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### Research Article

# **Development Model of Enterprise Green Marketing Based on Cloud Computing**

## Dian Jia<sup>1</sup> and Zhaoyang Wu D<sup>2</sup>

<sup>1</sup>School of Economics and Management, Qinghai Minzu University, Xining 810007, Qinghai, China <sup>2</sup>School of Economics and Management, Qinghai Normal University, Xining 810016, Qinghai, China

Correspondence should be addressed to Zhaoyang Wu; 2018130@qhnu.edu.cn

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Internet-based cloud computing is currently an important core technology for computer development in China. It can be used not only in marketing but also in various industries. At the same time, people-oriented and green projects and products that focus on the development of the ecological environment and green consumption dominate the current market trend. The purpose of this paper is at studying the development model of enterprise green marketing based on cloud computing. This article compares and analyzes enterprise green marketing systems through big data algorithms and statistical methods. It starts with the basic characteristics of cloud computing, studies the opportunities and challenges that cloud computing brings to enterprises' green marketing efforts, describes the green marketing processes and characteristics of enterprises, and analyzes cloud. The feasibility of the construction of the computing system, the basic architecture of the cloud computing system, and the construction of a complete cloud computing data processing flow are proposed. The research data found that the combination of the green marketing development model and cloud computing in the enterprise operating system is conducive to the development of the enterprise; it improves the discovery efficiency of the enterprise and reduces the pollution in the production of the enterprise; the cloud computing can greatly improve the work efficiency of the employees. Cloud computing can improve employees' speed to complete tasks by about 20% and reduce the error rate by about 50%. The cloud computing enterprise green marketing development model has guiding significance for the long-term development of the enterprise.

#### 1. Introduction

The meaning of green marketing is that the company takes "protect the environment, start with me" as its work purpose and uses "green ecology" as its guiding core and "reduces the damage to the global ecological environment" as its service center, positioning the starting point as a new marketing model that "meets consumers' green consumption." Since then, the company's green marketing model has been rapidly promoted in developed countries and some developing countries [1].

In today's Chinese society, sustainable development has become an important theme in a new era [2]. In order to enhance market competitiveness, enterprises have established a good corporate image, controlled pollution, saved energy, and reduced consumption and improved efficiency has

become an urgent need for an enterprise to succeed [3]. At the same time, the wave of Internet development has also provided some convenient conditions for companies to implement a series of measures. Therefore, we propose the "cloud computing-based enterprise green marketing development model" [4]. At the same time, China's existing market is fiercely competitive and most companies place too much emphasis on micro- and near-term interests. In addition, the current legal system is not sound and the system is not relatively speaking [5]. It is perfect, which has caused many problems and obstacles for the company's green marketing. As a new type of computing model, cloud computing is used in many fields. People are willing and looking forward to cloud computing to achieve interconnection, collaborative work, and knowledge sharing. People also urgently need reliable and efficient technical means and implementation models.

Well, we are also thinking about whether we can combine cloud computing and enterprise green marketing to achieve the "cloud computing enterprise green marketing development model" [6, 7].

Cloud computing is changing information technology [8]. As information and processes are being migrated to the cloud, this is not only a place where computing is done, but fundamentally, how is it done? As a result, more and more companies and academia are investing in this technology, which will also greatly change the way IT professionals work. Cloud computing solves many problems of conventional computing, including handling peak loads, installing software updates, and redundant computing cycles. However, new technologies also bring new challenges, such as data security, data ownership, and transcode data storage. Arora discussed the cloud computing security problem mechanism, the challenges that cloud service providers are facing in cloud engineering, and proposed a metaphorical study of various security algorithms [9, 10]. In addition, companies that undertake a large number of batch-oriented tasks with Armbrust can obtain results as soon as their programs are scaled up, because the cost of using one server for 1,000 hours is only 10% higher than the cost of using one server for 1,000 hours [11]. This flexibility of resources does not have to pay a high price for large-scale purchases, which is unprecedented in IT history.

Cloud computing is an important prerequisite for longterm green development of enterprises [12]. The purpose of this paper is to study the development model of enterprise green marketing based on cloud computing. This article compares and analyzes enterprise green marketing systems through big data algorithms and statistical methods. It starts with the basic characteristics of cloud computing, studies the opportunities and challenges that cloud computing brings to enterprises' green marketing efforts, describes the green marketing processes and characteristics of enterprises, and analyzes cloud. The feasibility of the construction of the computing system, the basic architecture of the cloud computing system, and the construction of a complete cloud computing data processing flow are proposed. The use of cloud computing for green marketing in practice serves the purpose of changing the traditional way of developing the use of structures and exploring a more effective marketing model in the modern sense from the perspective of cloud computing business marketing.

#### 2. Programs Method

2.1. The Connotation of Cloud Computing. Cloud computing is a relatively new form of supplement, consumption, and delivery implemented by Internet technology. It mainly takes virtual resources as the object of service and has dynamic scalability [13]. It can use the Internet to calculate data and use the underlying server, storage, and network technology architecture as a computing resource in an abstract way. And it can access the configurable computing resource sharing space through the network to achieve a certain degree of management, so as to quickly provide computing resources to demand users in [14].

2.1.1. Characteristics of Cloud Computing. The main characteristics of cloud computing include the following aspects: first, it can provide self-service; according to the needs of users to allocate, users can operate freely on the interface, so as to achieve the smooth application of resources and in the process of use can also be adjusted and released various resources [15]. The second point is that the time period of network access in cloud computing is very free and not limited by the location [16]. The service platform provided by cloud computing can be accessed in various ways, which greatly facilitates users. Third, cloud computing can reach the state of resource pooling. In this way, the physical resources of the computer do not belong to a specific individual and will be occupied only when they are needed; otherwise, there is no need to occupy them. Fourth, it has a large elastic space, can timely adjust and allocate resources to meet the needs of customers, and has strong shrinkage and expansion performance [17, 18]. We have a general understanding of the main features of cloud computing, which is a way to make our lives more convenient and our businesses more successful. Time is free, resources are shared, there is a lot of flexibility, and the characteristics of cloud computing determine its position in enterprise applications.

2.1.2. Cloud Computing Architecture. Cloud computing has a huge architecture, including five major structural layers, which are organically unified, as shown in Figure 1, namely, cloud client, cloud application, cloud platform, cloud infrastructure, and service layer [19]. This study uses a B2B model.

- (1) The cloud client, also known as the cloud terminal or cloud computer, is the part that connects with the customer most closely. The composition of the cloud client mainly includes computer hardware and computer software. Among them, hardware is necessary, while the existence and use of software are largely determined by the specific application degree of cloud computing. The design of software should meet the standards of cloud services to play an effective role [20]. Currently, the main cloud clients are mobile phones (Linux-based Palm, Android, iPhone, etc.), fat clients (Cherrpal, Wyse, etc.), and thin clients [21]
- (2) Requirements for cloud application foundation: the first is that cloud infrastructure is a kind of commercial software that is easy to manage and operate under the premise of network access. The second point is the reasonable and scientific control of the software through the server. Only in this way can the client use the form of Web to access the application system remotely and achieve the desired effect [22]. Third, in the delivery of cloud applications, the main pattern is one-to-many, in terms of architecture, price, and partners [23]. Fourth, the functionality of cloud applications is centralized when they are updated, which means that there is no need to download patches and upgrade packages from the

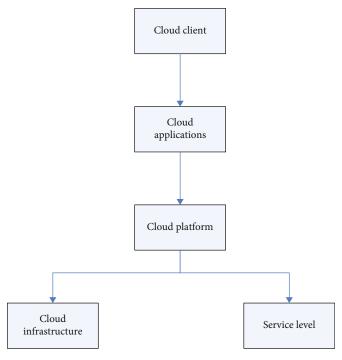


FIGURE 1: The composition of the cloud computing.

cloud client. At present, the types of cloud applications mainly include "Web applications," "software as a service," and "software + services" [24, 25]. In the cloud computing market, SaaS services account for about 58% of the total. The growing maturity of cloud computing and the gradual growth of the industry chain are driving the rapid development of SaaS services

- (3) The cloud platform is usually referred to as platform as a service; the main feature is the computer platform or it could be multiple solutions as a specialized service, it mainly plays the function of its service program on the basis of cloud infrastructure, so you do not have to process more complex procurement activities, also can reduce the underlying hardand software of the corresponding management program of computing time, and improve the ability of system application deployment [26, 27]. The main types of cloud platforms currently in use include solution stacks and structured storage. Solution stack, for example, Google App Engine, is mainly designed by combining the convenient environment of cluster development with the platform of hosting Web applications; currently, the programming languages adopted mainly include Python and Java. The database types of structured storage are all cloud-based databases, including the Amazon-distributed database and BigTable database system, which generally do not directly provide relevant business services to the outside world. The types of storage on the basis of cloud files mainly include
- the Amazon online storage service, which is fee based and targeted at the public. In the process of using the Web, various digital data can be saved through this online storage method, which is also very convenient to look up
- (4) Cloud infrastructure is usually also an example of infrastructure as a service, which is the delivery of computer infrastructure, usually through the creation of a platform-virtualized environment to achieve the desired purpose. Major types include the use of physical machines and virtual machines, physical host rent is usually provided by different kinds of IDC, the virtual machine is on the basis of the operating system virtualization, the virtual to physical machine can have multiple parallel operation systems, each system has a relatively independent operation, and between its types are mainly Amazon EC2. Rackspace improves the utilization efficiency of the server. GoGrid is used for Cloud computing. In particular, Amazon EC2 is also called the horse into play, can have very high flexibility in strengthening the self-recovery system, reduce artificial maintenance features of cloud computing, and can be calculated according to the customer's resources for expansion and contraction of the corresponding use of virtualization technology; it will be an independent virtual machine, as an example, its function and virtual dedicated servers at the same equipment
- (5) The composition of the server layers mainly includes computer hardware and, when necessary, computer software. The design and application process of

software and hardware is consistent with the delivery process of cloud services and has the coordination and unity of architecture

The application of cloud computing to green marketing and wireless networks is mainly attributed to the advantages of on-demand deployment, flexibility, reliability, and cost effectiveness of cloud computing.

- 2.2. Enterprise Green Marketing Development Mode. In order to comply with the requirements of environmental protection and sustainable economic development in China, the 18th national congress of the communist party of China (CPC) advocated "green" development. Under the background of ecological civilization, the enterprise green marketing development model has become a new marketing model and gradually developed in China. The development mode of green marketing is relatively slow in China due to its late start and the insufficient understanding of some enterprises. At the same time, the growth of national economy and the improvement of people's material level will be restricted by resources and the environment. Therefore, it is necessary to speed up the intensity and process of the development mode of green marketing, so as to promote the green management of enterprises into a normal track.
- 2.2.1. Conduct Objective Quantitative Analysis and Evaluation on the Efficiency of the Enterprise Collaborative Network. Objective quantitative analysis and evaluation of the efficiency of the enterprise collaborative network are an important link to ensure and promote the optimization of the collaborative business chain. The network optimization is realized based on the multilevel and multistage complex random analysis of the collaborative business chain. On the basis of the proof of the phase type for a randomly distributed system, a computational method of complex coordination and a quantitative expression of the system efficiency are presented in this paper. This method has the advantages of wide application range and easy to parse.
  - (1) In the network cooperative organization of enterprises following pH distribution (network organization *U*): *Ui* is the *i*th unit of the organization, *U*2, *U*3 is the intermediate unit, and *U*4 is the task termination unit

$$U = \sum_{i=1}^{4} Ui,$$

$$y[n] = \sum_{i=1}^{N} \sum_{l=1}^{L} w_{i}(l) S_{i}(n-l),$$

$$\rho_{j} = \rho_{i} \frac{je_{t} + (j-1)e_{r}}{ie_{t} + (i-1)e_{r}}$$
(1)

(2)  $S_{mn}$  is the state transition probability, that is, the probability of successful task delivery between units. Satisfy, according to the image,

$$\sum_{Ui} Su_i = 1,$$
 
$$E_C = NCV_{dd}^2$$
 (2)

2.2.2. Based on the Enterprise Efficiency Monitoring System. The energy consumption of the monitoring network node based on enterprise efficiency is mainly concentrated on the data transmission unit. The energy consumption at the transmitting end is mainly generated by the transmitting circuit and the power amplifier circuit, while the energy consumption at the receiving end is mainly generated by the receiving circuit. Energy consumption at the transmitting end is shown in formula (3), while energy consumption at the receiving end is shown in formula (4):

$$E_{tr}(k,d) = \begin{cases} kE_{\text{elec}} + kE_{\text{apm1}}d^2, & (d < d_0), \\ kE_{\text{elec}} + kE_{\text{amp2}}d^4, & (d \ge d_0), \end{cases}$$
(3)

$$E_{rx}(k) = kE_{elec},\tag{4}$$

Where E is the number of bits of data sent or received, k is the distance between two nodes, d is a constant, and the value is related to the network environment:

$$d_0 = \sqrt{\frac{E_{\text{apm1}}}{E_{\text{amp2}}}},$$

$$\frac{d\rho_i e}{id\lambda \cdot e_t + (i-1)\lambda d \cdot e_r} = \beta,$$

$$A(\delta) = 1 + \alpha_{i1}\delta^{-1} + \alpha_{i2}\delta^{-2} + \dots + \alpha_{in}\delta^{-n}.$$
(5)

Sustainable supply chain management and green marketing have become key themes in academic research and management practice since the concept of sustainability was transformed into the mainstream of business. Great progress has been made in both areas. It has been recognized that green marketing and sustainable supply chain management should be seamlessly integrated to better meet the needs of green customers through supply chain functions. Existing research has explored point-to-point integration methods. Liu proposed a new hub-and-center integration model that integrates green marketing and sustainable supply chain management from six dimensions (product, promotion, plan, process, people, and project (called 6P)). Empirical studies have been conducted with the industry to test the 6P integration model. This paper presents the empirical research results on the driving factors and obstacles of integration dimension, integration strategy, and multidimensional integration, as well as the significance of management. The new integrated model allows the flow of resources such as information, materials, and capital between green

marketing and sustainable supply chain management through a variety of direct channels. According to the triple bottom line goal, it is possible to achieve better overall business performance.

2.2.3. Sustainable Industrial Chain Management. As global warming intensifies, both developed and developing countries are committed to sustainable development. Committed to sustainable development, it has been in the form of thematic study of sustainable supply chain collaborative management and is based on the traditional theory to explore how to synergize in order to promote the sustainable development of the world's stakeholders, one of the characters of economic man hypothesis, which has the self-interest preference, always in its own interests, for maximum core concerns, to determine how to build and implement sustainable global supply chain collaborative management. As a decision criterion, it does not take into account the psychological factors and their behavior. In 1965, the American strategic management expert H. Igor Ansofr first applied the idea of collaboration in this field. Behavioral economic research shows that a large number of scientific experiments and empirical studies have confirmed the advantages of the application of writing ideas in management but the current research collaborative management concept has no unified behavioral tendency and does not have realistic objectivity.

The government supervision of sustainable supply chain collaborative management is the mainstream direction of supply chain collaborative management research. In response to global warming, countries have issued a series of policies, which has set off a research upsurge in the academic circles and has triggered everyone's thinking and exploration of the future. Before companies bear part of the losses, most of the existing research is to guide macrorecommendations or government subsidies, etc. In the supply chain management of enterprises, in addition to considering economic issues, it is also necessary to promote the development of sustainable supply chain collaborative management from the perspective of government supervision, as well as environmental and social factors. In other words, companies are subject to government regulation. However, the goal of sustainable supply chain collaborative optimization seldom considers the maximum social welfare. The future can be based on government regulation management which refers to the economic, environmental, and social impact of enterprises based on the product life cycle.

2.2.4. Integration Model of Central Radiation. With the continuous development of information technology, data types and data storage are constantly increasing and the construction of enterprise informatization is accelerating. Due to the inconsistency of data standards, the difficulty of data communication between enterprises and enterprises is increasing and the number of data islands increases sharply. How to make good use of the acquired data to effectively support the business activities and decisions of enterprises has become a crucial issue in the process of enterprise informatization. In the face of the increasingly complex data environment, it is the primary task of enterprise

informatization construction to establish exchanges among multiple data islands. By analyzing the distribution, heterogeneity, and autonomy of data sources in the data center construction of downhole operation branch, this paper studies the virtual data integration model and its realization technology, proposes the virtual data integration architecture, constructs the virtual data integration metadata model, and realizes the data integration among information islands based on the model. We set up a data source layer for data source dispersion. A metamodel of virtual data integration is established by using metadata technology, through the metamodel to realize the logical integration of multiple scattered data sources to form the unified data access logical interface. In order to effectively solve the problem of low data source access efficiency, the data access layer is constructed by data segmentation technology. The granularity of the accessed data is refined to improve the efficiency of data access.

# 2.2.5. Analysis of the Path for Enterprises to Build Green Marketing

- (1) Change the concept of the environment and establish a "green" consumer culture. Enterprises should change the misconception of "polluting first, then treating," establish an environmental concept, condense environmental protection awareness into the values of each employee, strengthen the concept of green marketing, and establish a "green" corporate culture. Enterprises should use a variety of publicity methods and publicity methods to continuously publicize environmental protection and green consumption knowledge to help consumers establish green consumption awareness. Enterprises should guide consumers in a variety of ways to consume reasonably and moderately, put an end to comparison consumption and show off consumption, and promote the awareness of green consumption in the society by promoting the knowledge of green consumption and forming an atmosphere of green consumption
- (2) Improve the green management organization and establish green rules and regulations. To implement green marketing, enterprises must rely on effective organization and management. First of all, the enterprise should set up a special green management organization, which is responsible for the green design, green production, and green marketing of the company. Establish full-time environmental protection functional departments at all levels, implement internal hierarchical management, integrate corporate resources, and jointly complete ecological environmental protection and construction. Secondly, we should carry out green education activities for employees, help employees understand basic environmental protection knowledge and master specific environmental protection skills, and improve the teaching effect by establishing a corresponding reward and punishment system. Finally,

through strengthening management and technological innovation, enterprises must strive to obtain green environmental label certification and international environmental standard system certification in developed countries in Europe and America, establish a green image of the enterprise, enhance the competitiveness of the enterprise, and break through the restrictions of green barriers in developed countries. In addition, enterprises should construct a green evaluation index system to monitor their green marketing behavior

The core elements of the development model based on workflow efficiency mainly include the following aspects:

Roles: different configurations of roles under different organisational structures, with clear correspondence between roles and people.

Responsibilities: definitions of responsibilities for different roles, used to clarify the stages and timing of intervention in the process.

Processes: definition of the sequence of nodes in the corresponding process according to the scenario, e.g. development, testing, deployment.

Nodes: clear definition of roles in different nodes, as enablers for the orderly completion of the nodes.

A rational process management mechanism that facilitates efficient work; in order to avoid excessive complexity in process collaboration, collaboration rules are also established.

#### 3. The Experiments

#### 3.1. Experimental Settings

- 3.1.1. Experimental Background. In response to the requirements of the green marketing development model of the enterprise, this experiment investigated the speed of completing the operational tasks of 40 enterprises across the country, the time required for multilevel managers to hand over tasks, and the accuracy and superiority of the assigned tasks to reduce environmental pollution. From the perspective of improving safety production and monitoring accuracy, test the advantages and popularity of cloud computing in the green operation model of enterprises and combine cloud computing with the green development model of enterprises to make it play the greatest role in enterprise management and development.
- 3.1.2. Experimental Setup Process. The experiment sets up a control group and an experimental group. The control group adopted the traditional enterprise marketing model, and the experimental group adopted the human-computer interactive cloud computing green marketing model. Because cloud computing is a relatively large concept, we conduct research through specific tasks, give full play to the advantages of enterprise personnel, and get results.

#### 3.2. Experimental Steps

3.2.1. Data Accuracy of Human-Computer Interaction Adjustment in the Enterprise Green Marketing System. Using

human power to transmit data, 40 companies are divided into four groups, each group of 10 companies, named A, B, C, and D groups. Traditionally, four sets of data are used to transmit data and the efficiency of manpower in transmission is detected based on the time required to complete the given task plan.

- 3.2.2. Meetings and Tasks Are Performed by Manpower throughout the Day. Divide 40 companies into eight groups of 5 companies, 4 groups of experimental groups, and 4 groups of control groups, using manual testing as the control group, and the experimental group uses the cloud computing submethod, using Internet thinking for testing, and treat each process as each node, and each node can be detected, and time is used as the main observation parameter to detect the accuracy of the data obtained. In turn, these datasets are often entered as parameters and analyzed by the necessary algorithms to produce the final result.
- 3.2.3. Convenience of Detection Using Cloud Computing. Use artificial detection as a control group to collect data on the cloud computing of the nodes. Through multiple experiments and integrations, the time and workflow are planned to obtain the optimal combination ratio.
- 3.2.4. Feasibility of Cloud Computing in the Development Model of Corporate Green Marketing. According to the monitoring plan given by the cloud computing and the monitored parameters of the enterprise's green marketing model, the simulation parameter estimation scheme through the simulation database is feasible.

#### 4. Discussion

- 4.1. Comparative Analysis of Two Different Schemes
  - (1) From Table 1 and Figure 2, it can be seen that the four sets of situation data indicate that the data of pure human resources in the enterprise operating system are compared with the data measured through cloud computing. It can be clearly seen that the efficiency of the nodes based on cloud computing is significantly higher than the efficiency of manual work. By comparing the entire work, it is found that the error rate has been greatly reduced and the working time has been reduced. When the error rate is 33.2%, the node's efficiency is 44.8%. The working efficiency is increased by about 20% compared with that of the control group. It can be seen that the marketing model under the cloud computing situation is conducive to the conservation of corporate resources and has a promoting effect on the green development model of the enterprise
  - (2) Table 2 and Figure 3 are the results of research on the use of cloud computing to set the nodes of enterprise resources. Enterprise work detects people's work errors every two hours, and compares the data

TABLE 1: Degree of 1	reduction of the e	experimental gro	oup compared v	with the control	group (unit%).	

	Error rate	Operating hours	Work efficiency
Comparison between group A and the control group	34.2	45.8	44.8
Comparison between group B and the control group	33.2	48.2	53.8
Comparison between group C and the control group	26.7	45.1	56.8
Comparison between group D and the control group	36.8	50.1	49.3

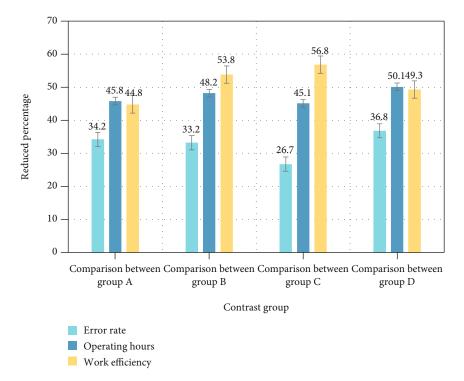


FIGURE 2: Degree of reduction of the experimental group compared with the control group (unit%).

Table 2: Number of errors in the comparison between the two groups.

	In the case of cloud computing	Professional inspector	Degree of error reduction (%)
7 to 9 o'clock	4	8	0.50
9 to 11 o'clock	2	6	0.33
13:00 to 15:00	5	12	0.58
15:00 to 17:00	8	16	0.50
17:00 to 19:00	5	9	0.44
19:00 to 21:00	6	11	0.45

of cloud computing and professional manual detection, from 7:00 am to 11:00 am. There is a slight error; the temperature data of human-computer interaction detection measured from 13:00 noon to 21:00 pm is compared with the data of manual detec-

tion. The experimental results show that the error of each working line in cloud computing is much smaller than that of professional manual measurement. From the data shown in Table 2 and Figure 3, it can be seen that the number of errors of each working line is higher than that of the professional work. The number of errors is small, and the number of errors in the experimental group is about 50% lower than that of the control group on average. This shows that if the company wants to develop a marketing model from green, the combination with cloud computing is essential

## 4.2. Advantages of Using Cloud Computing in the System of Enterprise Green Marketing

(1) The data shows that after excluding some experimental errors, the data obtained by professional manual testing and cloud computing testing are basically the same. Before the cloud computing measuring instrument, the number of labor used was 22 ± 1 people, and after the various parameters of enterprise green marketing obtained by cloud computing detection assistance, the number of labor used was

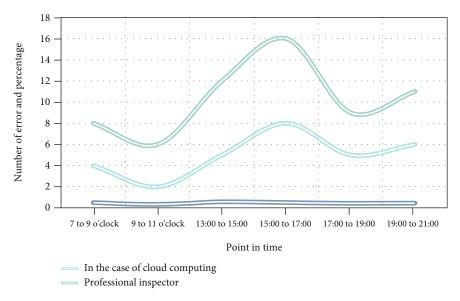


FIGURE 3: Number of errors in the comparison between the two groups.

TABLE 3: Comparison of cloud computing and control.

	Number of people saved	Economic cost savings (%)	Time saving (%)
Comparison between group A and the control group	8	34.4	33.4
Comparison between group B and the control group	10	25.7	48.5
Comparison between group C and the control group	5	13.5	52.1
Comparison between group D and the control group	8	15.3	45.7

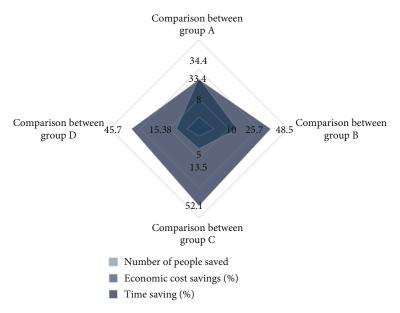


FIGURE 4: Comparison of cloud computing and control.

greatly reduced and the number was  $5\pm1$ . For individuals, their labor costs have been greatly reduced by nearly 80% and the working speed has been increased by 60%. As shown in Table 3 and Figure 4, it can be seen that the number of people in each work line has been greatly reduced. Four groups of enterprises were randomly selected. In

the same type of work, it was found that after using the cloud computing node strategy to improve the work, its number has been significantly reduced, the economic cost has been saved by about 20%, and the average working time of a batch of the entire work line has been saved by about 45%. It can be seen from this that the combined application of

Table 4: Comparison of advantages of using cloud computing.

	Speed of capital return (%)	Fast storage improvement rate	Duty cycle improvement rate
Group A enterprise	46.4	47.2	54.2
Group B enterprises	55.3	52.1	48.3
Group C enterprises	48.6	55.6	47.2
Group D enterprise	55.8	56.6	48.5

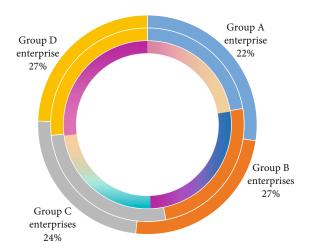


FIGURE 5: Comparison of the advantages of using cloud computing.

enterprise green marketing methods and cloud computing networks is conducive to the development of enterprises

(2) It can be seen in Table 4 and Figure 5 that after the four groups of enterprises experimented with working lines, they switched to cloud computing storage and program operations. Because the safe use of the program and the entire process reduce excessive manual intervention, this not only frees people's hands and brains but also greatly saves the length of the enterprise's operating capital chain. On the other hand, because it is fast and easy, the characteristics of short-term storage can reduce the company's entire data and operation and storage costs. From the comparison of the company's threemonth work data with the traditional job issuance, the company's work efficiency in safe operation and enterprise storage, as well as the cost of funds, is clear. The recovery speed has been greatly improved. From this aspect, it can be seen that the green marketing model of cloud computing enterprises can quickly recover the funds of the enterprise, which is beneficial to the development of the enterprise

#### 5. Conclusions

Enterprises are not only the subject of economic activities but also consumers of productive resources and creators of products. They are also the subjects and entities of industrial development and technological use, which play a very important role in the sustainable development of the society. For the enterprise, the green economy promotes the transformation of the company's business model into resource conservation or intensive transformation. It uses cloud computing to promote enterprises to meet consumers' green needs as the starting point to organize production, emphasizes environmental protection, and seeks economic, social, and ecological aspects. Benefits are unified. More and more companies will use cloud computing as the basic operating model.

Sound laws and regulations can effectively promote the implementation of green marketing and also promote the development of green product production. Although China has formulated relevant laws and regulations on environmental protection and sustainable development, these systems are not complete and there are some shortcomings, which can no longer meet the development needs of the market economy. The cloud computing enterprise green marketing development model can speed up the company's capital recovery rate, reduce the loss caused by unnecessary manual interference, improve the company's work efficiency, make the office convenient, and operate the network, which greatly saves the company's operating costs. This has greatly promoted the development of enterprises.

Based on the trend of the Internet, the research is based on cloud computing to reform the original traditional methods of enterprises to achieve higher accuracy and superiority. This article is aimed at studying cloud computing-based enterprise green marketing development models. This article compares and analyzes enterprise green marketing systems through big data algorithms and statistical methods. It starts with the basic characteristics of cloud computing, studies the opportunities and challenges that cloud computing brings to enterprises' green marketing efforts, describes the green marketing processes and characteristics of enterprises, and analyzes cloud. The feasibility of the construction of the computing system, the basic architecture of the cloud computing system, and the construction of a complete cloud computing data processing flow are proposed. The research data found that the combination of the green marketing development model and cloud computing in the enterprise operating system is conducive to the development of the enterprise; it improves the discovery efficiency of the enterprise and reduces the pollution in the production of the enterprise; the cloud computing can greatly improve the work efficiency of the employees. Cloud computing can improve employees' task completion speed by about 20% and reduce the error rate by about 50%. Cloud computing has guiding significance for the long-term development of the company's green marketing development model.

#### **Data Availability**

This article does not cover data research. No data were used to support this study.

#### **Conflicts of Interest**

The authors declare that they have no conflicts of interest.

#### References

- [1] C. Li, S. Zhang, P. Liu, F. Sun, J. M. Cioffi, and L. Yang, "Overhearing protocol design exploiting Intercell interference in cooperative green networks," *IEEE Transactions on Vehicular Technology*, vol. 65, no. 1, pp. 441–446, 2016.
- [2] Y. Yu, "Research on the evaluation algorithm of social capital influence of enterprise network marketing," Security and Communication Networks, vol. 2021, Article ID 7711322, 8 pages, 2021.
- [3] A. F. S. Devaraj, M. Elhoseny, S. Dhanasekaran, E. L. Lydia, and K. Shankar, "Hybridization of firefly and Improved multi-objective particle swarm optimization algorithm for energy efficient load balancing in cloud computing environments," *Journal of Parallel and Distributed Computing*, vol. 142, pp. 36–45, 2020.
- [4] Y. Zhao, "Sports enterprise marketing and financial risk management based on decision tree and data mining," *Journal of Healthcare Engineering*, vol. 2021, Article ID 7632110, 8 pages, 2021.
- [5] H. Hwangbo, Y. S. Kim, and K. J. Cha, "Use of the smart store for persuasive marketing and immersive customer experiences: a case study of Korean Apparel Enterprise," *Mobile Information Systems*, vol. 2017, Article ID 4738340, 17 pages, 2017.
- [6] R. Arora, A. Parashar, and Cloud Computing Is Transforming, "Secure user data in cloud computing using encryption algorithms," *International Journal of Engineering Research and Applications*, vol. 3, no. 4, pp. 1922–1926, 2017.
- [7] K. Shizuma, W. I. Nursal, and Y. Sakurai, "Long-term monitoring of radiocesium concentration in sediments and river water along five rivers in Minami-Soma city during 2012–2016 following the Fukushima Dai-ichi Nuclear Power Plant accident," *Applied Sciences*, vol. 8, no. 8, pp. 1319–1329, 2018.
- [8] X. Li, H. Jianmin, B. Hou, and P. Zhang, "Exploring the innovation modes and evolution of the cloud-based service using the activity theory on the basis of big data," *Cluster Computing*, vol. 21, no. 1, pp. 907–922, 2018.
- [9] R. Arora, "A study of consumers' attitude towards environment friendly products," *Asian Social Science*, vol. 8, no. 12, 2018.
- [10] L. Qi, X. Chang, and J. Guan, "The application of pump intelligent condition monitoring technology in nuclear power station *IOP Conference Series: Earth and Environmental Science*,", no. 3, Article ID 032006, 2019.
- [11] M. Armbrust, "Research contributions in human-computer interaction," *Interactions*, vol. 23, no. 3, pp. 38–44, 2016.
- [12] L. Chen and X. Yin, "Low-power pest monitoring model based on cloud computing," *Revista Cientifica-Facultad de Ciencias Veterinarias*, vol. 29, no. 2, 2019.
- [13] S. Sun, M. Kadoch, L. Gong, and B. Rong, "Integrating network function virtualization with SDR and SDN for 4G/5G networks," *IEEE Network*, vol. 29, no. 3, pp. 54–59, 2015.
- [14] V. Agarwal, J. W. Buttles, L. H. Beaty, J. Naser, and B. P. Hallbert, "Wireless online position monitoring of manual valve types for plant configuration management in nuclear power plants," *IEEE Sensors Journal*, vol. 17, no. 2, pp. 311–322, 2017.

- [15] S. Namasudra and P. Roy, "PpBAC," *Journal of Organizational and End User Computing*, vol. 30, no. 4, pp. 14–31, 2018.
- [16] B. Huang, J. Wei, Y. Tang, and C. Liu, "Enterprise risk assessment based on machine learning," *Computational Intelligence and Neuroscience*, vol. 2021, Article ID 6049195, 6 pages, 2021.
- [17] M. Peng, H. Wang, S. Chen et al., "An intelligent hybrid methodology of on-line system-level fault diagnosis for nuclear power plant," *Nuclear Engineering and Technology*, vol. 50, no. 3, pp. 396–410, 2018.
- [18] K. Hirose, "Long-term monitoring of radiocesium deposition near the Fukushima Dai-ichi nuclear power plant: effect of interception of radiocesium on vegetables," *Journal of Radio Analytical and Nuclear Chemistry*, vol. 318, no. 1, pp. 65–70, 2018.
- [19] E. I. Sobeh, N. S. Donia, A. M. Abd el Salam, and M. N. ELSayed, "Design of a sensor network node for air quality monitoring in nuclear installations," *Journal of Environmental Science*, vol. 45, no. 3, pp. 69–85, 2019.
- [20] L. Zhu, M. Li, and N. Metawa, "Financial risk evaluation Z-score model for intelligent IoT-based enterprises," *Information Processing & Management*, vol. 58, no. 6, article 102692, 2021
- [21] J. Aparna, S. Philip, and A. Topkar, "Thermal energy harvester powered piezoresistive pressure sensor system with wireless operation for nuclear reactor application," *Review of Scientific Instruments*, vol. 90, no. 4, pp. 044705–044747, 2019.
- [22] H. Chen, H. Chen, W. Zhang, C. Yang, and H. Cui, "Research on marketing prediction model based on Markov prediction," *Wireless Communications and Mobile Computing*, vol. 2021, Article ID 4535181, 9 pages, 2021.
- [23] B. Yang and Y. M. Liao, "Research on enterprise risk knowledge graph based on multi-source data fusion," *Neural Computing and Applications*, vol. 34, no. 4, pp. 2569–2582, 2022.
- [24] M. Raza, N. Aslam, H. le-Minh, S. Hussain, Y. Cao, and N. M. Khan, "A critical analysis of research potential, challenges, and future directives in industrial wireless sensor networks," *IEEE Communications Surveys & Tutorials*, vol. 20, no. 1, pp. 39–95, 2017.
- [25] H. Yetgin, K. T. K. Cheung, M. el-Hajjar, and L. Hanzo, "A survey of network lifetime maximization techniques in wireless sensor networks," *IEEE Communications Surveys & Tutorials*, vol. 19, no. 2, pp. 828–854, 2018.
- [26] P. C. S. Rao, P. K. Jana, and H. Banka, "A particle swarm optimization based energy efficient cluster head selection algorithm for wireless sensor networks," Wireless Networks, vol. 23, no. 7, pp. 2005–2020, 2017.
- [27] S. Kurt, H. U. Yildiz, M. Yigit, B. Tavli, and V. C. Gungor, "Packet size optimization in wireless sensor networks for smart grid applications," *IEEE Transactions on Industrial Elec*tronics, vol. 64, no. 3, pp. 2392–2401, 2017.