

An Example of E-Commerce Platform in Anhui Tobacco Corporation

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Abstract

Anhui Tobacco Corporation (ATC) is a large state-owned group corporation. After a long period of planned economy system, ATC is not suit for marketing economy. With rigid management method, bad service and high trade cost, ATC is weak in competition. Shortly after 1-year's construction, ATC built up an E-commerce platform which has the largest bargain and perfectly combines the traditional industry with modern information technology. The information system is based on a network connecting all the subordinate factories, branches and wholesale center. It is centered by e-business, including e-commerce platform, centralized fund management system, and ERP for manufacturing factories and MIS for sales firms will be applied later. Since the platform went into operation in Oct.,2001,an average of thousand boxes of cigarette has been dealt. Up to March,2002, the trading fund amounts to 400 million yuan. This figure is forecasted to be one billion in 2002. At the same time, income grows rapidly. The allot income increases 24% compared with the same period last year; wholesale increases 14%, profit increases 21%. Information system must service the strategy target, and be driven by management innovation. The success is due to idea renewing, leadership, organization and Training from beginning to end.

1. Introduction

By the end of 2000, Anhui Tobacco Corporation (ATC) was still backward in information system, far behind such advanced provinces as Shanghai, Yunnan and Hunan. Shortly after 1-year's construction, ATC built up an E-commerce platform which has the largest bargain and perfectly combines the traditional industry with modern information technology. The success is due to idea renewing, leadership and organization. All enterprises preparing to construct e-commerce can learn much from this case.

2. Background of E-commerce construction

ATC has 23 subordinate organizations, including 8 factories, 17branches, with a totaling staff of 20000. It has 7000 wholesale net terminals, 27 retail shops. After a long period of planned economy system, ATC is not suit for marketing economy. With rigid management method, bad service and high trade cost, ATC is weak in competition.

In order to survive and grow rapidly in the new era of knowledge economy and information, ATC must solve two main problems. First, inside the corporation, it must

standardize production, strengthen management, re-organize management structure. Second, outside the corporation, it must setup a strict rule for tobacco market, blow away imitate and forge product. ATC undertook the above work before, but no better effect was achieved because of heavy job, bad organization and weak method. In the new era, this can be achieved by information system to guarantee the growth target.

3. Procedure of E-commerce system construction

3.1 Re-construction of marketing net up to sky and down on earth

According to administration region, geographic environment and economic region, ATC redesigned its business flow, logistic flow and inspection flow, and built up a network covering all the cities, counties and towns throughout the province. This net has 7156 sales routes, 6361 distribution routes and 7386 inspection routes. With an effort of standard service, sending goods directly to customers etc., the net is more complete, more unblocked and more effective. It is also a ready platform for the e-commerce platform to be constructed later.

3.2 Weaving a network up to sky and down on earth

The first step in constructing ATC tobacco information system is to build a computer network connecting all the subordinate factories, branches and wholesale center. By the end of 2000, ATC begin to invest several million yuan to construct the industrial private net that is 'up to sky and down on earth' with the principle of 'International standard, Chinese characteristic and suitable for Anhui'. In the sky, ATC links with China Tobacco Corporation through satellite; on the earth, ATC connects its subordinates, wholesale centers, inspection branches and banks through DDN,PSDN. The net will be further connects to workshops, machines and customers in the future.

The private net is used not only for data transmission, but also for other applications. The internal IP-phone system is used by all users throughout the province with a charge of zero. The video meeting system is normally in use for tobacco industrial meeting and training. Everyone can discuss business and learn new technology in his own office, saving a large amount of money that is needed for traveling. The inter- and extra- web sites are open to visitors inside and outside ATC.

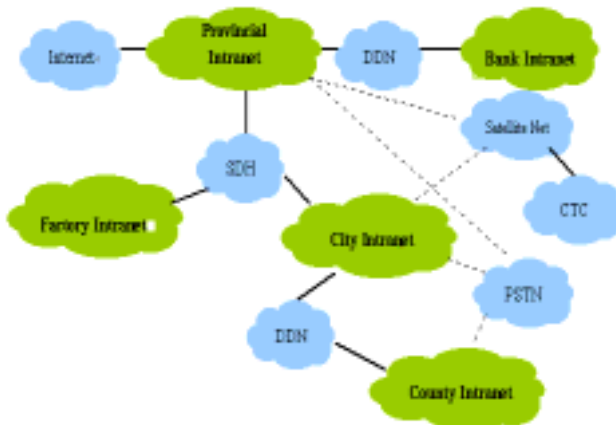


Fig.1 The Top Structure of ATC Intranet/Extranet

3.3 Innovation drives information system

Information system must service the strategy target, and be driven by management innovation. During the construction of information system, ATC invented many innovative methods.

The first is innovation of marketing network.. ATC built up a multi-dimensional marketing system covering information flow, currency flow and goods flow. The most significant innovation is centralized logistics, centralized customer visiting and centralized inspection. With specialization and division, such phenomenon as practicing fraud and secret bribery is eliminated completely, which ensures the purity of business.

The second is the innovation of managing idea. In 2000, ATC stated that 'Retail shops are our parents of living'; in 2001, ATC further raised the idea to 'Service is of outmost important; Customers should be respected everywhere'. With the application of methods in Customer Relationship Management, ATC setup a system of customer management, which focuses on improving customer's satisfaction, contribution and loyalty. This system tried hard to achieve a state that the co-operation between ATC and customer is distance-zero, customer's cost of purchase is zero, and customer's complain on service is zero. In this state, customer's resource and value can be fully mined.

Thirdly is the innovation of management system. ATC pays yearly salary for the main leaders of its subordinate organizations according to their work achievement. The application of yearly salary stimulated these leaders as were as provide a standard of assignment for them.

The fourth is the innovation of work examination. In the past 2 years, ATC did not assign such quota as profit, tax or selling. It assigned a new examination quota system mainly concerning the quality of operation. For subordinate organization, the quota is increase of growth; for salesmen, it's income and gross profit; for monopoly staff, it's quantity and purity of the market; and for all leaders, the main examination quota is the quality of their

work. This new examination system is more rational. It released all the people from traditional quota, enabling them to do more important work.

4. Application of software centered on e-commerce

4.1 The strategy of software application

In 1993, ATC began to build its information system, but the application goes slowly. Later, ATC developed a set of software named 'ATC Business Information System', which was appraised by China Tobacco Corporation in 1996. There were only four users by the end of 1998.

Entering 2000, the information system and their blocks still remained isolated from each other, forming many 'information islands'. The network equipments were out of fashion, only connecting cities. In such environment, ATC was hesitated to start e-commerce. Will the e-commerce platform become a mirage in this loose base of information system? Should we start from the very beginning in a traditional way? By that time, there was no complete e-commerce platform in our nation. Should we wait until other company builds a model?

It is risky to invest a large amount of money and build an information system. Such system may look vast, but it can't run smoothly. Therefore, ATC determined a strategy of planning totally and implementing progressively. First of all, ATC plans to build a e-commerce platform with the function of cigarette dispatching, transporting and accounting, ignoring the demand of factories and retails. After the platform operates in good condition, the logistic management is completed, and the market environment is improved, ATC will prolong the platform to B-C, and finally B-B including firms both inside and outside. At that time, online purchasing and selling will be achieved.

The basic idea of constructing ATC's e-commerce system is to achieve standardization through information system and build up a scientific management system. The system is centered by e-business, including e-commerce platform, centralized fund management system, ERP for manufacturing factories and MIS for sales firms. The



Fig.2 Framework of ATC information System

main frame of the system is shown in Fig 2.

4.2 E-commerce trade platform

E-commerce platform is a trade and managing tie connecting producers, agents, customers and banks. In order to be easily operated, ATC first built a B-B e-commerce platform which has a vast amount of trade. The platform is open to tobacco 8 factories, 17 branches, all the wholesale centers and 2 banks. The procedure includes web ordering, electric approval, online payment and logistics. It takes only 10-20 minutes to process an order.

As known to all, e-business has three difficult problems in China: safety, payment and material flow. Many e-business companies lost a lot in these problems. But with the superiority in tobacco industry, ATC ingeniously solved the problems.

First, the ATC's network is a sealed network in tobacco industry, not opened to outside yet. Therefore, enterprises outside tobacco industry can't trade in the e-commerce platform. On the surface, it seems to contrast the rule of opening advocated by e-business. But actually, it is this sealed network that ensures the safety in the not matured social environment. With all the traders being brothers inside the industry and strict control, no business cheat can appear.

Secondly, the rule of paying first and delivering second also avoids the debt crisis often appeared in such inside-industrial trading. Therefore, if relative enterprises are all involved in the e-commerce platform, the real time accounting can be achieved and the main problems become only technology and skill.

Thirdly, ATC connect the e-commerce platform with information systems in Industrial and Business Bank and Agriculture Bank by special lines. A machine located between information systems transmits data and ensures the safety. In this method, cigarette factories open bank accounts in both banks, and the sales companies in cities and counties open only one account in either bank. The purpose of cooperation with two banks is to avoid the difficulty of financial accounting between banks. At the same time, this structure can guarantee the platform running in good condition. If one bank has any problem, the other can be a 'backup'. The result of competition between two banks is better service.

Finally, the logistics network constructed by ATC itself ensures the material flow. A high-lever centralized dispatching center is built in each city. There are 6,159 delivery lines, 2,974 delivery cars in ATC. In cities and towns, the delivery occurs at least one time in 2 days to each retails, and in countryside, it occurs at least one time in 3-4 days.

Since the platform went into operation in Oct., 2001, an average of thousand boxes of cigarette has been dealt.

Up to March, 2002, the trading fund amounts to 400 million Yuan. This figure is forecasted to be one billion in 2002. Anhui tobacco industry has preliminarily realized internet ordering, trading, and payment. The platform can also trace the whole procedure of any business, display trading status simultaneously, and provide reports automatically for managers throughout the province. The application of e-commerce re-constructed the marketing system as were as the model of management, which ensures the policies such as 'payment first, delivery second' to be strictly carried out. By now, the platform is the largest B-B electronic commerce platform in China.

4.3 Fund management centralization and account system

It's important to centrally manage fund for groups as ATC. With Fund management centralization, flexible operation, safety and accuracy can be ensured, and the operation cost can be reduced. Several years ago, ATC began to centrally manage its fund. But with weak means of management, the target could not be achieved. After the operation of e-commerce platform, the fund management centralization and account system is also ignited, which connect tightly to the platform.

Now, all the 66 members are using this system. Every member has an independent account number and has the right of determining its own fund. The department of financial affairs can inspect the fund flow through network. It can also regulate the requirement and surplus of fund between two or more subordinate members. One member can lend its fund to another without the help of banks. From inner load applying to plan balancing, financial approving and lender's approving, it takes only minutes. The result is that the efficiency is improved, the total loan of ATC decreases rapidly and financial cost reduced greatly. Restricting only to financial cost, a total saving of about 50,000,000 Yuan is predicted.

The e-commerce system is not isolated. The supplement software such as Office Automation, Sales and Service come into operation last year. ATC plans to apply CRM, SCM in 2002 after the stable operation of e-commerce platform. It also plans to apply ERP to manufacturing factories in the near future. These systems will makeup a complete information system, centralized on e-commerce, connecting both inside and outside Anhui Tobacco Industry.

5. Benefit of e-commerce application

The following figure best shows the benefit of e-commerce application in Anhui Tobacco Industry.

Income grows rapidly. The allot income increases 24% compared with the same period last year; wholesale increases 14%, profit increases 21%. The wholesale gross profit ratio of cigarette product achieves 18.65% with an increase of 4.9%. The ratio of profit plus tax vs capital

increases 14 percentage. The ratio of capital income increases 12%. The storage of cigarette remains 200,000 boxes, a 110,800 boxes' below the control lever of assigned by China Tobacco Corporation. The total profit plus tax increases 34%. The productivity increases 28.7%.

The efficiency of fund utilization increases greatly. The total loan of Anhui Tobacco Industry decreases from 330 million Yuan in 1999 to 160 million Yuan in 2001. It will become zero by the end of March, 2002. This has an interest saving of about 10 million Yuan. At the same time, the harmful capital decreases. Through resource reconstruction, the total capital of ATC decreases from 1130 million in 1999 to 960 million now. The total debt decreases from 730 million to 532 million. The existing stock decreases from 300 million to 220 million.

With re-organization, department decreases 46%, management staff decreases 34%, financial cost decreases 54%, sales income increases 17%, total profit increases 242%.

The brand begins to centralize. The number of Brands of ATC decreases from 70 to 52. The number of brand which has a sales income over 100 thousand boxes increase from one to four.

6. Realization in e-commerce construction

6.1 The renewing of idea is the fundamental requirement in information system construction

Compared to first-rate tobacco companies in the world, ATC is far behind in production, management, technology etc.. The backward of management is extremely obvious, which mainly appeared in management idea. The practice of ATC e-commerce construction shows that, the most difficult problem lying in information system construction is neither technology nor fund, but the renewing of management ideas.

Shortly in one year of 2001, ATC completed over 10 important projects of system construction including computer network, e-commerce, fund centralization, office automation, bank accounting, group IP phone, video meeting and so on. If we followed the prescribed order, it's impossible to finish so many projects. Only when we take an idea of standing in a high lever, constructing simultaneously and arousing all the staff can we make the significant achievements.

For example, in the construction of computer network, ATC took the potential resource of the network in the future as its bargain weight. With the result of visit bids, the investment of the net became zero, and the yearly rent of was settled in 2 million. Besides, the bank provided the interface equipment valued over 4 million. This result is far bellow the budget of 20-30 million fund investment and nearly 10 million yearly rent.

6.2 Overall arrangement is the necessary prerequisite

E-commerce system must be constructed to meet the practical requirement of enterprise. It must have an overall plan with obvious key points, sufficient fund and manpower. Meanwhile, the system must solve the most difficult problem. The procedure of construction must be focused on raising the competence of enterprise. With the principal of advanced in technology, practical, we must act according to our ability in order to invest little and harvest much.

6.3 Top leader's project

To describe the importance of e-commerce construction, we often use the words of 'top leader's project'. It doesn't merely mean people and fund investment. First of all, the top leader must be confident. The construction is a process of standardization, reformation and innovation accompanied by the re-allocation of right and benefit. It's a new challenge to both the leader and the staff. Therefore, the leader must be confident himself and transfer this confidence to all the staff. Otherwise, the information systems are impossible to be constructed.

Secondly, the top leader must control the direction. He must be participated in distributing limited resource, inspecting the rate of progress, undertaking supplementary reform, coordinating departments and grasping the best chance. Finally, he must provide a priority of both fund and manpower to the system. The top leader of ATC takes the information system as an important part of ATC's strategy, and he has done much to guarantee the smooth construction of the system.

6.4 E-commerce requires many compound talents

Talents are essential to e-commerce. Talent shortage is normal to most enterprises. There are two ways to solve the problem. One is to train own talents, and the other is to import from the outside. But the most important to the enterprise is to setup a system of talent usage. An environment of 'respect knowledge, respect talent' is highly needed to solve the problem of 'talents is difficult to be imported and hard to be kept'. The compound talents, who have the knowledge of both information technology and management, must be promoted to important position.

6.5 Training from beginning to end

With the progress of e-commerce construction, ATC undertook training engineering from beginning to end. The training center which is responsible to training, launched 40 training classes. Over 5,000 people were trained there. ATC also raised classes of EMBA and Master of Engineering with universities. About 50 people study in the class in their spare time. ATC set the target of its rank construction as 'Intelligent workers, thinking cadres and researching leaders'. It is trying to build the corporation into a learning organization. With the overall quality improvement of both staff and the enterprise, the

competence of ATC is improving everyday.

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