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Based on e-Business technology to construct logistics information service platform of renewable resources ——Taking Nanning city as an example

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Abstract: With the rapid development of economy and the increase of population, we are facing the stern challenge of lack of resources and environment pollution. Through the recycling of resources we can reduce the exploitation of native resources and save energy. At present, the level of recycling resources in Nanning city is quite low, as do the utilization rate of recovery. The recyclable resource logistics information service platform is built to collect recyclable resources, also have other function like product display, online trading, information management and customer service, the platform can give recyclable resources information service to citizens of Nanning, which have a great significance on recyclable resources industry in Nanning.

Keywords: E-Business, Logistics information service platform of renewable resources, Nanning city

1. INTRODUCTION

According to the 2006 April national "General Office of the Ministry of Commerce on the organization to carry out pilot work notice", Nanning city was listed as one of 24 national renewable resource recycling system pilot city. With the development of renewable resources industry and information technology, computer technology has widely applied in the renewable resources industry, the traditional renewable resources enterprises in Nanning city is now facing the problem on changing the existing management mode, and the challenge on making a higher leveled logistics service. Therefore, the construction of the online recovery of Logistics information service platform of renewable resources is not only designed for realize the renewable resources of Nanning city e-Business technology products, online trading, information management, customer service function based on, but also for the development of renewable resources industry which can promote the use of renewable resources industry, in order to achieve information management.

2. INVESTIGATION AND ANALYSIS ON THE STATUS OF RENEWABLE RESOURCES

2.1 Renewable resources survey

Renewable resources is generated in the process of social production and consumption, which have lost all or part of its using value but can regain some value after recycling and processing^[1]. Including scrap metal,

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discarded electronic products, electrical and mechanical equipment and parts, waste paper raw materials (such as waste paper, cotton), waste light chemical raw materials (such as rubber, plastic, packing of pesticide, animal bones, hair and so on), waste glass and so on.

Before the "Eleven fifes", the recycling level of renewable resources industry in Nanning city is quite low, the problems of small scale, inadequate equipment, two pollution are prominent. But with the development of market economy, especially since 2008, the relevant departments of the state and local levels of government unveiled intensive promotion of policies of renewable resource recycling system, recycling and utilization was greater popularity and attention. At present, Nanning city has completed the construction, renovation of street community recycling sites in more than 40, new, renovation of distributed transaction market of more than 3, in a scrap yard 1, renewable resource recycling business place area of more than 7 square meters. All kinds of renewable resources recovery ability has reached more than 100000 tons, recycling business radiation to Baise, Chongzuo, Qinzhou, Fangcheng county.

Nanning city is one of the 24 pilot city construction of national renewable resource recycling system, plan to build a renewable resource recycling system which include 350 recycle stations, 8 distributed transaction markets and 1 industrial base. A reporter from the industry and information technology committee was informed of Nanning city, as one of the important contents of national Ministry of Commerce to carry out the national renewable resource system for experimental work in Nanning, Nanning city, plans to invest ¥2,300,000,000 industrial base of renewable resources in Anji area construction of Nanning city, Xixiangtang District, the project will be scattered in the renewable resource recycling enterprises in urban centralized arrangement to the park, for the use of renewable resources, the formation of scale and cluster. Nanning city regeneration resources industry base after completion, annual recycling renewable resources will reach 660000 tons, the project by the plastics recycling processing and utilization zones, scrap metal, electrical appliances and vehicle dismantling and recycling, paper recycling area, deep processing of renewable resources, composition of pollutants disposal area and service management center of area 6 big areas, will eventually annual processing of waste plastics recycling 300000 tons of products, scrap metal, electrical appliances and vehicle dismantling recycling 300000 tons of products, the recycling of waste paper products 60,000 tons of production scale.

2.2 Existence of renewable resources industry problems

2.2.1 Renewable resources industry management system is not perfect

With the reform of national economic system, Renewable resources industry failed to get into the local macro-control track in Nanning, which lead to lower management level, confused market and blinded development ^[2]. At present, Nanning city engaged in recycling of waste materials of the self-employed and private enterprises rapid expansion in the number of renewable resources industry, individual and joint-stock private enterprises accounted for the majority, but the composition of complex, the lack of unified management, make the enterprise management ineffective management state ^[3]. Self-employed business recycling mode single, some operators engaged in illegal recycling scrap car dismantling and assembling scrap automobiles, some even become illegal molecular fence place.

2.2.2 Regeneration of industrial resources industry progress is slow

Because renewable resources industry is a low-profit industry, and the lack of investment in state and local funding and technology, causing the lack of technology, most of the operators with manual labor; concentration degree of the resources is low; the technological content of products and added value is very low, not use many resources recycling industrialization degree; the use of low ^[4]. It is understood from Nanning city, Xixiangtang District Environmental Protection Bureau, engaged in renewable resources recovery Nanning city the size of more than 10 enterprises, has a certain scale distribution market in 4, small distributed transaction market 9, urban recycling station more than 500, including 40% undocumented recycling station, the staff of nearly 10000

people (including the movement of personnel). Because of inadequate investment, market disorder, the use of renewable resources recovery of the small scale of production, the level is low, environmental pollution, serious waste of renewable resources.

2.2.3 Renewable resources industry informatization level low

At present, the primary objective of Nanning city waste material website is to provide waste material supply and demand information service for a certain area, operating unit is cooperated with local enterprises, to provide local service, the trading range and the distribution of renewable resources has its limitation, the lack of standard caused the information isolated each other, make traders information without fast delivery and sharing, low operation efficiency [5]. Main technical obstacles which lies in the service operation mode of e-Business web site are limited to text information browsing, and professional technology constraints, important characteristics of regenerative resource description is not detailed, unable to solve the key problems of information asymmetry and screening. Therefore, resulting in the vast amounts of information quickly and find the best deals become a bottleneck of website platform scale [6].

3. CONSTRUCTION OF LOGISTICS INFORMATION SERVICE PLATFORM OF RENEWABLE RESOURCES BASED ON THE TECHNOLOGY OF E-BUSINESS

Under the financial crisis, the waste plastic, scrap metal recycling industry, which lies in the middle of the industrial chain of small and medium-sized enterprises went bankrupt due to sharp price increases upstream raw materials and downstream demand, there are enterprises because of errors in judgment, hoarding a large number of products can not sell into retreat dilemma. Recycling of renewable resources and transaction costs and the high cost of traditional, through the construction of e-Business technology based on renewable resources of Nanning city logistics information service platform can significantly shorten the supply chain, reduce circulation, reduce social cost, can fully satisfy the online negotiation transaction, settlement performance requirements delivery management, transaction management, settlement and other business functions and the system, including the establishment of renewable resources platform construction spot electronic trading market of renewable resources, the contract market and spot market three market, realize the whole process of regeneration resources trade. Selection of e-Business transaction system project development and rich experience in the implementation, technical strength and the system guarantee of fully continuous system two times the development and upgrade of the system support technology in the development process., The establishment of e-Business sites achieve renewable resources in Nanning city online recycling, product display, online trading, information management, customer service and other functions, the better for the majority of Nanning provide renewable resource information service, can help the renewable resources industry development of Nanning city.

4. CONSTRUCTION OF LOGISTICS INFORMATION SERVICE PLATFORM OF RENEWABLE RESOURCES FOR E-BUSINESS TECHNOLOGY BASED ON NEEDS ANALYSIS

4.1 Logistics information service platform of renewable resources service object

Logistics information service platform of renewable resources service object mainly includes two aspects: one is the need of renewable resources enterprises to provide services to customers, can be resource suppliers or distributors, in the service platform to support can greatly reduce logistics cost, can get high quality service; the two refers to the relevant departments to provide logistics services as a renewable resource companies or enterprises [7].

4.2 The main function of Logistics information service platform of renewable resources

4.2.1 Integrated renewable resource information service function

The perfect information system is a renewable resource recycling business resources, an important guarantee for improving the operational efficiency, renewable resources through logistics information service platform to publish and query information, to meet the needs of different enterprises of renewable resources information. The platform not only focus on sharing and resource recycling resource information of other enterprises, application service mode for renewable resources enterprise service platform for enterprises to provide, to solve the problem of information service enterprises, the daily management to achieve customer management, enterprise storage scheduling, financial and other information; it can communicate with customers online, the latest information, customer support line order, greatly simplifies the transaction process.

4.2.2 Online recycling, product display and online transactions

Complex of renewable resources recovery process of traditional, spend time, online recycling renewable resources through logistics information service platform can realize resource, and can be recycled after processed products displayed on the platform, the convenience of customers browse and buy, buy a good customer after the online transaction [8]. Through the service platform for the enterprise resource recycling, trading to save a lot of time, cost, and improve the overall profit of enterprise.

4.2.3 Customer relationship management and service function

The function includes basic information of customers, the customer signed a contract agreement, the client's business information management, customer telephone follow-up service and customer demand management and other functions. Renewable resources service platform for the registration of the enterprise credit assessment, provide personalized service includes basic information management, order management, members of the business tracking, members of the status of goods as well as members of the content.

4.2.4 System management function

System management is the management of Logistics information service platform of renewable resources , including user management, user management, system maintenance, system parameter setting and data backup / restore function.

5. DESIGN AND OPERATION OF RENEWABLE RESOURCES OF LOGISTICS INFORMATION SERVICE PLATFORM BASED ON THE TECHNOLOGY OF E-BUSINESS

Logistics information service platform of renewable resources includes 3 main modules: renewable resources enterprise resource recycling; product display, shopping and trading information online communication and information sharing. Platform architecture as shown in Figure 1:

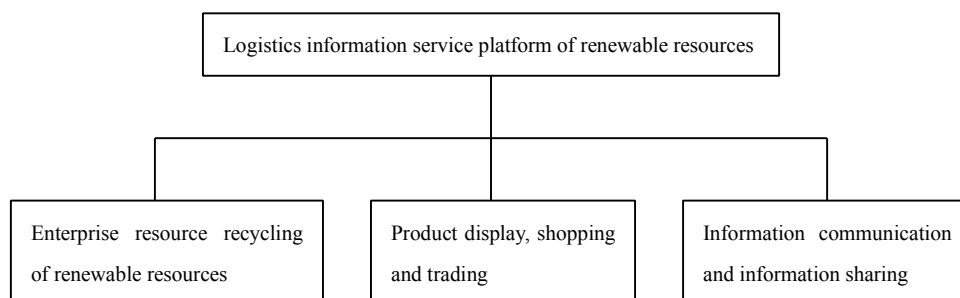


Figure 1. The overall architecture of renewable resources logistics information service platform

5.1 Enterprise resource recycling of renewable resources

This module is the recycling of renewable resources by waste materials enterprises, its operation process is as follows:

- Announce the recovery information which the recycling enterprise needs.
- Transfer the information to all clients through the service platform from its information channels.
- Customers receive this information can sell their waste items to recycling enterprise.
- The collection depot will collect the waste materials.
- Classify the waste.
- After classification, send the waste to dismantling company for dismantling through logistics company.
- Send the disassembled

objects to recycling company through logistics company.

By this means the renewable resource recycling process specification, the whole process is simpler and more convenient, the manpower and time cost is reduce much, the enterprise's profit is enhanced. The business process is shown in figure 2:

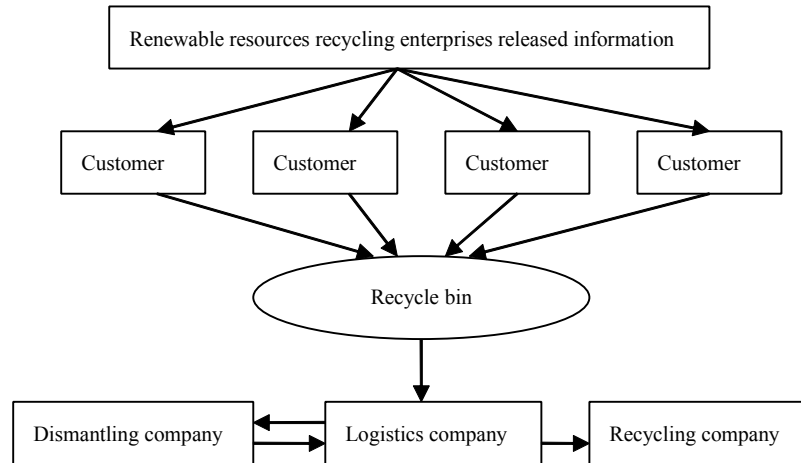


Figure 2. Enterprise resource recycling of renewable resources

5.2 Product display, shopping and trading

The module for products in the online display, purchase and trade, its operation process is as follows:

- To display product information to customers [9].
- Customers browse through the platform for various products, compare the prices, and confirm to buy.

• The orders should get through the system certification, once passed customer can make online transactions.

Through the network customers can easily complete the product display, shopping and trading at any time, and the transaction cost is greatly reduced [10]. Business process as shown in figure 3:

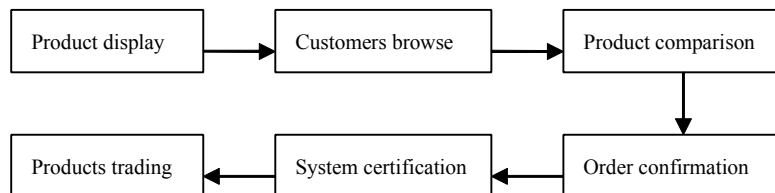


Figure 3. Product display, shopping and trading

5.3 Information communication and information sharing

To provide information of online communication and information of the module for Logistics information service platform of renewable resources for members to share service [11]. Which platform members include renewable resources, waste materials enterprises sell clients, customers to purchase products etc. Its process is as follows:

- Collect related information.
- Systemize collected information.

- Communication and shared Information between companies and customers.

By this means members of the platform can search the information they needed, enterprises and customers can get the latest resource prices and resource supply and demand rate, so as to grasp the market dynamics. The business process as shown in figure 4:

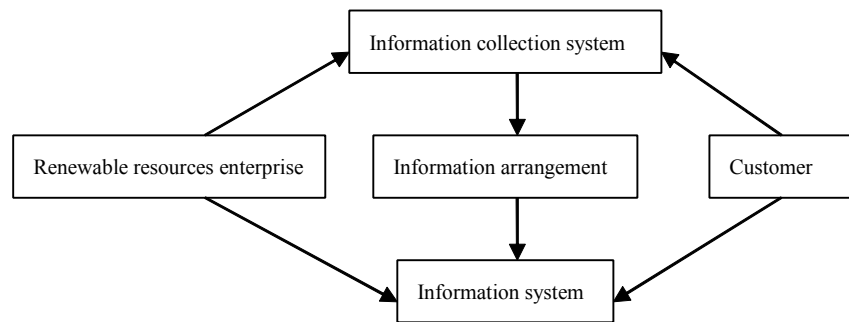


Figure 4. Information communication and information sharing

6. CONCLUSIONS

With the development of economy, resources and environment has become the major bottleneck of economic development, in recent years we splurge the enormous energy and environmental costs on supporting the GDP. But if we going on that way, we are going to suffer the exhausting of resources and the destructing of the environment, sustainable economic and social development will be impossible. Therefore, vigorously develop renewable resources industry is not only to promote the recycling economy construction, construction of a conservation-oriented society's need, but also an effective way to solve the exhaustion of resources, energy shortages, environmental pollution and other social problems. The construction of Nanning city Logistics information service platform is used to fit the "non-standard" transaction, the complex goods delivery process, based on the characteristics of the demand, credit sale of seats, mutual evaluation method to solve the credit problems in the process of traditional trade, the interface design is based on easy operating, reducing the search time; considerate individual needs, establish a standard, the standardized operation platform, change the information mutual closed condition, fast delivery and widely shared enable traders to realize the information, improve operational efficiency.

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