backbone of information technology, a business is not going to be successful. It is hard to imagine a business that has not benefited from the digital revolution.

Even something as hands-on as agriculture uses computers. Farmers use computers for production records, financial planning, and research on technical issues.

Examples of information technology tools that marketing professionals are likely to use regularly include:

• Digital Presentations: Marketers are often responsible for creating computerized sales and marketing presentations using PowerPoint or other applications [1].

• Customer Relationship Management (CRM) Systems: Companies often use sophisticated CRM software systems to keep track of all types of client contact, including calls, presentations, purchases, complaints and more. Marketers need to be able to access information that is in the system as well as input additional data when it becomes available.

• Email Communication: Marketing professionals rely heavily on one-on-one email communication to accomplish their work. Email communication is quite common with customers, coworkers, members of the media and others [1].

• Email Marketing: Many companies too, rely heavily on email marketing as a way of attracting new business and building relationships with current and past customers. Marketers are often responsible to build and maintain an email-marketing database as well as create e-newsletters and email advertisements, allowing them to reach out directly to the customers with news, updates and special offers.

• Graphic Design Applications: Marketing professionals, who design advertisements, brochures, and newsletters for their companies, are expected to have technical abilities such as the knowledge of graphic design software applications like InDesign, Photoshop and more.

• Websites: Having web design, development, and maintenance skills are often an advantage for people who want to work in marketing. The level of web skills necessary varies from one company to another. In some companies, marketers are expected to have the ability to create a website, including design, programming, security, content development and more. In other companies, marketing employees work closely with the employed programmers or web development companies from outside.

• Social Media: Nowadays, many companies incorporating social networking into their strategies and marketers need to be trained in the use of popular social media technologies as tools for attracting new business and building customer relationships. Marketers are often responsible to set up and manage Facebook pages and Twitter accounts for their companies, publish video content on YouTube, and establishing LinkedIn profiles for key workers within the company.

1. Information Technology: Big data

Nowadays, more and more organizations find out that, in a highly competitive environment, the policy of maximizing short-term profits is no longer a guarantee of commercial success and that such a policy should be accompanied by an informational marketing system based on studying the successful opportunities in the business environment. A comprehensive study of the data stored in the informational marketing system can ensure its long-term competitiveness and represent the contribution to sustainable development.

Innovation was a slow and steady process for most of the 20th century. For the most part, brilliant people innovated and the rest of the public slowly adopted the idea of the innovation. In addition, one thing that is systemically changing businesses nowadays is data.

Big data refers to the ever-increasing volume, velocity, variety, variability, and complexity of information. For marketing organizations, big data is the fundamental consequence of the new marketing landscape, born from the digital world we now live in. The term "big data" does not just refer to the data itself; it also refers to the challenges, capabilities, and competencies associated with storing and analyzing such huge data sets to support a level of decision-making that is more accurate and timely than anything previously attempted: big data-driven decision-making [2].

Organizations today face overwhelming amounts of data, organizational complexity, rapidly changing customer behaviors and increased competitive pressures. New technologies, as well as rapidly changing channels and platforms, have created a massively complex environment. Data worldwide is growing 40 percent per year, a rate of growth that is daunting for any marketing and sales leader [3].

Many marketers may feel like data has always been big – and in some ways, it has. But one thing is the customer data businesses collected 20 years ago – point of sale transaction data, responses to direct mail campaigns, coupon redemption, etc. And another is the customer data collected today – online purchase data, click-through rates, browsing

behavior, social media interactions, mobile device usage, geolocation data, etc. Comparatively speaking, there is no comparison [4].

2. The importance of Data for marketing research

Having big data does not automatically lead to better marketing – but the potential is there. Big data is similar to a secret ingredient, raw material, an essential element. Nevertheless, the insights derived from big data, the decisions are taken and the actions made that make all the difference.

By evaluating and manipulating data, marketers can increase the precision of marketing campaigns, personalize customer communication and improve customer relationship management. Therefore, there are three types of big data are key for marketing:

1. Customer: The big data category most familiar to marketing may include behavioral, attitudinal and transactional metrics from such sources as marketing campaigns, points of sale, websites, customer surveys, social media, online communities, and loyalty programs [3].

2. Operational: This big data category typically includes objective metrics that measure the quality of marketing processes relating to marketing operations, resource allocation, asset management, budgetary controls, etc. [3].

3. Financial: Typically housed in an organization's financial systems, this big data category may include sales, revenue, profits and other objective data types that measure the financial health of the organization [3].

Marketing is one of the most important departments for every company, as the majority of the marketing campaigns have a direct effect on a company. As a result, almost all the marketing initiatives should be handled by considering the return on investment.

3. Big data benefits for marketing

Marketing specialists need to make very powerful and highly efficient marketing plans. In addition, to make the best and most efficient marketing plans, marketing teams need to have a lot of market understanding, customers, competitors, etc. This is exactly why they need to be focused on big data and these are there are numerous ways big data benefits marketing:

• It improves marketing precision: With computers, marketing teams store, analyze and manage large volumes of data on prospects and customers. Understanding the demographics, purchasing histories and product preferences of different groups and individuals enable marketers to target products and campaigns with greater precision and to personalize communications [5].

• It increases campaign capacity: With cloud resources, marketers can quickly increase computing capacity when they need it. Increasing website capacity to handle large numbers of campaign responses, for example, ensures that customers do not experience long waiting times. Marketing professionals also use cloud computing to provide the additional capacity for test marketing and to manage large-scale email campaigns [6].

• It automates marketing campaigns: Marketing automation is now an essential element in lead management, the process of converting sales leads to customers. Marketing automation identifies a prospect's level of interest or intent to buy based on the response to a series of emails. The team can then follow up with detailed information or a sales call, depending on the response [6].

• It opens new communication channels: Computer technology allows marketers to build dialog and strengthen relationships with customers and prospects. Marketers must respond to consumers' growing use of the Internet and social media. By monitoring reviews on social media and websites, marketers can gain insight into consumer attitudes and take the opportunity to respond and build dialog [5].

• It provides efficient sales support: Big data has become tremendously important for every company, an enormous corporation or even a small start-up. It is one of the most important technologies that can help businesses gain an extra advantage over their competitors [7]. Field sales teams and distributors require access to marketing support material, such as brochures, presentations, product datasheets, and advertising or email templates. By storing digital versions of campaign material in a secure Web portal and providing access to authorized users, marketers can simplify the distribution of support material and increase control over its use.

• It helps better understanding the competition: Competition is fierce today. To become successful, companies have to gain an extra edge over their opponents. This is exactly where the role of big data analytics services and solutions comes into play. Data related to the competition can be collected and analyzed in a way that helps marketers gain valuable insights about their opponents.

• It improves collaboration: Using desktop video or Web-conferencing tools, marketers can collaborate with colleagues in sales and product development or account teams in advertising agencies and public relations consultancies. Collaboration tools can speed product development by making it easy for teams to meet and take decisions, rather than trying to arrange face-to-face meetings. Agency teams can discuss or review campaign proposals and changes to ensure they meet deadlines [5].

• It helps with pricing: When it comes to the benefits of big data in terms of marketing, its influence on pricing seems to be one of the most important. Pricing is the most significant element of the marketing mix and it is always subjected to careful monitoring and analysis. With the advent of big data, it has become possible for marketers to make real-time decisions when it comes to adjustment of prices to their products and services [8].

• It helps to plan properly: When it comes to big data marketing, the correct way of curating a marketing plan can be counted as an integral part of it. Over the past few years, data scientists are providing the marketing departments with an exact analysis of the latest trends in customer behavior. It is considered one of the most remarkable benefits of big data in marketing.

This technology is helping marketers to target consumers in segmented sub-groups with various specific features. It gives marketers the possibility to modify various activities and adapt to each one of the audience sections individually.

• It gives the ability to customize: Any successful business has to take into consideration the basic ability to address the user experience.

In this era of big data, marketers can easily customize operations and improve customer journeys tremendously. The level of enhancement almost reaches such a point that every single client can receive products or services according to his/her personal choices.

For example, Facebook is responsible for storing and analyzing a huge amount of Petabytes of user-generated data [8].

This enormous volume of data allows businesses to identify where their target groups of an audience are located. In addition, the marketers can go much deeper with this knowledge and explore the affinities of every user too.

• Enhances forecasting: Predictive analytics is one of the important aspects of big data marketing analytics. This technology is all about using data, machine learning, and statistical algorithms to analyze historical data and figure out the chances of some significant future results. Predictive analysis lets the marketers work beyond the events that have already happened and foretell the customer behavior and sales effectively. With the help of this analysis, big data is letting the marketing specialists spruce up their approach and efforts in the form of advanced reporting, real-time forecasting, more comprehensive and informed decision-making, and so on.

By analyzing big data, all of these benefits can be gained.

4. Result of research

However, organizations that want to succeed in marketing should not rely completely on big data, but do the following things well:

1. The successful analysis of new opportunities. Successful analysis requires building a data advantage by pulling in relevant data sets from both within and outside the company. Relying on the mass analysis of those data, however, is often a recipe for failure. Analytics leaders need to use digital information to better target buyers and use heaps of analytics to learn more about target buyers than ever known before [9]. Modern marketing professionals should analyze more detailed: which websites a user frequents most often, which social media profiles they have and use, and even how they surf a website. The "ideal customer profiles" can easily be targeted with big data, if approached with a rational and cautious perspective.

2. Understand the consumer decision journey. Understanding the decision journey is critical to identify new customers and keep the existing ones. Marketing and sales leaders need to develop complete profiles of their customers so they can create messages and products that are customized to their needs and wishes. Understanding your target audience and customers are critical for every marketing expert [10]. At the end of the day, the main goal of marketing experts is to catch the attention and onboard more and more customers. Therefore, all of your strategies have to be developed specifically with their target audience in mind. The intention should be to turn every lead into a valuable customer for the company.

3. Monitor Google Trends to inform your global/local strategy. Google Trends is probably the most approachable method of utilizing big data. Google Trends displays trending topics by quantifying how often a particular search-term is entered relative to the total search-volume. Global marketers can use Google Trends to assess the popularity of certain topics across countries, languages or other constituencies they might be interested in, or stay informed on what topics are cool, hip, top-of-mind or relevant to their buyers [9] .

4. Create real-time personalization for buyers. Timeliness and relevance are the foundation of successful marketing campaigns, e-mail click-through rates and consumer engagement with your brand. Big data gives marketers timely insights into who is interested or engaging with their product or content in real-time [11]. Tying buyer digital behavior into customer relationship management systems and marketing automation

software allows to track the topics that the customers are most interested in and then send them content that develops those topics.

5. Identify the specific content that turns a person into a client. How big of an impact, had a singular blog or social post on generating revenue? Before big data, that was an unanswerable question. Nowadays, marketers can determine the effectiveness of a marketing strategy down to tweet. Tools allow marketers to create and shape the strategies around the content topics or types that resonate with their buyers the most and truly compel them to purchase.

6. Companies need to invest in an automated "algorithmic marketing," an approach that allows to process vast amounts of data through a "self-learning" process to create better and more relevant interactions with consumers. That can include predictive statistics, machine learning, and natural language mining. These systems can track keywords automatically, for example, and make updates every few seconds based on changing search terms used, ad costs or customer behavior. It can make price changes on the fly across thousands of products based on customer preference, price comparisons, inventory, and predictive analysis [3].

7. Knowing how to manipulate data:

• Knowing what data to gather. Data, data everywhere. There are enormous volumes of customer, operational and financial data to analyze and work with. However, more is not necessarily better – it has to be the right data.

• Knowing which analytical tools to use. As the volume of information grows, the time available for coming to decisions and turning them to actions is shrinking. Analytical tools can help aggregate and analyze data, as well as allocate relevant insights and decisions appropriately throughout the organization – but the difficult task is to choose the ones one needs.

• Knowing how to go from data to conclusion to action. Once one has the data, how does one turn it into insight? Moreover, how do to use that insight to make a positive impact on the marketing programs?

As the volume of customer interactions across channels continues to grow, it is vitally important that companies not only take advantage of real-time analytics but that they use the collected information to enact valuable changes [12]. The key to getting the most from real-time, as is true with any sort of analytics, is to take effective action on the findings. With each new insight discovered, it is important to turn that information into the best practices. It is with that effort that a company can discover just how valuable a tool real-time analytics can be.

Conclusion

Marketing is going to continue to change rapidly in the next few years. There are more people with access to technology than ever before. Digital consumers are connected all the time, through their smartphones, tablets, and almost every application, service and channel accessible through these devices. As they move among devices and channels, they are creating multiple customer touch-points across different mediums – online, offline, proprietary, third party, corporate networks, social networks, location-based and mobile. This makes big data more effective, profitable and helpful than in the previous years.

Big data analysis helps marketing experts in many ways. The first step is for marketers to define what they want to get from their big data analysis. Then, they can churn

out valuable insights based on their needs and requirements. An intelligent big data strategy will help marketing experts make more effective plans, create new growth opportunities and entirely new categories of companies that can combine and analyze industry data.

Big data analytics is an important investment for every business. While implementing big data, analytics businesses can achieve a competitive advantage, reduce the cost of operation and drive customer retention. With this technology, the company can stimulate growth, automate everyday tasks, and help the marketing team develop winning strategies. As technological advancements continue, data is becoming readily available to all organizations.

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