

# Research on Marketing Strategy of Technical Products of Coal Mine Enterprises in The Digital Information Age

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**Abstract:** Digital information technology means to promote the transformation and upgrading of technical product marketing of coal mining enterprises. Based on the background of digital information age, this paper analyzes the current situation and challenges of the coal mine technology product market, expounds the importance and necessity of digital marketing, and puts forward innovative strategies such as precision marketing, Internet platform marketing, application of intelligent marketing tools and online and offline integrated marketing based on big data analysis. At the same time, it also discusses the safeguard measures for the implementation of digital marketing strategy, including the adjustment of organizational structure, personnel training, data security management and the construction of marketing effect evaluation system, and analyzes with examples. The results show that the digital marketing strategy can effectively improve the market competitiveness and sales performance of coal mine technology products, and provide new ideas and methods for the marketing innovation of coal mine enterprise technology products.

**Keywords:** Digital informatization; Coal mining enterprise; Technical product; Marketing strategy; Big data analysis; Internet platform.

## 1. Introduction

With the rapid development of big data and internet technologies, digital informatization has become a significant force driving the transformation and upgrading of various industries [1-2]. As an essential component of traditional industry, coal mining enterprises are facing unprecedented opportunities and challenges in the marketing models of their technical products [3]. By exploring innovative marketing strategies for coal mining enterprise technical products in the era of digital informatization, this study aims to address the increasingly fierce market competition and ever-changing customer demands, thereby enhancing the marketing market of coal mining enterprises.

Coal mining technical products are characterized by their high specialization, advanced technological content, and complex procurement decision-making processes. Traditional marketing models can no longer meet the demands of the modern market. Digital marketing not only improves marketing efficiency and reduces costs but also enables precise marketing and enhances customer experience. Therefore, based on the above analysis, this paper will start from the current state of the coal mining technical product market, analyze the importance and necessity of digital marketing, propose innovative marketing strategies, and explore the safeguard measures for implementing these strategies. The goal is to provide theoretical guidance and practical references for the marketing innovation of coal mining enterprise technical products.

## 2. Analysis on the Market Status of Technical Products in Coal Mining Enterprise

At present, China's coal mine technology product market is in the stage of rapid development. With the state's emphasis on coal mine safety production and the technological

upgrading of the coal industry, the demand for coal mine technical products continues to grow [4]. The main products in the market include coal mine safety monitoring equipment, intelligent mining equipment, efficient ventilation system, gas extraction equipment, etc. [5-7]. These products not only need to meet the basic requirements of high efficiency and reliability, but also meet the development trend of intelligence and informatization.

However, the coal mine technology product market is also facing many challenges. First, the market competition is increasingly fierce, domestic and foreign enterprises have increased R&D investment, and the speed of product upgrading has accelerated. Secondly, customer demands are increasingly diversified, which puts forward higher requirements for personalized customization of products and overall solutions. Moreover, the procurement decision-making process of coal mine technical products is complex, involving multiple departments and levels, and the traditional marketing method is difficult to effectively reach all decision-makers. Finally, with the development of digital technology, the way customers obtain information and purchase habits have changed significantly, and the traditional marketing model has been difficult to meet the needs of the modern market.

## 3. The Importance of Digital Marketing in Coal Mine Technology Product Sales

Digital marketing is a new marketing method that uses digital technology and Internet platform to carry out marketing activities. It includes big data analysis, social media marketing, search engine optimization, content marketing and other forms. The core of digital marketing is to focus on customers, realize precision marketing through data drive, and improve marketing efficiency and effect [8-11].

In the sales of coal mine technical products, the importance

of digital marketing has become increasingly prominent [12]. First of all, it can help enterprises better understand market demand and customer preferences, and realize precision marketing. Through big data analysis, enterprises can deeply tap customer needs, predict market trends, and provide scientific basis for product development and marketing strategy formulation. Secondly, digital marketing can improve marketing efficiency and reduce marketing costs. The application of Internet platform and intelligent tools enables enterprises to reach target customers more efficiently and realize the optimal allocation of marketing resources. Moreover, digital marketing helps to establish long-term customer relationships and improve customer satisfaction and loyalty. Through social media and customer relationship management system, enterprises can maintain continuous interaction with customers and provide personalized services. Finally, digital marketing provides enterprises with a real-time marketing effect evaluation and feedback mechanism, which helps to continuously improve marketing strategies and enhance market competitiveness.

#### **4. Marketing Strategy of Coal Mine Technology Product Innovation in The Digital Information Age**

Under the background of digital information age, the marketing strategy of coal mine technology products needs continuous innovation. First, precision marketing strategy based on big data analysis is very important. Enterprises can collect and analyze customer data, market data and competitor data, establish customer portraits, and achieve accurate product recommendations and personalized marketing solutions. For example, use machine learning algorithm to predict customer demand and formulate targeted marketing strategies in advance.

Secondly, the application of Internet platform marketing strategy can significantly expand marketing channels. Enterprises can expand brand influence and improve product exposure by building their own e-commerce platforms, settling in industry vertical platforms, and using social media platforms. At the same time, the product features and technical advantages can also be vividly displayed through online live broadcast, virtual reality display and other innovative forms.

The application of intelligent marketing tools is the key to improve marketing efficiency. Enterprises can use the artificial intelligence customer service system to realize 24-hour online service and improve the efficiency of customer consultation; Through the marketing automation tools to achieve the functions of clue cultivation, customer grouping, precise push and so on, improve the marketing conversion rate; Use virtual reality technology for product demonstration and training to improve customer experience.

The implementation of online and offline integrated marketing strategy can maximize the marketing effect. Enterprises can conduct brand promotion, product display and clue collection through online channels, and conduct in-depth communication, technical exchange and after-sales service through offline channels. For example, hold technical seminars online to attract potential customers, and organize field trips and product trials offline to achieve closed-loop marketing.

#### **5. Safeguard Measures for The Implementation of Digital Marketing Strategy**

In order to ensure the effective implementation of digital marketing strategy, coal mining enterprises need to take a series of safeguard measures. First, the adjustment of organizational structure and process optimization are crucial. Enterprises should set up a special digital marketing department, integrate online and offline marketing resources, and establish a cross departmental cooperation mechanism. At the same time, optimize the marketing process, realize data sharing and business collaboration, and improve marketing efficiency. Talent training and team building are the key to the success of digital marketing. Enterprises need to cultivate compound talents who understand both coal mine technology and digital marketing. The digital marketing ability of the team can be improved through internal training, external introduction, school enterprise cooperation, etc. At the same time, establish an incentive mechanism to encourage innovation and stimulate the enthusiasm and creativity of the team.

Data security management and privacy protection are the basis of digital marketing. Enterprises need to establish a perfect data security management system to ensure the security of customer information and marketing data. At the same time, comply with relevant laws and regulations, respect customer privacy and establish customer trust. Data security can be improved through technical means such as data encryption, access control and security audit.

The construction of marketing effect evaluation system is the basis of continuous improvement. Enterprises should establish a scientific evaluation index system, including brand awareness, customer acquisition cost, conversion rate, customer satisfaction, etc. Through real-time monitoring and analysis of marketing data, timely adjust marketing strategies and optimize the allocation of marketing resources. At the same time, establish a feedback mechanism to link the evaluation results with the performance appraisal, and promote the continuous improvement of marketing strategies.

#### **6. Case Analysis: Digital Marketing Practice of a Coal Mine Technology Product Enterprise**

In order to further illustrate the practical application effect of digital marketing strategy in the marketing of coal mine technology products, this paper selects a coal mine technology product enterprise (hereinafter referred to as "company a") as a case for analysis. Company a is a high-tech enterprise focusing on the R&D and production of coal mine safety monitoring equipment. In recent years, through the implementation of digital marketing strategy, it has significantly improved its market competitiveness.

Company a first conducted a comprehensive market research and data analysis, and used big data technology to establish a customer portrait to identify the needs and preferences of different customer groups. Based on these insights, company a has formulated targeted product strategies and marketing plans. For example, for large state-owned coal mining enterprises, company a launched a customized overall solution, emphasizing product reliability and long-term service support. For small and medium-sized private coal mining enterprises, they have launched

standardized products with high cost performance and provided flexible payment methods.

In terms of Internet platform marketing, company a has established its own e-commerce platform and cooperated with a few industries vertical platforms. Company a has successfully attracted many potential customers through online live broadcasting, virtual reality display and other innovative forms. At the same time, company a also actively uses the social media platform for brand promotion and customer interaction, improving brand awareness and customer stickiness.

Company an also introduced intelligent marketing tools, such as artificial intelligence customer service system and marketing automation platform. These tools not only improve the efficiency of customer consultation, but also achieve accurate customer grouping and marketing content push, significantly improving the marketing conversion rate. In addition, company an also used virtual reality technology for product demonstration and training to provide customers with an immersive product experience, which greatly enhanced customers' purchase intention.

In terms of online and offline integrated marketing, company a carry out brand promotion and clue collection through online channels, and conducts in-depth communication and technical exchange through offline channels. For example, company a regularly holds online technology seminars to invite industry experts to share the latest technology trends and attract potential customers. For customers with strong purchase intention, company a will arrange offline field visits and product trials to further facilitate the transaction.

Through the implementation of these digital marketing strategies, company a has achieved an average annual sales growth of 30% in the past two years, and customer satisfaction has also increased significantly. This successful case fully proves the great potential of digital marketing strategy in the marketing of coal mine technology products.

## 7. Future Outlook and Suggestions

With the continuous development of digital information technology, the marketing strategy of technical products of coal mining enterprises will also continue to evolve. In the future, the following aspects deserve special attention:

(1) Deep application of artificial intelligence and machine learning: through more advanced algorithms and models, more accurate market prediction and customer demand analysis can be achieved to improve the scientificity of marketing decisions.

(2) The wide application of augmented reality (AR) and virtual reality (VR) technology: provide customers with a more immersive product experience, especially in remote product demonstration and training.

(3) Application of blockchain Technology: improve supply chain transparency and data security, and enhance customer trust.

(4) Popularity of 5g Technology: realize faster and more stable data transmission, and support more complex remote monitoring and diagnosis services.

(5) Integration of the concept of sustainable development: integrate environmental protection and sustainable development factors into product design and marketing strategies to meet the growing demand for social

responsibility.

## 8. Conclusion

This paper studies and discusses the innovative marketing strategy of coal mine enterprises' technical products in the digital information age. The research shows that digital marketing can effectively improve the market competitiveness and sales performance of coal mine technology products. Strategies such as precision marketing, Internet platform marketing, application of intelligent marketing tools and online and offline integrated marketing based on big data analysis provide new ideas and methods for marketing innovation of technical products of coal mining enterprises. The implementation of digital marketing strategy requires enterprises to provide guarantee from the aspects of organizational structure, personnel training, data security and effect evaluation. In the future, with the continuous progress of technology and the continuous change of the market, coal mining enterprises need to constantly innovate marketing concepts and deepen digital applications to adapt to the new market environment.

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