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# Enterprise Marketing Strategy Innovation Based on the Background of Big Data Era

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Abstract: This article mainly discusses how enterprises innovate marketing strategies in the context of the era of Big Data (BD). Through in-depth analysis of the impact of BD on enterprise marketing environment, this article discusses the application status of BD in the formulation and implementation of marketing strategy. This article elaborates the role of BD in market segmentation, target market selection, product positioning and marketing mix innovation. It is found that the application of BD technology can significantly improve the accuracy and efficiency of enterprise marketing, help enterprises to better meet the individual needs of consumers and enhance market competitiveness. However, enterprises are also facing challenges such as data acquisition, data analysis and talent shortage in the implementation process. In order to overcome these challenges, enterprises must build a sound data governance system to ensure the safe, accurate and compliant use of data; Futhermore, it is also crucial to strengthen internal cooperation, cultivate BD talents and establish an innovative culture. Through the implementation of these measures, enterprises can make full use of the advantages of BD technology and promote the innovation and development of marketing strategy.

#### 1. Introduction

In today's society, BD has become a hot word that cannot be ignored. The era of BD refers to the information age with huge data scale, various types, fast processing speed and great value [1]. The characteristic of this era is that data is no longer just simple numbers or information fragments, but has been endowed with unprecedented strategic significance and has become a new driving force to promote social and economic development [2]. The rapid development of BD technology has changed people's way of life, and also profoundly affected various fields of social economy [3]. From government decision-making to enterprise management, from medical health to education and entertainment, all of them are permeated with BD.

For enterprise marketing, the era of BD has brought unprecedented opportunities as well as severe challenges [4]. The opportunity is that enterprises can more accurately understand consumer demand, optimize product design, formulate personalized marketing strategies and improve market competitiveness through BD analysis. BD can also help enterprises find market trends in time, seize business opportunities and achieve rapid development [5]. However, the challenges are equally obvious. The mass, complexity and timeliness of data require enterprises to have strong data

processing and analysis capabilities, otherwise they will be submerged in the ocean of data and unable to dig out valuable information [6]. Data security and privacy protection are also important issues that enterprises must face.

Therefore, it is particularly important to study the innovation of enterprise marketing strategy under the background of BD era [7]. This is related to the survival and development of enterprises and the prosperity and stability of the whole market economy. Through innovative marketing strategy, enterprises can better adapt to the changes in the era of BD, seize opportunities, meet challenges and achieve sustainable development. The purpose of this article is to deeply discuss the innovation of enterprise marketing strategy under the background of BD era. The research content will focus on the impact of BD on the marketing environment of enterprises, the application of BD in the formulation and implementation of marketing strategies, and how enterprises can build a marketing strategy innovation system that adapts to the era of BD.

# 2. Analysis of enterprise marketing environment in the era of BD

The arrival of the era of BD has had a profound impact on consumer behavior patterns. In terms of information acquisition methods, consumers no longer rely solely on traditional advertising, word of mouth and other channels, but collect product information through social media, search engines, online comments and other diversified channels [8]. The application of BD technology makes this information more comprehensive, accurate and real-time, and consumers can know what they need more quickly and then make more informed purchase decisions. BD has also changed consumers' purchasing decision-making process. By analyzing consumers' historical purchase records, browsing behaviors, hobbies and other data, enterprises can push personalized product recommendation and preferential information to further guide consumers' purchase behavior.

BD has also had a significant impact on the market competition pattern [9]. On the one hand, with their keen insight and flexible application of BD technology, emerging enterprises have risen rapidly and occupied a place in the market. Through BD analysis, they accurately locate the target customer groups and provide personalized products and services. In order to stand out in the fierce market competition. On the other hand, traditional enterprises are also facing the pressure and opportunities of transformation. They need to actively embrace BD and use BD technology to optimize product design, improve marketing efficiency, enhance customer experience to meet the challenges of emerging enterprises and maintain market competitive advantage.

The application of BD technology in marketing has been widespread. Enterprises rely on data analysis to establish market strategy, which has become the key to strategy formulation [10]. By digging and analyzing a large amount of data, enterprises can more accurately grasp the dynamics of the market and consumers, and then form a more accurate marketing plan. Thanks to this accuracy, enterprises can provide personalized products and services according to the specific needs of consumers, so as to improve marketing effectiveness and customer satisfaction. BD technology also plays a key role in customer relationship management. By analyzing data, enterprises can gain a deeper insight into customers' needs and preferences and handle customers' feedback and needs in time.

## 3. The innovation path of enterprise marketing strategy in the era of BD

In the era of BD, the innovation of enterprise marketing strategy has become the key to enhance competitiveness. Its basic principle and idea is to take data as the core drive, deeply integrate BD technology into all aspects of marketing, and realize the precision, personalization and intelligence of marketing. This means that enterprises need to change from traditional experience-driven to data-driven, speak with data, and make data an important basis for decision-making.

BD plays an important role in the formulation of marketing strategy. Through BD analysis, enterprises can subdivide the market in more detail, and divide the market into more accurate market segments according to consumers' needs, preferences and behavioral characteristics. This will help enterprises to identify the target customer groups more accurately and provide strong support for subsequent marketing activities. BD can also help companies choose their target markets. Through data analysis, enterprises can evaluate the potential, competition and risks of different markets and choose the most suitable target market. In addition, BD can also play an important role in product positioning. By analyzing consumers' needs and feedback, enterprises can continuously optimize product design, meet consumers' personalized needs and enhance the market competitiveness of products.

BD not only affects the formulation of marketing strategy, but also helps enterprises to realize the innovation of marketing mix. In terms of products, BD can help enterprises understand the needs and preferences of consumers and develop products that are more in line with market demand. In terms of price, BD can analyze consumers' price sensitivity and willingness to pay, and provide a basis for enterprises to formulate more reasonable pricing strategies. In terms of channels, BD can analyze consumers' purchasing channels and habits, help enterprises optimize channel layout and improve channel efficiency. In addition, BD can also analyze the effects of promotional activities and consumer reactions, and provide data support for enterprises to formulate more accurate promotional strategies.

BD also plays an important role in marketing execution and evaluation, as shown in Table 1:

Application Aspect	Specific Content	
Real-time Monitoring of	Monitor ad exposure, click-through rates, conversion rates, and other	
Effectiveness	metrics	
Adjust Marketing Strategies	Timely adjust marketing strategies based on real-time monitoring	
	results	
Optimize Marketing	Optimize the allocation of marketing resources based on data	
Investment	feedback	
Collect Customer Feedback	Collect and analyze customer opinions on products and services	
Improve Products and Services	Improve and optimize products and services based on customer	
	feedback	
Build Customer Profiles	Gain in-depth understanding of customer characteristics and needs	
Support Customer Relationship	Provide strong data support for customer relationship management	
Management		

Table 1 Applications of BD in Marketing

The era of BD provides broad space and opportunities for the innovation of enterprise marketing strategy. Enterprises need to make full use of the advantages of BD technology, deeply integrate it into all aspects of marketing, and constantly innovate marketing strategies and methods to adapt to the new marketing environment and achieve sustainable development.

## 4. Implementation and guarantee of enterprise marketing strategy innovation in the era of BD

In today's era of BD, the marketing strategy innovation of enterprises requires forward-looking ideas and strategies, as well as practical operation steps and processes. Specifically, enterprises should first recognize the key role of BD in marketing and regard it as a core element of corporate strategic planning. Subsequently, enterprises need to build a set of perfect BD collection, storage and processing system to ensure the comprehensiveness and up-to-date of data. On this basis, using professional analytical tools and methods, we deeply explore the market insight and consumer behavior patterns hidden in the data, and provide solid scientific support for marketing decisions.

Enterprises should adjust and optimize their marketing strategies according to the results of data analysis, so as to achieve the purpose of accurate marketing and personalized service. Through continuous monitoring and evaluation, we can get market feedback in time, and then adjust and optimize the marketing strategy to form a complete closed-loop management cycle.

However, in the implementation process of BD marketing strategy innovation, enterprises may encounter various challenges and problems. In the aspect of data acquisition, we may encounter the problems of diversity of data sources and different data quality. In the field of data analysis, professional technology and talents are needed, and these resources are scarce in the market. Data security and privacy protection are also issues that enterprises must take seriously. Because data leakage or improper use may bring serious legal risks and reputation damage to enterprises. In order to overcome these challenges, enterprises must establish a sound data governance structure. See Table 2 for details of the strategic innovation challenges and data governance structure of enterprise BD marketing:

Table 2 Challenges and Data Governance Structure for Enterprise BD Marketing Strategy Innovation

Category	Challenges/Issues	Countermeasures
Data Acquisition	Diversity of Data Sources	Expand data acquisition channels, integrate
		multi-source data
	Inconsistent Data Quality	Implement data cleaning and standardization
		processes
Data Analysis	Scarcity of Professional	Strengthen internal training, recruit external
	Skills and Talents	professional talents
Data Security &	Risk of Data Leakage	Enhance data encryption technologies, restrict
Privacy		data access permissions
	Risk of Improper Use	Establish data usage norms, strengthen
		supervision and auditing
Data Governance	Lack of Overall	Build a comprehensive data governance structure
	Governance Framework	and policies

In addition to establishing a data governance system, enterprises need to promote internal collaboration, cultivate BD professionals and create an innovative culture. Strengthening internal cooperation is helpful to the information flow and collaborative work between departments, and improves the implementation efficiency of marketing strategy. Cultivate BD talents through internal training, external recruitment and school-enterprise cooperation, and build a professional BD analysis team. The establishment of innovative culture encourages employees to try new methods and challenge old ideas, and provides continuous motivation and support for the innovation of marketing strategy.

## 5. Conclusions

The era of BD provides an unprecedented opportunity for the innovation of enterprise marketing strategy. By making full use of BD technology, enterprises can more accurately grasp the market demand and consumer behavior, thus formulating more scientific and effective marketing strategies. Enterprises will face many challenges in the process of implementing BD marketing strategy innovation, such as the difficulty of data acquisition, the complexity of data analysis and the shortage of BD talents. But these challenges are not insurmountable. As long as enterprises take active measures, such as strengthening internal cooperation, cultivating BD talents and establishing a sound data governance system, they can effectively meet these challenges.

This study emphasizes that the innovation of BD marketing strategy is not only a technological

innovation, but also a change of thinking mode. It requires enterprises to take data as the core drive, deeply integrate BD technology into all aspects of marketing, and constantly promote the innovation and development of marketing strategy. Only in this way can enterprises be in an invincible position in the fierce market competition and realize sustainable development.

## References

- [1] Wang Liqin. New Thinking on Enterprise Marketing Strategies Based on the New Economic Background [J]. Journal of Shanxi University of Finance and Economics, 2024, 46(S01): 136-138.
- [2] Kenza B, Soumaya O, Mohamed A. A Conceptual Framework Utilizing Big Data Analytics for Effective Email Marketing [J]. Procedia Computer Science, 2023, 220: 1044-1050.
- [3] Jia Haixia. Opportunities and Challenges for Feed Enterprise Marketing in the Context of E-commerce [J]. China Feed, 2023(19): 148-151.
- [4] Song Shengmei. Issues and Coping Strategies for Feed Enterprise Marketing in the Internet Model [J]. China Feed, 2023, (02): 105-108.
- [5] Sun Sui. Exploring New Ideas for Enterprise Marketing Strategies in the Context of the "Belt and Road" Initiative [J]. Price Monthly, 2019, (05): 90-94.
- [6] Chen Zheng. Marketing Strategy Choices for Modern Enterprises Based on Market Segmentation [J]. Journal of Commercial Economics, 2019, (01): 65-67.
- [7] Miklosik A, Evans N. The Impact of Big Data and Machine Learning on Digital Transformation in Marketing: A Literature Review [J]. IEEE Access, 2020, 8: 101284-101292.
- [8] Roy S, Patel B, Bhattacharyya D, et al. Demographic Gender Prediction of Twitter Users Using Big Data Analytics: An Application of Decision Marketing [J]. International Journal of Reasoning-Based Intelligent Systems, 2021, 13(2): 41-49.
- [9] Wang Daoping, Liang Sihan, Zhou Yu. Closed-Loop Supply Chain Decision-Making Considering Manufacturer Reputation and Big Data Service Provider Participation [J]. Computer Integrated Manufacturing Systems, 2023, 29(7): 2474-2484.
- [10] Lyu X, Jia F, Zhao B. The Impact of Big Data and Cloud-Driven Learning Technologies in Healthy and Smart Cities on Marketing Automation [J]. Soft Computing, 2022, 27: 4209-4222.