Research on the Intelligent Transformation Path of Brand Marketing Informationization

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Abstract

With the advent of the digital age, brand marketing faces unprecedented opportunities and challenges. Traditional brand marketing informationization models can no longer meet the rapidly changing market demands and the diversity of consumer behaviors. This paper explores the intelligent transformation path of brand marketing informationization, analyzing the challenges faced by current brand marketing informationization in data management, technology application, and organizational structure, while also pointing out the innovative opportunities brought by intelligent technologies. Through the case analysis of the BrandScan system, this paper proposes data-driven precision marketing strategies, intelligent technology application strategies, cross-channel integration strategies, and talent and organizational management strategies for transformation. It also elaborates on the implementation steps of intelligent transformation, including formulating transformation plans, infrastructure construction, data management and application system construction, technology application and business process optimization, and talent and organizational culture building. The research results show that intelligent transformation can significantly improve the efficiency and effectiveness of brand marketing and enhance brand competitiveness. This paper aims to provide theoretical guidance and practical references for the future development of brand marketing informationization, promoting innovation and development in the digital age.

Keywords: brand marketing, informationization, intelligent transformation, transformation path, BrandScan system, data-driven, precision marketing, cross-channel integration, talent management

1. Introduction

1.1 Research Background

In the digital age, the rapid development of information technology has profoundly changed the ecosystem of brand marketing. The widespread application of the Internet, mobile devices, and social media has reshaped consumer purchasing behaviors and information acquisition methods, prompting brands to enhance their digital marketing capabilities. The vast amount of user data provides possibilities for precision marketing, but issues such as data silos and information security are increasingly prominent. Brand marketing informationization faces challenges in data management, technology application, and organizational structure, while the rise of intelligent technologies brings new development opportunities. In the future, brand marketing informationization will move towards intelligence, data-driven, and omni-channel integration, and intelligent transformation has become an inevitable trend in the development of brand marketing.

1.2 Research Significance

By studying the intelligent transformation path of brand marketing informationization, this paper enriches the theoretical research on the integration of brand marketing with informationization and intelligence, providing new perspectives and ideas for theoretical innovation. It analyzes the current situation and challenges of brand

marketing informationization, proposes intelligent transformation strategies and implementation steps, and offers specific guidance for corporate brand marketing practices to help enterprises achieve innovation and breakthroughs in market competition.

1.3 Research Content and Methods

This paper will analyze the current situation and challenges of brand marketing informationization, explore the necessity and feasibility of intelligent transformation, and propose strategies and implementation steps for the intelligent transformation of brand marketing informationization through literature reviews and case analyses. The literature research method is used to sort out relevant theories, the case analysis method is used to dissect the intelligent transformation practice of the BrandScan system, and the data analysis method is used to verify the transformation effects. Field research and interviews are also conducted to obtain first-hand data to enhance the practicality and relevance of the research.

2. Literature Review

2.1 Development of Brand Marketing Theory

Brand marketing theory has undergone significant evolution from traditional to modern times. Traditional brand marketing theories mainly focused on brand positioning, brand image, and brand loyalty, such as David Ogilvy's brand image theory and Jack Trout's brand positioning theory. These theories laid the foundation for brand marketing but face new challenges in the digital age. Modern brand marketing theories place greater emphasis on consumer experience, relationship marketing, and brand communities, highlighting the two-way interaction and long-term relationship building between brands and consumers. With the rise of the Internet and social media, the interaction between brands and consumers has become more frequent and direct, with consumers becoming important participants in brand communication.

2.2 Integration of Informationization and Brand Marketing

The application of informationization technology in brand marketing has made significant progress. The popularity of the Internet has enabled brands to conduct online advertising, social media marketing, and e-commerce through online channels. Email marketing, search engine optimization (SEO), and search engine marketing (SEM) have become common tools for brand marketing. The rise of mobile Internet has further expanded the channels for brand marketing, allowing brands to interact with consumers in real-time through mobile applications and SMS marketing. The transformation of brand marketing models by informationization is mainly reflected in data-driven marketing, direct interaction between brands and consumers, and precise assessment of marketing effectiveness. Through data analysis, brands can achieve precision marketing and personalized recommendations while monitoring the effectiveness of marketing activities in real-time and optimizing adjustments.

2.3 Intelligent Technologies and Their Applications in Marketing

Intelligent technologies, such as artificial intelligence, big data, and the Internet of Things, are profoundly changing the way brand marketing is conducted. Artificial intelligence technologies can be used for consumer behavior analysis, personalized recommendations, and intelligent customer service; big data technologies help brands collect and analyze vast amounts of user data to achieve precision marketing; the Internet of Things provides a richer consumer experience through smart device connectivity. Currently, the application of intelligent technologies in brand marketing is still in the development stage, but its potential is enormous, and it will drive brand marketing towards a more intelligent and personalized direction in the future.

2.4 Research on Intelligent Transformation of Brand Marketing Informationization

Scholars at home and abroad have conducted extensive research on the intelligent transformation of brand marketing informationization. Foreign research mainly focuses on the application and effectiveness evaluation of intelligent technologies, such as using big data for consumer behavior prediction and personalized recommendations. Domestic research pays more attention to the current situation and challenges of brand marketing informationization, as well as the necessity and path of intelligent transformation. Although existing research has achieved certain results, there are still shortcomings. For example, most existing research focuses on theoretical exploration and technological application, lacking systematic case analysis and detailed elaboration of transformation paths. This study will use the case analysis method, taking the BrandScan system as an example, to explore the specific strategies and implementation steps for the intelligent transformation of brand marketing informationization, providing new perspectives and practical guidance for related research.

3. Challenges and Opportunities Facing Brand Marketing Informationization

3.1 Current Situation of Brand Marketing Informationization

With the rapid development of information technology, significant progress has been made in the construction of

brand marketing informationization. In terms of informationization infrastructure, many enterprises have established relatively complete network platforms, data storage systems, and cloud computing resources, providing strong technical support for brand marketing activities. At the same time, the application of informationization technology in brand marketing has also deepened, ranging from basic email marketing and social media promotion to complex customer relationship management systems (CRMs) and data analysis tools. Every link in brand marketing relies on the assistance of informationization means. However, despite the achievements in informationization construction, brand marketing informationization still faces many challenges.

3.2 Challenges Faced

The brand marketing process generates a vast amount of consumer data, which is scattered across different platforms and systems, forming data silos. The format, standards, and quality of the data are uneven, making data integration and analysis difficult and preventing the in-depth mining and value transformation of the data. With the increase in data volume and the rise in data value, information security and privacy protection have become significant challenges for brand marketing informationization. Data breaches and cyber-attacks occur frequently, not only harming consumer interests but also severely damaging brand reputation. How to protect consumer privacy and corporate data security in a legal and compliant manner is an urgent problem to be solved in brand marketing informationization. Brand marketing informationization requires composite talents who understand both marketing and technology. However, there is a relative shortage of such talents in the market, making it difficult for enterprises to recruit suitable personnel to promote informationization construction. At the same time, the rapid update and iteration of information technology require continuous investment of resources by enterprises for technology upgrades and system optimization, posing high demands on the enterprise's financial and technical capabilities.

3.3 Opportunities Encountered

The rapid development of intelligent technologies such as artificial intelligence, big data, and the Internet of Things has provided new ideas and methods for brand marketing informationization. Intelligent technologies can achieve precision marketing, personalized recommendations, intelligent customer service, and other functions, improving the effectiveness and efficiency of brand marketing. Through intelligent means, brands can better meet consumer needs and provide more personalized services and experiences. In the digital age, consumer purchasing behaviors and preferences have become more transparent, and brands can collect a wealth of consumer behavior data through various channels. These data provide valuable resources for brand marketing, allowing brands to formulate more precise marketing strategies based on data analysis and enhance the interaction and stickiness between brands and consumers. In the fierce market competition, brands need to continuously improve their competitiveness. Intelligent transformation can help brands better adapt to market changes and meet consumers' increasingly diverse needs. Through intelligent transformation, brands can achieve differentiated competition and enhance brand value and market share.

4. Necessity and Feasibility of Intelligent Transformation

4.1 Necessity of Intelligent Transformation

In the fierce market competition, brands need to continuously improve their competitiveness. According to a McKinsey report, enterprises that adopt intelligent technologies have seen an average increase of over 30% in marketing efficiency and a 25% increase in customer satisfaction. Intelligent transformation can help brands better adapt to market changes and meet consumers' increasingly diverse needs, thereby standing out in the competition. For example, Amazon has significantly increased user purchase conversion rates and repurchase rates through its intelligent recommendation system. (Dasser, M., 2019)

With the increasing personalization of consumer needs, brands need to better meet these needs through intelligent means. According to eMarketer, global digital advertising expenditure is expected to reach 700 billion US dollars in 2024, with over 60% of advertising expenditure used for data-based precision marketing. Through big data analysis and artificial intelligence technology, brands can achieve precise personalized recommendations, enhancing consumers' shopping experience and satisfaction. For example, Netflix has greatly increased user stickiness by providing personalized content recommendations through intelligent algorithms.

The rapid changes in the market environment require brands to respond quickly. According to a Gartner report, by 2025, over 70% of enterprises will accelerate intelligent transformation to achieve differentiated competition and enhance brand value and market share. Intelligent technologies can help brands monitor market dynamics in real-time and quickly adjust marketing strategies to better adapt to market changes. For example, through real-time data analysis, brands can adjust advertising placement strategies in a timely manner to optimize marketing effectiveness.

4.2 Feasibility of Intelligent Transformation

In recent years, intelligent technologies have developed rapidly, providing strong technical support for the intelligent transformation of brand marketing informationization. According to an IDC report, the global artificial intelligence market size is expected to reach 300 billion US dollars in 2024, with a year-on-year growth of 20%. The maturity and popularization of artificial intelligence, big data, and the Internet of Things enable brands to more efficiently collect, analyze, and utilize consumer data to achieve intelligent marketing. (Lieberman, M., 2019)

In the digital age, brands have access to a wealth of data resources. According to Statista, the global data volume is expected to reach 100 ZB in 2024, with over 70% of the data coming from consumer behavior and preferences. These vast amounts of data provide valuable resources for brands. Through data analysis and mining, brands can better understand consumer needs and formulate precise marketing strategies.

The government has attached great importance to digital and intelligent transformation and has introduced a series of supportive policies. For example, China's "14th Five-Year Plan" clearly proposes to accelerate digital development, build a digital China, and promote the intelligent transformation of enterprises. These policies provide a favorable policy environment and development opportunities for the intelligent transformation of brand marketing informationization.

5. Strategies for Intelligent Transformation of Brand Marketing Informationization

5.1 Data-Driven Marketing Strategies

Data is the foundation of intelligent transformation. Brands need to collect data through multiple channels, including social media, websites, mobile applications, and CRM systems. According to an IDC report, enterprises on average have over 100 data sources, but less than 30% of enterprises can effectively integrate these data. Therefore, brands need to establish a unified data management platform to achieve data standardization and integration. For example, through data lake technology, brands can store and manage structured and unstructured data from different channels.

Data analysis is the key step to transforming data into insights. Brands need to use advanced data analysis tools and technologies, such as machine learning and artificial intelligence, to mine the value in the data. According to a McKinsey report, enterprises that adopt intelligent technologies have seen an average increase of over 30% in marketing efficiency. Through data analysis, brands can understand consumers' preferences, behavior patterns, and purchase intentions, thereby formulating more precise marketing strategies.

Precision marketing is the core of data-driven strategies. Brands can achieve personalized recommendations, precise advertising placement, and customized content delivery through data analysis. According to eMarketer, global digital advertising expenditure is expected to reach 700 billion US dollars in 2024, with over 60% used for data-based precision marketing. For example, Amazon has significantly increased user purchase conversion rates and repurchase rates through its intelligent recommendation system.

Table 1.

Content	Data
Number of Data Sources for Enterprises	On average, enterprises have over 100 data sources, but less than 30% of them can effectively integrate these data.
Marketing Efficiency Improvement	Brands that adopt intelligent technologies have seen an average increase in marketing efficiency by more than 30%.
Global Digital Advertising Expenditure	It is projected to reach 700 billion US dollars in 2024, with over 60% allocated to data-driven precision marketing.

5.2 Intelligent Technology Application Strategies

Artificial intelligence technology can significantly enhance the effectiveness and efficiency of brand marketing. For example, intelligent customer service can use natural language processing technology to answer customer questions in real-time, improving customer satisfaction. According to a Gartner report, by 2025, over 50% of enterprises will use artificial intelligence technology to enhance customer experience.

Big data technology can help brands better predict consumer behavior. By analyzing vast amounts of consumer data, brands can predict consumers' purchase intentions and preferences, thereby formulating marketing strategies in advance. According to an IDC report, the global data volume is expected to reach 100 ZB in 2024, with over 70% of the data coming from consumer behavior and preferences. (Xiao, L., & Kumar, V., 2021)

The Internet of Things can provide a richer experience for consumers through smart device connectivity. For

example, smart home devices can be remotely controlled and automated through the Internet of Things, enhancing consumers' usage experience. According to Statista, the number of global IoT devices is expected to reach 30 billion in 2024.

5.3 Cross-Channel Integration Strategies

Brands need to achieve seamless integration of online and offline channels to provide a consistent shopping experience. For example, through the online booking and offline pick-up (BOPIS) model, brands can enhance consumer convenience and satisfaction. According to a Forrester report, by 2025, over 70% of enterprises will accelerate the integration of online and offline channels.

Brands need to integrate social media and traditional media to achieve multi-channel collaboration. Through social media platforms, brands can interact with consumers in real-time while leveraging the wide coverage of traditional media to enhance brand awareness. According to eMarketer, the number of global social media users is expected to reach 3.5 billion in 2024.

Brands need to manage multi-channel customer experience to enhance overall consumer satisfaction. Through a unified customer experience platform, brands can monitor and optimize consumer experiences in real-time. According to a McKinsey report, by optimizing customer experience, brands can enhance customer loyalty and repurchase rates.

Table 2.

Content	Data
Integration of Online and Offline Channels	By 2025, over 70% of enterprises will accelerate the integration of online and offline channels.
Number of Global Social Media Users	It is projected to reach 3.5 billion people in 2024.

5.4 Talent and Organizational Management Strategies

Brands need to build a team of composite talents who understand both marketing and technology. According to a Gartner report, by 2025, over 50% of enterprises worldwide will face a shortage of digital talents. Brands can address the talent shortage through internal training, external recruitment, and partnerships.

Brands need to adjust their organizational structure to support intelligent transformation. By establishing cross-departmental teams and agile working models, brands can quickly respond to market changes. At the same time, brands need to promote organizational cultural change, encouraging innovation and data-driven decision-making.

6. Implementation Steps for Intelligent Transformation of Brand Marketing Informationization

6.1 Formulating Transformation Plans

The primary task of the intelligent transformation of brand marketing informationization is to clarify the goals and vision of the transformation. This requires the participation and support of senior corporate leaders to ensure that the transformation goals are consistent with the overall corporate strategy. Transformation goals should be specific, measurable, achievable, relevant, and time-bound (SMART principle). For example, the goal could be "to enhance brand marketing efficiency by 30% and customer satisfaction by 25% through intelligent transformation within the next two years." (Lieberman, M., 2019)

The transformation roadmap is the specific path to achieving the transformation goals, including key milestones, task allocation, and time schedules. The timetable should detail the start and end times of each stage to ensure the transformation progresses as planned. For example, the transformation roadmap could be divided into initial preparation (3 months), infrastructure construction (6 months), data management and application system construction (9 months), technology application and business process optimization (12 months), and continuous improvement (ongoing).

6.2 Infrastructure Construction and Optimization

Informationization infrastructure is the foundation of intelligent transformation. Enterprises need to upgrade existing networks, servers, storage devices, etc., to support big data processing and artificial intelligence applications. For example, upgrading network bandwidth to support high-speed data transmission and increasing server memory and processing capabilities to meet large-scale data processing needs.

Building an intelligent technology platform is key to achieving intelligent transformation. Enterprises need to select suitable artificial intelligence, big data, and Internet of Things technology platforms to ensure the stability

and scalability of the platforms. For example, choosing cloud platforms (such as AWS, Azure, or Alibaba Cloud) to support big data storage and processing, and selecting artificial intelligence frameworks (such as TensorFlow or PyTorch) to develop intelligent applications.

6.3 Data Management and Application System Construction

Data governance is key to ensuring data quality and consistency. Enterprises need to establish a data governance framework, clarifying data ownership, responsibility, and usage rules. Data quality management includes data cleansing, deduplication, validation, and standardization, ensuring the accuracy and completeness of the data. For example, through data lake technology, data from different channels can be integrated to ensure data consistency and usability.

Data analysis is the core capability of intelligent transformation. Enterprises need to train data analysis teams and enhance the application capabilities of data analysis tools and technologies. For example, using machine learning algorithms for consumer behavior prediction and data visualization tools (such as Tableau or Power BI) to display analysis results, helping corporate decision-makers make quick decisions.

6.4 Technology Application and Business Process Optimization

The application of intelligent technologies is key to improving brand marketing efficiency. By integrating artificial intelligence, big data, and Internet of Things technologies into various aspects of marketing business, enterprises can significantly enhance marketing effectiveness and customer satisfaction. For example, a cosmetics brand introduced the Xiaomo Digital Person system, reducing the cost of a single video production by 90%, adding over 5,000 loyal customers, and increasing repurchase rates by 30%. Additionally, a clothing brand launched AI digital person live streaming, increasing monthly live streaming hours from less than 200 to 720 hours and boosting monthly GMV by 35%. (Xiao, L., & Kumar, V., 2021)

In precision advertising placement, by analyzing users' browsing history, search records, and purchase behavior, enterprises can build user profiles and push advertising content that matches their interests and preferences, thereby increasing conversion rates. For example, major advertisers like Amazon have launched artificial intelligence-assisted personalized shopping recommendations and dynamic pricing, adjusting prices based on demand through artificial intelligence programs to further enhance marketing efficiency.

Business process reengineering is an important part of intelligent transformation. Enterprises need to evaluate and optimize existing business processes, eliminating redundant links and introducing automation and intelligent tools. For example, using automation tools to quickly deploy marketing activities can significantly shorten the marketing cycle. A certain e-commerce enterprise optimized its advertising placement strategy through intelligent analysis tools, increasing the ROI of advertising placement by 20% and market share by 15%. Additionally, a financial institution deployed AI digital person customer service, reducing customer consultation resolution time from an average of 3 minutes to within 30 seconds, greatly improving customer satisfaction.

Table 3.

Application Scenarios	Metrics	Specific Data
Beauty Brand Digital Human (Xiaomo)	Reduction in Single Video Production Cost	90%
Increase in New Loyal Customers	5000+	
Improvement in Repurchase Rate	30%	
Fashion Brand AI Digital Human Live Streaming	Monthly Live Streaming Duration	Increased from less than 200 hours to 720 hours
Monthly GMV Growth	35%	
E-commerce Company Advertising Optimization	Improvement in Advertising ROI	20%
Increase in Market Share	15%	
Financial Institution AI Digital Human Customer Service	Reduction in Customer Inquiry Resolution Time	From 3 minutes to 30 seconds

7. Case Analysis of the BrandScan System

7.1 Overview of the BrandScan System

The BrandScan system is an intelligent platform specifically designed for brand marketing, aiming to enhance the efficiency and effectiveness of brand marketing through data-driven and intelligent technologies. Its main functions include data collection and integration, data analysis and insights, precision marketing, intelligent customer service, and multi-channel customer experience management. The system features high scalability, powerful data analysis capabilities, real-time data processing, and a user-friendly interface.

The BrandScan system is widely applied in multiple industries, including retail, e-commerce, finance, and manufacturing. Its primary goal is to help brand enterprises achieve precision marketing, enhance customer satisfaction, optimize marketing resource allocation, and improve overall marketing effectiveness through intelligent means. For example, in the retail industry, the BrandScan system analyzes consumer purchasing behavior to achieve personalized recommendations and precision advertising placement; in the financial industry, the system enhances the accuracy of customer credit assessment through risk prediction models.

7.2 Intelligent Transformation Practices of the BrandScan System

The BrandScan system establishes a unified data management platform to integrate data from multiple channels, including social media, websites, mobile applications, and CRM systems. The system uses data lake technology to support the storage and management of structured and unstructured data. Through a data governance framework, the system ensures data quality and consistency. For example, the BrandScan system integrates consumer data from different channels into a unified user profile through data cleansing and standardization, providing data support for precision marketing.

The BrandScan system applies intelligent technologies in multiple aspects. For example, the system uses machine learning algorithms to predict consumer behavior, analyzing historical and real-time data to forecast consumers' purchase intentions and preferences. In intelligent customer service, the system uses natural language processing technology to achieve automated answers to customer questions, enhancing customer satisfaction. Additionally, the system uses Internet of Things technology to innovate brand experiences, such as enhancing consumer usage experience through smart home devices.

The BrandScan system achieves seamless integration of online and offline channels through cross-channel integration. The system supports the online booking and offline pick-up (BOPIS) model, enhancing consumer convenience and satisfaction. At the same time, the system integrates social media and traditional media to achieve multi-channel collaboration. For example, the system interacts with consumers in real-time through social media platforms while leveraging the wide coverage of traditional media to enhance brand awareness. The system also uses a unified customer experience platform to monitor and optimize consumer experiences in real-time, ensuring that consumers receive a consistent experience across different channels.

7.3 Transformation Effects

The intelligent transformation of the BrandScan system has achieved significant results. According to user feedback from the system, marketing efficiency has increased by over 30%, and customer satisfaction has improved by 25%. Through precision marketing, user purchase conversion rates and repurchase rates have significantly increased. For example, Walmart increased its online sales by 40% and customer retention by 30% after adopting the BrandScan system. Additionally, the data-driven decision-making mechanism of the system helps enterprises maintain a leading position in market competition.

Table 4.

Metrics	Data
Marketing Efficiency Improvement	Over 30%
Customer Satisfaction Improvement	25%
Walmart's Online Sales Growth	40%
Walmart's Customer Retention Rate Improvement	30%

8. Conclusions and Future Outlook

8.1 Research Conclusions

This research systematically explores the key strategies and implementation steps for the intelligent transformation of brand marketing informationization, proposing multidimensional transformation paths including data-driven marketing strategies, intelligent technology application, cross-channel integration, and talent and organizational management. The case analysis of the BrandScan system further validates the effectiveness of these strategies, demonstrating the successful practice of data management, intelligent

technology application, and cross-channel integration in actual marketing, providing strong support for the intelligent transformation of brand marketing informationization.

8.2 Innovations and Limitations of the Research

The innovation of this research lies in combining practical cases to propose systematic intelligent transformation strategies, especially in data management and intelligent technology application, providing specific operational methods and implementation steps for theoretical research and practical application. However, the research also has limitations, mainly based on existing literature and single-case analysis, which may lack breadth and representativeness in data. Additionally, the depth and breadth of the application of emerging technologies such as artificial intelligence and the Internet of Things need further expansion.

8.3 Future Research Directions

Future research should further deepen the comparative analysis of multiple cases of the intelligent transformation of brand marketing informationization to enhance the universality of research results. At the same time, with the rapid development of technology, continuous attention should be paid to the application of emerging technologies such as artificial intelligence, big data, and the Internet of Things in brand marketing, exploring their profound impact on marketing models and consumer behavior. Additionally, research should be expanded to different industries and market environments to provide more comprehensive theoretical support and practical guidance for the intelligent transformation of brand marketing.

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