

Research on the Mode of Enterprise Service Innovation in Micro Era

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Abstract

Service innovation as an important technology innovation form, plays more and more important role in economic growth and social development, it has received extensive attention from both academic and industrial circles. This paper analyzes the driving force and the modes of the enterprises service innovation, points out the problem of enterprise service innovation in micro era, and proposes the improvement of enterprise service innovation strategy.

Keywords: *Service innovation, Driving force, Mode, Micro era*

1. Introduction

Nowadays, we have entered a worthy of the name "micro era". Micro message, micro-blog, micro credit, micro novel, micro film, micro media, micro advertising, micro payment, and so on, all of these new cultural form, mode of transmission, economic activity patterns, lifestyles, accompanied by the rapid development of computer network and mobile Internet, has subliminally defined our lives in potential. So we can say that "micro" has become a key word of our lives.

The micro economy is Post-Fordism economic, more personalized products and services oriented, and the quality is higher than the scale, green, interactive, dialogue and win-win. The micro economy respects every consumer demand, the services are more meticulous.

Micro era put forward higher requirements to enterprise service, not only provides multidimensional service, but also requires a corresponding service innovation, customers can comments on services through the Internet or mobile terminal, enterprises need to respond quickly to customers. The enterprise service innovation from internal drive to the external drive, from customer participation to customer orientation, from enterprises provided to custom driven in micro era.

At present, the essence of micro era is based on Internet technology as the core of the network information society; it has become an important way to promote enterprise service innovation. The information value lies in that it not only can improve the operation efficiency of industry, also plays more and more important role in the integration of organizational and social resource. Thus, there exists a close relationship between enterprise informatization and service innovation, which cannot be ignored in the study of the service innovation of enterprise, enterprise most services can become more efficient through the information technology (such as the Internet and communication technology). However, from the retrieved literature, few scholars do research on the service innovation of enterprise from the information technology, information technology, e-commerce perspective. In this paper, analyzed some existing problems of enterprise service innovation in micro era from the basic meaning of service innovation and driving force, then proposed the enterprise service innovation strategy to solve these problems, which has an important guiding significance for the enterprises to carry out the service innovation in the new period.

2. The Connotation and Influence Factors of Enterprise Service Innovation

Service innovation as an important technology innovation form, plays a more and more important role in economic growth and social development, has received extensive attention from both academic and industrial circles. The fundamental purpose of service innovation is creating new market value, establishing the competitive advantage of enterprise, realizing the sustainable growth of enterprises. It is an important means to enhance the competitiveness of enterprises.

2.1. The Connotation of Service Innovation

Both academic and industrial circles are far from agreement for the concept of service innovation. It is because that the service innovation itself is very abstract, on the other hand, experts and scholars of various countries have different study perspective and the study environment for service innovation, including the developing stage, the internal and external environment, the consumption level, and so on. The different aspects make it must be tested, whether the different countries service innovation theory is suitable for the national service industries.

From the source of service innovation point of view, some scholars regard the service innovation as a kind of special knowledge. They regard the core of service innovation as knowledge innovation. Of course, technology is a form of knowledge. Nonaka and Takeuchi (1995) pointed out that the tacit knowledge was the main source of continuous innovation and creating new knowledge [1]. Van and Elfring (2002) thought that service innovation was a new service concept, a new service behavior and the process of implementation of new goals [2].

From the angle of innovativeness, Heany (1983) divided the service innovation into radical innovation and incremental innovation [3]. Hauknes (1998) thought that technology was one of a dimension for service innovation, service innovation however coverage was broader, and it should be a broader category concept [4].

From the perspective of customers, Tidd and Hull (2003) thought that service innovation was the service concept or the service processes with a significant change given by the enterprise or organization to increase the added value of the customer, or a new service mode or method in order to resolve customer questions [5]. Lu Ruoyu (2000) researched the service innovation of manufacturing industry, and thought service innovation defined the improvement of all the activities directly faced customers, in order to facilitate the mining for the potential benefits of existing and new products, and through the relevant channels of communication, form the benign interactive dynamic partnership with customers in terms of service and product quality [6].

From the angle of service form, Berry *et al.*, (2006) thought that service innovation referred to the provision of new services modes, and the expansion of existing service modes, and emphasized the importance to develop new market by service innovation [7]. Lin Lei and Wu Guisheng (2007) argued that the concept of service innovation was very wide, and it could occur in various industries and various departments [8].

From the characteristic angle of service innovation, Xu Qingrui (2003) pointed out that the key point of service innovation was the transformation process. This was the use of new technology to transform the old processes in order to form the new processes, and then the service product innovation [9]. Wang Lin, Wei Jiang and Hu Shengrong *et al.*, (2009) thought that service innovation included transmission innovation and concept innovation [10]. The former referred to innovation in order to improve the operational efficiency of enterprises and improve the customer satisfaction of the service, the latter referred to the provision of a new or improved service content or function for the customer.

From the knowledge perspective, Meng Qingwei *et al.*, (2004) thought the service innovation referred to the knowledge creation activities means based on the old knowledge, and shared the enterprise knowledge in the flow accompanied by the emergence of new products and new services, integrated knowledge in the sharing processes, thereby generating evolution process of original knowledge [11].

At present, the related research results of service innovation generally refer to the service innovation can be divided into product innovation, process innovation, transfer innovation, market innovation, technology innovation, organization innovation, creativity innovation, reorganization innovation, specialized innovation and formal innovation, and so on [12].

2.2. The Influence Factors of Enterprise Service Innovation

The influence factors of service innovation can be divided into two categories internal factors and external factors.

The internal factors of service innovation: the main driving force of service innovation comes from internal factors. Demand, technology and competition are the key driving force in the process of service innovation. The first is the employee. The employee involvement is the key to whether the service innovation completes. Therefore, employee plays a very important role in the process of service innovation. The employee's innovation ability is one of the core competitiveness of enterprises. The employees with the innovative spirit and creative ability are the key resource of enterprise. So it is important for service innovation in paying attention to train innovative thinking ability of staff. Secondly, select innovation mode. Innovation mode of different property service enterprises may select different modes. If the choice is undeserved, then the service innovation result will be affected. Third, correct service innovation strategy is the key to the success or failure of service innovation. The strategic direction of service innovation mainly face to benefits, differentiation, customer first, system optimization and advanced direction. Different from tangible products, intangible service products do not exist in form of entity before providing consumers and in it may disappear after consuming. Therefore, it is difficult to find and eliminate the defects through repeated test way. If there are problems in the consumer process, it is more difficult to be modified. Fourth, the cost factors of company innovation. The innovation cost is too high, it may cause the service innovation ability of some small company is not high. Fifth, the corporate culture will also affect service innovation. Research shows that, the innovation ability in a good culture of innovation in enterprises is higher than those who do not have a culture of enterprise innovation.

The external factors of service innovation: the first is the customer factor. Different customers have different personal preferences, consumption habits and personality and so on. Interactive habits will also affect each other for different consumer environment, which makes the service innovation uncertain. Even the same service products can't meet the needs of different consumer, which will affect the development efficiency of service product. The second is the influence of national policy environment. The basic economic system and legal rules are not the same in different countries, and this also affects service innovation. Third is the market environment. For the different needs of the market, the content of service innovation will be different; the degree of innovation will also be affected. In the markets of developed countries, the service industry accounts for a high proportion, so the service innovation degree is deeper, and in the developing countries, the proportion of industry is still the principal, so the technological innovation is the main innovation mode.

3. The Driven Force for the Enterprise Service Innovation

The basic driving force of the service innovation is the basis of innovation mode, and at the same time, it determines innovation model. The combination of driving force factors will form system innovation environment of the service enterprises. To correctly identify and grasp the driving force is the premise of developing service innovation strategy, and it also is an important means with management departments in the service industry affecting innovation activity.

The driving forces that service enterprises carry out innovation activities are various, and it includes both internal driving coming from the behavior subject and the external factors. Sundbo and Gallouj regard a single enterprise as the interface identifying a driving force (Figure 1) [13], and divide the driving force into the internal driving force and external driving force. Each kind of driving force contains different factors and has different effects on the innovation activities.

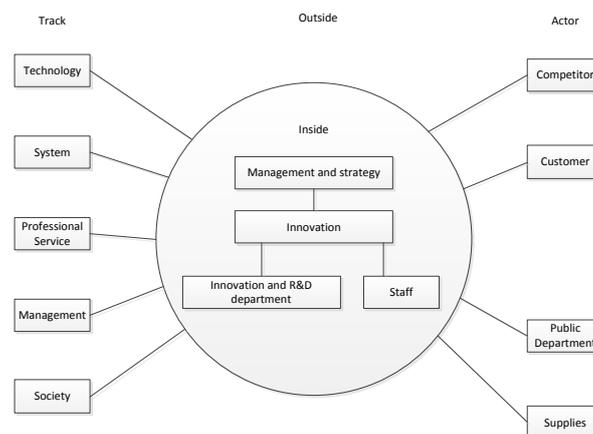


Figure 1. The Driving Force Model of Service Innovation

3.1. The Internal Driving Force

Sundbo and Gallouj thought that service innovation activities mainly are driven by the internal power in the enterprise. The internal driving forces include three categories: strategy and management of enterprises, employee, innovation department and R&D department.

(1) Strategy and management of enterprises

For the enterprise, strategy is one of the most fundamental and most effective driving forces of internal innovation. Strategy is service enterprise long-term planning about their own development, and it is a fundamental principle guiding in service activities of the enterprise. The innovative service enterprises will regard the innovation as an important part of strategic planning, which is a fundamental means to obtain competitive advantage, occupy the market and form a good corporate image. In order to form an innovation management concept, enterprises must make the innovation become active and the internal motive power to seek survival and development. In addition to the strategy, management is another key internal driving force, and it mainly refers to the enterprise top management and management activities of marketing departments. The management activities of marketing departments occur more frequently, because the service innovation is often driven by the market and the marketing department is a function department in direct contact with customers and having extensive market knowledge. It will timely respond appropriately by management activities based on market changes and customer needs, and inspire the appearance of certain innovation. The top management activities can not only react to the market demand, but also lead innovation through the

improvement of organizational change, the new market development, operation and transfer process. Strategy and management are two kinds of important driving forces in the occurrence and development of innovation activities. And service enterprises should actively apply the two driving forces, triggering innovation activities through strategic planning and management activities accordingly.

(2) Employee

Service innovation is the interaction process between service employees and customers, so the employees become an internal value driving force. Employees have a unique key role in the service innovation process, and they not only provide innovative ideas for the enterprise, but also become a business internal innovation entrepreneurship in order to promote the emergence and development of innovation. The employees can most directly find customer needs in the process of interaction with the customer, and thus stimulate to generate a large number of innovative ideas. At the same time, employees can provide valuable innovation thought based on their own knowledge and innovation experience, so this is one of the important driving forces.

(3) Innovation and R&D department

The innovation department in the service enterprise is a form of communication department having a certain effective to make innovation emergence, whose duty is to induce and collect the concept of innovation, therefore it may also lead to the emergence of innovative activities. But it is not main driving factors of innovation. In addition, service firms rarely have the formal R&D department in similar manufacturing enterprises, and its activity is often appear in another way, but it will become a source of innovative ideas and have a certain impact on the effectiveness of innovation. Regardless of effectiveness, service enterprise innovation department and R&D sectors may both become a driving force of service innovation activities.

3.2. The External Driving Force

(1) Track

The track is propagated in the social system, thought a lot of actors who is difficult to identify spread and diffusion, corresponding to the dynamic environment around. In the "track" concept, the key is the spread concept and logic, rather than the mode of transmission which actors spread. We must notice that, although individual service enterprise innovation activities may affect the given track, as the important external innovation driving force, track will exert greater effect on the enterprise, and promote enterprises to innovate in the orbit constraint.

Service enterprises' innovation activities are mainly restricted by five types of track. The most important track is the professional service in these five types of track, it refers to the general knowledge, basic method and the code of conduct which exist in different professional service. This kind of track determined by the specific service department, occurrence and development of innovation activities must be based on the scope of orbit restraint. The second is the management track, according to the forms of organization of the general management concepts and methods, such as incentive mechanism, service management system. This kind of track will have a certain impact on the innovation activities. The third is the technology innovation economics track on the typical logic, that means the development of service production and delivery process must be followed the technology, such as information and communication technology, network technology and so on. Technology of track often triggered a lot of innovation, these innovation activities should not only follow professional services of track, but also for the scope of

technical track constraints. The fourth is institutional track, it describes the general evolution law and trend of the external system service enterprise environment, including changes in the political environment and control rules. The influence of institutionalized track on the innovation activities of service business is more than manufacturing, the change of institutional environment will promote the emergence of innovation, may also inhibit the occurrence of innovations. The last one is social track, it is the evolution of social general rules and practices, has a significant impact on the innovation service activities of enterprises such as ecological and environmental protection consciousness. Social track may conform to the technological track or not.

(2) Actor

Refers to a person, company or organization, who has important influence on the behavior of innovation activities of service enterprises, and often be included in the innovation process. Customer is one of the most important actors. They are the sources of information and the innovation thought, also often participate the innovation process in service enterprises, has important impact on the success of the innovation. The interface between service provider and the customer can be seen as a "laboratory", the innovation is produced here. Therefore, the customer is an important external driving force of service enterprise innovation.

In addition to the customers, competitors have a certain impact on the innovation activities. Service enterprises can make innovation through imitating innovation behavior of competitors, and service enterprises generally do not take offensive innovation strategy, so the competitor's action becomes the condition of an innovation activity began. Suppliers in particular knowledge supplier are also an important source of promoters in innovation activities, they can provide a large number of innovative ideas for service enterprises, and help enterprises to carry out specific innovation. Gallouj thinks that there is a possibility of innovation model defined "consultants to help"[13], that means the enterprise through the third party (consultant) to make the innovation, this model is the important complement to bear Pete's two famous innovation model (bear Pete model I and model II bear Pete). The knowledge service provider especially KIBS has gradually been the focus of innovation research. In addition, the technology supplier including software vendors is also an important partner in the process of innovation, many software was developed in cooperation between service enterprises and technology suppliers. Therefore, it may become a driving force of innovation activities.

The public sector has small effect to the innovation activities of service enterprises. The public sector needs service, but it can provide the knowledge for innovation and the experience of management for service enterprises, and training the staff for service enterprises, carry out the specialized research on service innovation. The public sector indirectly promotes the innovation activities though this way, but it is rarely a direct actor in the process of service innovation. The public sector will exert some control on the service enterprise, which may make a lot of innovation appear, such as many financial services are generated by the change of tax system.

Seen from the driving force model, the mode of the service innovation of enterprise should be analyzed from the two aspects of internal and external. Among them, the enterprise internal mainly consider from strategy, management, staff, and R&D departments; for the individual's "micro" characteristics in the micro era, there is reasonable to research the enterprise external factors from the customer, competitor and social track.

4. The Innovation Mode of Enterprise Services

Some innovation patterns of service enterprises are similar as the manufacturing, and the service enterprises contain more unique innovation mode of services, they were adopted more frequently and more widely by the enterprises. In addition, the heterogeneity of service sector made the different types of innovation activities must adapt to the different innovation patterns.

4.1. The Traditional Service Mode

We can see from Figure 2, the technology track is the main driving force of Innovation, and the enterprise also has one or more specifically R&D department for the innovation, but these R&D departments are simple linear relationship to other departments, without any actual feedback, it can also be regarded as the mode of linear model traditional innovation. Although customer appears in this schema, it is not involved in the actual situation of the innovation process; it is only a passive recipient of innovation.

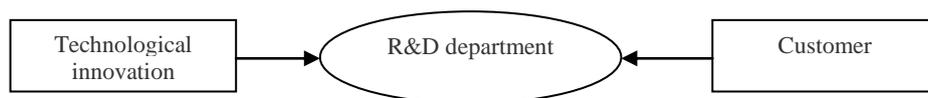


Figure 2. The Traditional Service Mode

4.2. The New Industrial Service Mode

It applies to the information service industry which follow the traditionally mass production mode and facing strong competition pressure of the large-scale (such as bank, insurance, postal service). Kline and Rosenberg thought that, innovation is arisen through interaction source or actors, innovation process rarely follows a linear model, but more complex models with interaction are used in these enterprises [14].

As shown in the figure 3, the main external driving force is the professional service track, technical track and the customer, including technical track is more important; the internal driving forces such as management and strategy play an important role in the mode, but the R&D sector is relatively weak. The customer is not as a source of information and the passive recipients of innovation, but the participants actively in innovation. It pulls effect on the innovation of the new industrial service mode.

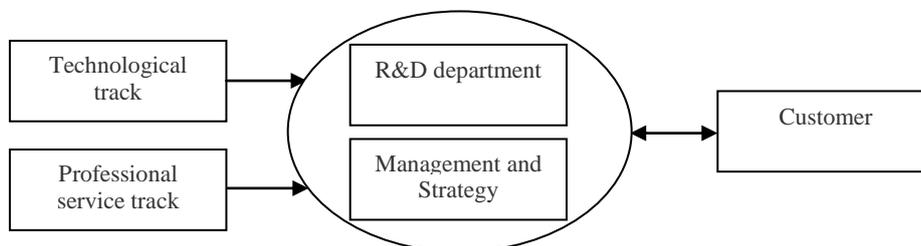


Figure 3. The New Industrial Service Mode

4.3. The Professional Service Mode

As shown in the Figure 4, the innovation main driving force of professional service mode is the professional services track. The focus of innovation is the interface with the customer interaction, customer plays an important role. Therefore, ad hoc innovation is a usual innovative form [15]; this is an innovation form for customers to solute particular problem.



Figure 4. The Professional Service Mode

4.4. The Organized Strategic Innovation Mode

This mode which known as “organization management mode” is the most typical innovation mode in the service department. Not only have the large enterprises, also small businesses used this mode. The process of innovation is under the guidance of enterprise management and strategy, so it is the strategic development of conscious and organized. There is lack of a formal R&D department in enterprises, that means the development of new concept and innovative research is everybody's job.

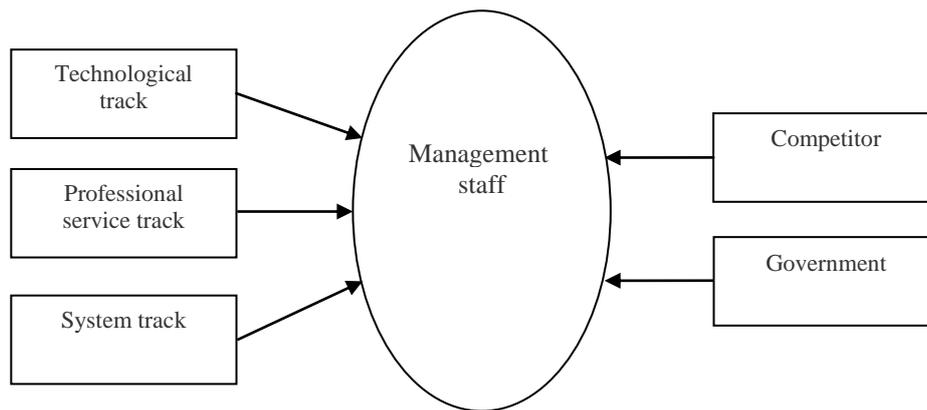


Figure 5. The Organized Strategic Innovation Mode

As shown in Figure 5, in this mode, almost all of the internal and external innovation driving force will have an impact on innovation, but strategy and management play a dominant role, innovation is a conscious and systematic activity under the guidance of enterprise strategy. At the same time, the employees' spirit of innovation in enterprises is very active; they are an important source of innovative ideas.

4.5. The Network Innovation Mode

This is a mode that a lot of service enterprises combined with a common network to innovation, the purpose is to induce the member enterprises' innovation. This mode often appears in innovation activities of the tourism industry and some financial group. Network mode has its own R&D departments, but the R&D department only interacts with members of the enterprise, without direct contact with the customer and supplier. Therefore, in the effect of network enterprise innovation external driving force, in addition to a variety of track, only competitors and the public sector play a part in action, as shown in Figure 6.

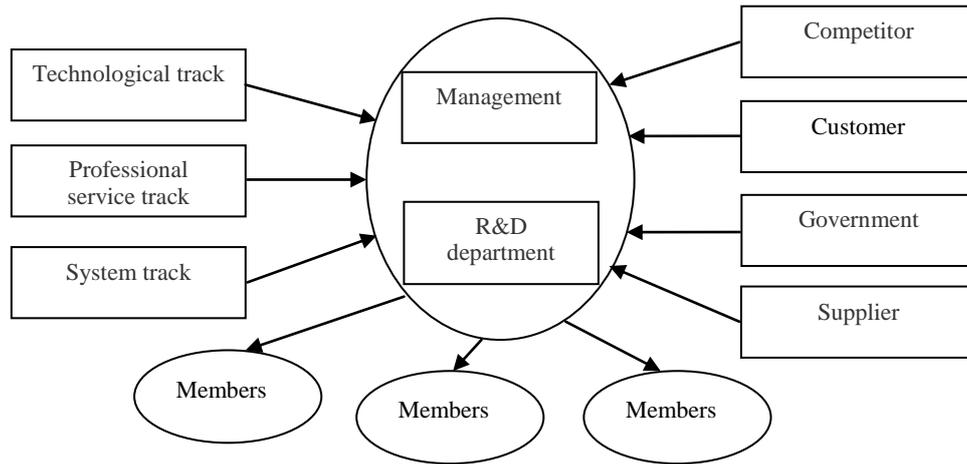


Figure 6. The Network Innovation Mode

5. The Existence Question of the Enterprise Service Innovation in Micro Era

With the development of the network and information society, information technology and communication technology has been widely applied to the service design process, enhances the possibility of service innovation. Informatization makes services more feature, content more extensive, more detailed division of labor, more formation of new industry and more employment opportunities. Information technology has become the main driving force of enterprise service innovation. Information technology makes the service time, space, service mode with unlimited expansion; the used way of information become fast, personality, interactive, one-stop, barrier free, seamless connection; It also have the sustainable development ability from the maximize open and neutral of the network platform. So the social network information plays an important role in the enterprise service innovation.

The use of network platform force enterprises to increase the power of service innovation, however, many problems also exist in the process of service innovation in the enterprise. Based on four dimensions factors of service innovation, these questions mainly display as follows:

(1) The Lack of Attention to the New Business Services Supporting

Many enterprises focus on innovation in technology, but they don't pay attention to the subsequent supporting needed by new service business innovation. Not complete in time service. There is not enough scope and intensity of new business promotion. These will make customers not understand and accept the innovations. At the same time, the enterprise interior staffs are unfamiliar with new business matching services, and it hinders the promotion of service innovation.

(2) The Internal Driving Force for Service Innovation

The powers of the enterprise service innovation come from two aspects of internal and external. The power source of service innovation is the external pressure of market competition for most enterprises. Enterprise innovation lacks internal driving force. First of all, the enterprise interior staff quality is not high, and they are fear and a boycott of service innovation. This is because that they worry about damage of their own interests through innovation behaviors. Secondly, the enterprise decision-making layer lacks the management concept of innovation, and enterprise leaders lack market oriented innovation spirit.

(3) The existence of blind phenomenon in service innovation

Usually, the service innovation of short life cycle is very easy to imitate. Domestic enterprises imitate blindly in service innovation, and enterprises lack investigation and analysis of the pre - market and customers, so the innovation is difficult to succeed.

6. Enterprise Service Innovation Strategies in Micro Era

Based on four dimensional model of service innovation, the enterprise service innovation content should include the following four aspects:

(1) New Service Concepts Introduced Continually

Establish a consumer oriented service concept. The services provided by enterprises maximize the consideration from the consumer's needs to meet consumer demand. Enterprises must regard customer satisfaction as the center in the design of service product, in order to improve efficiency, reduce costs, improve service quality, provide maximum service benefits for consumers, and gain competitive advantage from service.

Before the innovation of the new service concept, enterprises must have analysis and investigation about competitors and market. Otherwise only innovation is the castles in the air, and it can't be achieved or not achieve the expected goal. The tiny or different with rivals service innovations are all not easy in each link in any ring such as the network marketing, customer service consulting, payment and delivery, service after sale, and so on. For example, protect the security of network transactions; eliminate the potential safety problems in e-commerce transactions to prevent economic loss of customers. The protection of customer privacy makes customers more security and peace of mind in the purchase of goods. These are the problem that the environment enterprise service innovation must consider.

(2) A New Platform Built for Customer Communication

Make full use of various media communicate with customer smoothly, rapidly, timely to effectively solve customer problems. In addition to fax, telephone, e-mail, QQ, you can also consider the use of Micro message, micro-blog, and it can help the enterprise business to arrive in the level of potential customers, and keep viscous contact with old customers.

The enterprise must combine the traditional channels of communication and network information channels organically, combine online and offline services, and has timely access to customer feedback information, and put the customer information in the customer database. We use the information to customer relationship management, and realize self-service and active customer service. It can not only reduce the cost of customer service, but also win the trust of customers to improve customer loyalty.

(3) The Realization of New service Delivery System

The enterprise service delivery system is innovated mainly by the service enterprise's internal organization arrange, that is, through the appropriate organization and arrange, management and coordination to ensure that the enterprise staff perform the job effectively, develop and provide innovative service products.

Develop standardized, rationalized the customer service process, such as customer service flow, return flow, complaint handling process, and so on. These processes made must stand in the position of the customer set, and set up the specific steps in order to continue dynamic service flow through careful department investigation and effectiveness analysis. Changes in the enterprises, in the market, in the policy,

everything changes, so the process is not fixed, and it is a continuous dynamic process of customer service.

The enterprise must have a reasonable and efficient customer service team in order to realize the service innovation. The customer service team must be designed by the department organization structure, post setting. It is a principle that always in accordance with the operation Department's plan and actual operation situation for the corresponding specific plans or instant change.

(4) The Application of New Technology for the Service

The services based on modern information and communication technology (ICT) such as software ASA service (SaaS), online outsourcing service, *etc.*, are the new fastest growing economy service. Enterprises should use technology innovation to improve their quality of service, such as making clear the sales site to attract potential customers, providing excellent customer consultation web, mobile e-commerce application, and so on.

Application of cloud computing can provide the online e-commerce service enterprises need by online rental way in the cloud platform, greatly reducing the costs that enterprise obtain the electronic commerce IT capacity. So e-commerce enterprises can focus on the most valuable business activities such as promoting the brand, quality control, strengthening design, enhancing user experience, effective network marketing. We can be effectively integrated upstream and downstream enterprises, and innovate e-commerce business models through the cloud platform.

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