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WORLD MARITIME UNIVERSITY

Shanghai, China

RESEARCH OF CUSTOMER RELATIONSHIP MANAGEMENT (CRM) IN A LOGISTICS COMPANY

By

FANG SURUI China

A research paper submitted to the World Maritime University in partial Fulfillment of the requirements for the award of the degree of

MASTER OF SCIENCE

(INTERNATIONAL TRANSPORT AND LOGISTICS)

2007

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DECLARATION

I certify that all material in this research paper that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

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Abstract

Title of Research Paper: Research of Customer Relationship Management (CRM) in

Logistics Company

Degree: MSc

In logistics field, competence becomes ever serious today; the key to survive and win in the market is managing customer relationship effectively. However, in practice, customer loss is still a serious problem in many logistics company. This paper tries to introduce the way of improving CRM performance and effectiveness by setting up internal targeted performance level of CRM activity to customers in different industries. In Chapter 3 and Chapter 4, this paper defines the characteristics of CRM in logistics company and activities included in CRM process. Base on the identification in the two chapters, Chapter 5 introduces survey of customer expectation and processes statistics originated from the survey to set up a targeted performance level for a certain logistics company to enhance the efficiency and effectiveness of CRM activities. The paper defines the customer contribution and improvement effort, considering them with customer expectation to reach a performance level that balance between customer and the capabilities of logistics company. Chapter 6 concludes the findings of this paper and point out the aspect for further investigations in the subject.

KEYWORDS: CRM activity, distinguished performance level

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List of Abbreviations

CRM: customer relationship management

KPI: key performance indicator

1. Introduction

1.1 purpose

Within the present business environment, characterized by an increasingly aggressive competence, the battle to win customers is stronger every day. More and more industries raise the attention to the customer relationship management concept. With the understanding and implementation of Customer Relationship Management (CRM), companies will gain customer loyalty, reduce sales cycle time, reduce sales cost, expand market share... thus improve the competencies of the company in the market.

In logistics field, competence among logistics company become ever serious today, the key to survive and win in the market is getting customer, maintaining relationships and managing customers as a resource of the company. However, in practice, customer loss is still a serious problem in many logistics company. Table 1 shows a summary of annual statistics about customer loss and its reason. The summary raises the attention to make efforts in improvement of customer relationship management.

Table 1 reason of customer loss

	2005		2006	2006			
Number of lost customers	72	72 48					
Reason of loss	No.	Ratio	No.	Ratio			
Service	27	37.50%	14	29.17%			
Rate	34	47.22%	17	35.42%			
Business partner	5	6.94%	5	10.42%			
Customer payment error	2	2.78%	3	6.25%			
Unpredicted reason	7	9.72%	8	16.67%			
Customer didn't mention	1	1.39%	3	6.25%			

Source: collected data of logistics company

This paper tries to find solutions to improve CRM performance and effectiveness. That is setting up internal targeted performance level for CRM activity.

1.2 scope

The research of this paper mainly bases on the analysis of customer information in Shanghai branch office of a Deutsch logistics company. Customers being discussed in this paper are the objects of Marketing/ Sales/ Customer service. The company in China specializes in air and sea freight transport and related logistics services for manufacturing/ trading industries, fairs and events. With the growing number of customers, keeping marketing/ sales performance and integrate enterprise resources to guarantee high-level customer service quality challenges the company.

1.3 research questions

The paper tries to get a general view of current implementation of CRM in logistics company so that find out the necessities to set internal targeted performance level. These levels should not only reflect the customer expectation on service provided, but also show the abilities of logistics company's performance. Levels set up here would be activity-by-activity base on customer industries respectively.

1.4 theories and methods

1.4.1 Theory

The research of the paper is based on CRM theory. The innovator of CRM, Gartner Group regards CRM as a business strategy that organizes enterprise resources and implements customer- centric procedures by the study of customer segmentation, thus maximize profit gaining, income and customer satisfaction. The definition of customer relationship management has developed over 40 years. In the late 1960s, Levitt suggested that the goal of businesses was to "create and maintain customers" (T. Fox &

S. Stead, 2000). After more than two generations, it could be appreciated how far is the CRM concept, and the necessity to maintain a long-term relationship with customers is becoming an important issue. Philip Kotler mentioned CRM in marketing that change the sales marketing into relationship marketing. And up to nowadays, the concept of CRM can be understood with the reference of following summaries (Tao, 2003): (1) CRM redefine "customer" that refers to not only current customers, but also targeted customers and potential customers; (2) CRM redefine the scope of customer management that includes market management, sales management, service management, decision strategy, business partner management and so on; (3) relationship management emphasis on process management that coordinates with marketing, sales and service so as to realize strategic goals; (4) the core of CRM is customer value management.

1.4.2 Methods

Regarding to get targeted performance level of CRM in logistics company, questionnaire survey will be done and questionnaires will be distributed to direct business contacts of current major customers. Meanwhile, consultation with internal staff that handles daily issues of major customers for the performance improvement method and difficulty would be done. In the period of statistic processing, the paper applied linear formula and the principle of AHP analysis: "decomposition, comparative judgment and synthesis of priorities", because it is well suited to the research purpose of determining the relative importance of the customer industries so that different improvement efforts would be made to build up targeted performance level based on the survey data.

1.5 logic link of the paper

In modern logistics company, setting up internal targeted performance of complete processes included in CRM and leveraging customer resources will help to better raise the awareness of implementation.

There are six chapters in the paper:

Chapter 1 is "Introduction", including purpose, scope, research questions, theories and methods.

Chapter 2 is "Literature Review". Current study on CRM impact, service quality control will be reviewed.

Chapter 3 is "Features of CRM in logistics company". Discussing the main features of CRM process.

Chapter 4 is "CRM activities in logistics company". Dealing with identification of activities in a complete CRM procedure.

Chapter 5 is "Setting up internal targeted performance level"

Chapter 6 is "Conclusion".

1.6 limitations of this paper

Being limited by time, the paper could only raise the survey of one certain logistics company and its customers; also being lack of detailed customer satisfaction data in past, the paper regards company reports of overall customer satisfaction in former years which regardless of customer industry and detailed activity as a general reference. Thus, targeted performance level set here would be transferred from feedbacks of customer expectation survey, with the comparison of overall customer satisfaction level and the results of internal staff consulting. They have a lot of practice experience rather than academic expertise in this area and their ideas that are used to set up the targeted performance level is the sketch reference. The shortage of working experience in logistics industry also limits author's eyesight to view all-round and make analysis.

2. Literature review

2.1 impact of CRM on traditional enterprises

According to (Mendoza & Marius & Pérez & Grimán, 2001), CRM evolved from business processes, such as relationship marketing, and the increased emphasis on improved customer retention by management of customer relationships has been raised. Thus, the way exploring business and the attitude to service quality has changed. Goldenberg points out that as CRM is a relatively new concept, there are few experienced companies that allow adequate understanding and implementation (Goldenberg, 2000). Kirby expresses the problems in CRM understanding and implementation in detail (Kirby, 2001).

In a word, understanding and application of CRM will help company benefit from the reduced cost in searching new customers, reduced time and money in marketing and improved customer loyalty, traditional enterprises strive to overcome great challenges occur both internally and externally brought by this new concept.

2.2 impact of CRM on logistics companies

The product of most traditional enterprises is physical goods, and customers are always the buyer of the goods. However, the product of Logistics Company is "combined logistics services". Modern logistics company acts as a chain between seller and buyer (Han & Gao & Cao, 2003) that connects them and sell products to them.

Furthermore, with the production globalization, the scope of services provided by modern logistics company extends from single warehousing, transportation, custom clearance, and packaging to a high level of service combination so as to join in the supply chain management of customers and provide total logistics solutions. The top five logistics services and IT support functions in 2002 were: warehouse/distribution center management (77 percent); Web-enabled communications (64 percent); transportation management (64 percent); shipment tracking/tracing/event management (62 percent); and export/import/freight-forwarding/customs clearance (61 percent) (Clyde E Witt, 2003).

As a modern logistics company, the management of customer relationship always closely relate to the performance in the whole processes with the assistance of inter/intra collaboration. Morash and Lynch point out those collaborative relationships can remove bottlenecks and barriers to enable the best combination of capabilities and role assignments in the global channel. These partnerships can translate into seamless service and product offerings for customers. The key to meet demands of customers and gain customer satisfaction is to manage the logistics quality, speed and complexity (Grenoble, Luther, IV, 1994; Heikkilä, 2002).

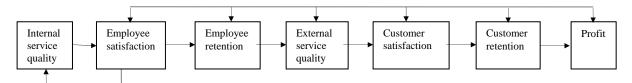
Meanwhile, studies have been made on differ customers by "customer value" so that leverage services provided, the models include: DWYER model, RFM model and Customer lifetime value model that all requires detailed original data of customer.

2.3 measurement tool of service quality

The product of logistics determines that logistics belongs to service industries. As Sasser noted in 1976, services are direct, perishable and can't usually be inventoried; the production of services is usually simultaneous with delivery – often in the presence of consumers, and the intangibility of service often complicates the task of managing capacity- matching supply and demand. Later on, Lovelock echoes above notes provided by Sasser and point out that quality control of "service" is more difficult

(Grenoble, Luther, IV, 1994). Gummesson termed "Four Types of Quality", service quality that has received attention since 1970s is one of them. He states that "service operations are heavily dependent on information technology and thus software quality is crucial for service quality." (Grenoble, Luther, IV, 1994).

The idea of controlling service quality to gain customer satisfaction so as to affect attracting customers has been mentioned (Logistics Management's Quest for Quality, 2006; Holcomb, 1994; Langley and Holcomb, 1992; Mentzer, 1993; Read and Miller, 1991) and it helps to increase profits as shown in Service-Profit Chain (Eichorn, 2004). Customer satisfaction originated in 1980, Philip Kotler defines the term as the feeling that with the comparison of perceived service and expectation.



Source: Frank L. Eichorn. Applying Internal Customer Relationship Management (IntCRM) Principles for Improving Business / IT Integration and Performance. UMI Number: 3165260 PP.49-50, 71

Figure 1 Service-profit chain

There are several dimensions that define quality, for services, by Zeithaml, Parasuraman, and Berry. Zeithaml list five dimensions that measure perceived service quality, which affect customer satisfaction: Tangibles – appearance of physical facilities, equipment, personnel and communication material; Reliability – ability to perform the promised service dependably and accurately; Responsiveness – willingness to help customers and provide prompt service; Assurance – knowledge and courtesy of employees and their ability to transfer trust and confidence; and Empathy – caring, individualized attention the firm provides its customers. A tool to measure service quality – SERVQUAL has also been developed by Zeithaml, Parasuraman, and Berry research team. The model

measures 22-item instrument that has several uses including allowing the user to determine the relative importance of the service quality dimensions defined above and attempts to measure the gap between customers' expectations of a service and perceptions of the actual service received. The factors focus on observations and perceptions regarding human behavior and characteristics (Eichorn, 2004; Liu, 2003).

Another popular management tool being built up to measure service quality performance in each period is Key Performance Indicators (Crosby). KPI, the quantifiable measurements that help an organization define and measure progress toward organizational goals (Reh). Theoretically, KPI provides a true picture of customer compliance, financial control and operational efficiency and should raise the attention of all employees in the company (DESCARTES, kpi metrics).

2.4 summaries

The paper that is based on above literature reviews will develop following points:

Point 1: general impacts of CRM on logistics enterprises have been pointed out; "customer" of logistics service is mentioned. This paper does agree on these impacts, and will have further insight into detailed nature or features of customer relationship management in logistics enterprises according to the various fields of customers included in global transportation network so as to improve CRM with clear aims.

Point 2: Apparently, SERVQUAL is helpful to find out the weakness in service quality, but it is a common indicator that not aims at specific industry. More importantly, service quality is only a part of customer relationship management, so measurement item of service quality can't be simply used for evaluation of activities included in logistics CRM system.

Therefore, current measurement items need to be adjusted to measure CRM activities. This paper will extend the scope of performance level to the whole process of customer relationship management inside a logistics company base on the survey of customer expectation on CRM activity.

Point 3: For a company, knowing how much value brought by a customer is important. Current calculation is too demanding in original data resources and prerequisites and is too complicated for common understanding and use. This paper tries to take last year's profit of logistics company as a reference to identify the "ratio of contribution" provided by certain customer and apply this ratio in forming expectation on CRM activity from specific customer industry. Therefore, it simplified the calculation and understanding, but manifests the differences in both individual customer and customer industries.

Above all, this paper will extend the research scope and apply the tool stated by former studies with adjustment.

3. Features of CRM in Logistics Company

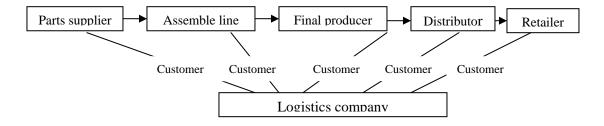
3.1 features of customers in logistics company

3.1.1 Product of logistics company

Logistics company overcomes barriers of space and time to realize physical movement with economic efficiency by combined resources. Differing from manufacturing enterprises, the product of logistics company is the one that without physical frame or physical measurement. The product of logistics company is the service that once the contacts with customer occur, the product comes into being. The product closely connects with psychological feelings that lead to difficulty in tangible measurement of quality. Logistics company sells services and wins profits from it.

3.1.2 Customer of logistics company

Generally speaking, it is very common for a logistics company to serve partial or all the parties included in a production and selling process (Figure 2), major in manufacturing/trading industries that include several intra-related parties. These parties may separate in different parts of the nation or world. Building up business relationship with these parties means the involvement in the customers' subsystems worldwide, such as selling, producing and cost controlling. Also, in specific shipment, each customer may has different requirements in lead time, promptness of delivery, flexibility of delivery, availability of additional service, quality of delivered products, etc.



Source: collected data of logistics company Figure 2 Customer of logistics company

Therefore, customers of different production period almost simultaneously appear with intra-related logistics requirements.

3.1.3 Features of customers in logistics company

1. Various professional backgrounds of customers

Customers of logistics company span in various professional field. Table 2 is a result of internal customer data study, showing that top 70 customers of a logistics company refer to seven vertical markets with features respectively.

Table 2 field of top 70 customers

Vertical Market	Number	Ratio of top 70 customers
Aerospace	2	2.86%
Automotive	16	22.86%
Chemical	9	12.86%
Consume	18	25.71%
Electronics	13	18.57%
Machinery	8	11.43%
Semicon.	4	5.71%
Total	70	100.00%

Source: collected data of logistics company

Thus, range of service provided to each customer market according to the capability of logistics company is different, see Table 3. Table 3 is the result of internal customer data study. It directly sorts out the services provided to specific customer industries.

Table 3 range of service according to customer market

Vertical Market	Range of service
Aerospace	Freight forwarding, custom clearance
Automotive	Warehousing, value-added service, distribute, custom clearance, freight forwarding
Chemical	Warehousing, custom clearance, distribute
Consume	Distribute, freight forwarding
Electronics	Warehousing, custom clearance
Machinery	Warehousing, custom clearance, value-added service, distribute
Semicon.	Warehousing, custom clearance

Source: collected data of logistics company

At the same time, with the unique service range provided and background-based requests, each customer field figures out distinguished level of requirement that has been proved in the Danuta Kisperska-Moron's survey (2005), such as requirement of handling cargo, promptness of responding to request, humidity or temperature of warehousing... It is clear that requirements of transportation function are different between branches of industry (Table 4, quote from Danuta's survey result)

Table 4 Requirements of transportation function for particular industry

Criteria	Industries										
	Metal		Metallurgical		Chemical		Light		Engineering	Electronic	
	1993	2001	1993	2001	1993	2001	1993	2001	2001	2001	
1. Lead time	4.10	4.43	4.00	3.75	4.00	4.20	3.50	4.10	4.55	3.88	
Promptness of deliveries	4.33	4.79	4.50	4.25	4.50	5.00	4.50	4.40	4.64	4.75	
3. Precision of delivered assortment	4.43	4.64	5.00	4.25	5.00	4.80	4.75	4.60	4.27	4.50	
4. Flexibility of deliveries	3.93	3.93	3.25	3.75	3.75	4.80	4.00	3.60	3.55	3.88	
Availability of additional services	3.83	3.21	3.25	2.50	2.75	3.20	1.50	2.90	3.64	3.63	
6. Quality of delivered products	4.40	4.86	4.75	5.00	4.00	4.80	4.50	4.60	4.82	4.88	

Scale: 1-not important, 5-very important.

Source: the surveyed samples in 1993 and 2001 by Danuta Kisperska-Moron

In a word, requests from customers with various professional backgrounds have common ground, but also challenge the ability of logistics company to distinguish customerised services provided.

2. Changing number of customer

Customers of logistics are mainly manufacturing enterprises, trading companies or retailers that the preference of a customer may impact on others for the sake of competition in this field. It should be well noted that key accounts, usually from manufacturing industry, play core role in business success that could bring to/ away a chain of customers in its system for logistics company.

On the other side, logistics company faces difficulty to control customer number due to the great psychological effect in the choice from customer. As discussed before, product of logistics company is service that without physical appearance, customer choice is greatly affected by his feeling if logistics company does understand him and be willing to meet his demands.

Above all, specific features of customer in logistics industry bring us into the unique features of CRM in logistics company.

3.2 CRM in logistics company

Because of the features of customers discussed above, management of customer relationship in logistics company forms its own specific characteristics. This section clarifies the features of customer relationship management.

3.2.1 Consistent

Relationship with customers starts from the point when target the potential customer. And then enter into relationship development and mature period. Finally, the built-up relationship comes to the end.

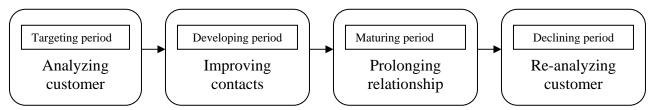


Figure 3 Four periods of relationship management

As shown in Figure3, each period of customer relationship management focuses on specific tasks. In targeting period, logistics company focus on searching for the potential customers, analyzing customer request to gain the business and start the trial shipments if possible. In this period, targeted customer almost brings bilateral confidence to the logistics company rather than measurable profits. In developing period, business increases and customer begins to bring profit to logistics company. Thus, logistics company pays attention to improving contacts and tries to push the relationship into mature stage by considering priority or dedicating person to handle and further explore routine request. In maturing period, customer brings stable gains to logistics company, and the logistics service provider regards prolonging business relationship as the top task. While in declining period, business contracted decreases, so does the profits. Whether to keep the customer or give up the relationship bases on the re-analysis of the customer. If deciding to keep the relationship, then CRM activities automatically restart from targeting period.

Therefore, CRM in logistics company is long-term and consistent activities.

3.2.2 Network must

Network here refers to three aspects, one is the Information Technology network, the second is the Global Customer network, and the third is the Business Portfolio network.

Logistics company relies on timely information exchange and tracking. Powerful Information Technology network is the necessity for parties involved to share information storage, communication and transfer. Thus, logistics companies always try best to develop a user-friendly interface for daily exchange.

In addition to information technology, Global Customer network is also important to logistics company's CRM. Being mentioned in Figure 2, the globally located production line of customer manifests the worldwide opportunity to gain customer from a certain point. The network will help local branches of logistics company to identify customer and distribute related findings to specific office to help initiate contacts. Powerful logistics company set up the global customer database and appoints staff to take care.

The third core criterion is Business Portfolio network. A strong Business Portfolio network, comprises not only hard facilities such as warehouses, transportation conveyance, or office with good equipment that keep high-quality appearance, but also an intra-organization or an alliance with business partners that could form up network system to provide continuous service mixture. Such kind of network, save the cost of providing services by realizing economies of scale, and expand the range of services so that help to attract customer's preference. Furthermore, it helps to quickly solve problems that arise in global customers' different parts of the nation or world.

Therefore, without the network, CRM in logistics company hardly takes effect. However, it also brings great challenges to logistics company in financial power, relationship with other players in the logistics industry and professional personnel resources.

3.2.3 Flexible

For the sake of cost control and management, logistics company prepares common service for ordinary customers. However, for especially important customer, common CRM principle need to be tailored into detailed procedure of standard operation that let customer "feel" good. Also, logistics company needs to know well about customers' industry characteristics so that provide aimed suggestion and solution.

In summary, being decided by the special "product" and features of customer, CRM of logistics company forms up above-mentioned three intra-related features.

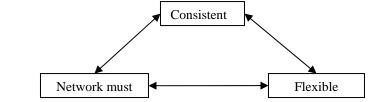


Figure 4 Intra-relationship of CRM features in logistics company

It's the consistency of CRM process that helps logistics company gain time and resource to explore and improve network application, adjust itself for flexibility in performance. It's the necessity of network that logistics company could be capable of sorting out information promptly to explore customer group, to meet customers' demands for consistency and to find possibility of tailored service mixture. It's the flexibility in CRM that makes use of network and brings possibility of distinguished customer treatment.

However, it's the features mentioned here that add the difficulty to logistics company to equip themselves and manifest these features in the CRM processes. Chapter 4 focuses on identifying activities included in CRM processes.

4. CRM activities in logistics company

According to the features discussed above, the paper tries to find out ways to improve current situation. Chapter 4 defines the activities in a complete CRM process.

4.1 activities of marketing

4.1.1 Collecting information of target customers

The first task of marketing department is collecting target customer information. Target customer is the one that logistics company decides to serve by collected information such as products, production capability, trading pattern, and valid linkman through all the sources accessible. Current customers with continued business contracts is one source of target customers, and meanwhile, exploring contacts with similar customers.

4.1.2 Market segmentation research

"Market segmentation is dividing a market into distinct groups of buyers with different need, characteristics, or behavior who might require separate procedures or marketing mixes."

(Philip Kotler & Gary Armstrong, Principles of Marketing, 1996, p.46)
Research of market segmentation may bases on several criteria, including geographic segmentation, demographic segmentation, psychographic segmentation and behavioral segmentation. For logistics company, it is better to refer to behavioral segmentation that base on customer industry. Results of this research need to be:

1) Measurable, means request frequency, purchasing volume, and payment promptness of the segments can be measured.

- 2) Accessible, means the market segments can be reached and served. More detailed speaking; accessibility means the right person of contacting has been found out, the basic requirement has been informed.
- 3) Sustainable, means the market segments are promising to bring stable contract requests and profits that are worthy of certain workload.
- 4) Actionable, means a logistics company is available to combine resources to realize segments' expectations with sensible costs.

In the stiffer competition among logistics company, a successful market segmentation research would assist in the analysis of customer information with bird's view that results in distinguished leverage of customer treatment.

4.1.3 Advertisement and fair

Publishing advertisement is an effective way to make better known. So does exhibiting in professional fair. These two activities imply the reputation and influence in logistics industry; imply financial resources of the company and provide more face-to-face opportunities for contacting under relaxed atmosphere that may attract potential customers and remind current customers for further communication.

In summary, in addition to main marketing activities involved in CRM process mentioned above, studying competitors' information is a critical task as well. Effective actions in marketing period pull the early entry into next activities with targeted aim.

4.2 activities of sales

From sales activities, essence of business that truly attracts customer becomes increasingly important in contacts.

4.2.1 Treating customer inquiry

Customer inquiry is a request from customer about information of rate/ cargo / document status that establish basic relationship.

Once receiving inquiry from customer, the promptness to respond is the first impression. It could be regarded as the first formal contact with customer. Whatever the customer industry is, high-level expectation of quick understanding of what they need is always same. Attitude of logistics company to treat customer inquiry is not only represented by manual performance, but also by friendly IT interfaces with terse and clear information about portfolio, main linkman and rate issue. It stimulates the desire for further contacts and pushes the relationship into deep level.

4.2.2 Entering into sales contact

In this activity, customer is tightly connected with logistics company for exchanging detailed business information for bilateral benefits. Relationship of both parties improves at fast speed. Whether the relationship could enter into next stage bases on the details of business contract discussed during each contact, including agreed quotation, standard operation procedure, unique strengths of logistics company, appointed person to handle daily issue, payment term, etc. These contacts aim at building up foundation for long-term business contract.

If the business contract is signed for a trial shipment, logistics company must find out whether there's possibility or benefits for pushing the trial partner relationship into formal business relationship with the assistance of collected information. If the business contract is signed for a fixed period, it will be idle if logistics company is well prepared and totally understands intra-operation of customer so that it could be active solution consultant rather than a simple response to customer's request.

Ways of sales contact can be various; telephone calling or email exchange or face-toface visit is must and mixed.

Activities of sales are on the front line of CRM, main task of them is to gain customers. However, there are other activities equal important to keep or improve customer relationships with logistics company. Following sections will refer to other activities essential in maintaining customer relationships.

4.3 activities of customer service

Generally, common points always regard customer service department as the only part to manage customer relationship. However, it is actually one of several parties involved rather than the single point of CRM. In most large logistics company, after setting up business relationship in sales activities, customer service department is always appointed to follow up further daily cases. Two main functions for customer service is customer inquiry and customer complaint. It is must be easy for customers to reach the right parties within the company to get service, answers, and solutions of problems.

4.3.1 Customer inquiry

When dealing with customer inquiry, customer service acts as an "inside sales" that rarely go out of office to sell but actually be involved in more detailed tasks. Responding to quotation request, following up quotation confirmation, informing related

operation department to arrange agreed service, monitoring prompt invoice issuing and customer payment... things like that brings frequent communications to push closer relationships among related parties. For individual customer, filing his inquiry record is a way to analyze his business patterns.

4.3.2 Customer complaint

Customer complaint is a customer's expression of dissatisfaction about service in both oral and written manner.

Whether treating customer complaints properly may directly breaks current customer relationships. Generally speaking, the activity requires convenience for customers to express dissatisfaction, offer suggestions for improvement, or pass on compliments. Logistics company needs the capability to take precautions against possible complaint, and be prepared for response and quick corrective actions.

At the same time, dissatisfaction in complaint handling may cause the loss of a group of customers. Still refer to Figure 2, if the parts supplier dissatisfies with performance of logistics company, he may deliver this dissatisfaction to downstream partners, thus dissatisfaction from parts supplier causes the doubts to logistics company from other parties.

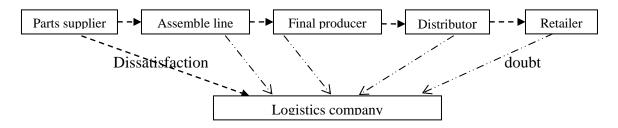


Figure 5 Chain effect of dissatisfaction

Therefore, complaint handling is the necessity of CRM process.

In a word, success in activities of customer service could help to transfer temporary and stochastic business contact into stable relationships that highly contribute to overall gaining.

4.4 activities of decision strategy

Decision strategy is the high level of leadership in management that spans several aspects in CRM.

The first aspect is decision on business strategy. This strategy determines business portfolio and partner choice. It is an integrated and coordinated set of commitments and actions the firm uses to gain a competitive advantage by exploiting core competencies in specific product market.

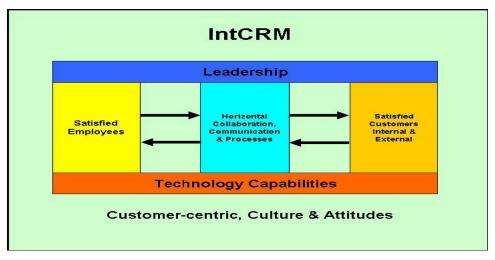
Deciding business portfolio with the consideration of capacity has impact on the marketing study and customer targeting. Choice of coordinated partner to realize combined services not only relates to service performance, but also financial and information compatibility. These two activities help to clarify Who are the customers to serve, Which customer needs to satisfy and How forms up core competencies necessary to satisfy customer needs.

For example, a logistics company, which is the subsidiary of Deutsch Bahn thoroughly takes use of powerful railway network in Europe continent to satisfy importers in Europe with prompt destination delivery service and various delivery modes. At the same time, combining with North America based company to improve performance in Latin America. The service range expands because of the worldwide portfolio coverage; the

competencies improve because of the local and regional advantages. Thus, the attractiveness to customers is stabilized. More current customers enjoy the business relationship with the company, and even more customers show interest to set up business relationship.

Another aspect is decision on internal resources management that enhances internal cooperation and communication. It refers to hardware management that goes in technical aspects, such as facility management, equipment management, IT maintenance, etc. And it also refers to software management that beyond technical issue, such as financial resource management, human resource management and enterprise core value / culture construction. These resources are teamed up to drive the daily work of the company to be real-time active in performance.

In a word, it is clear that customer relationship management is the task of all the players in different procedures rather than that of single person who represent logistics company to contact with customer. Referring to following Figure 5:



Source: Frank L. Eichorn. Applying Internal Customer Relationship Management (IntCRM) Principles for Improving Business / IT Integration and Performance. UMI Number: 3165260 PP.49-50, 71 Figure 6 Internal CRM

Leaders are the decision makers that provide guiding direction, set the overall tone for an organization, and directly impact the culture and attitudes of its members (Collins, 2001; Goleman 2002). Effective information technology capabilities create a supporting foundation and are critical for enabling and facilitating communication, processes and information flows inside and outside the organization (Plakoyiannaki & Tzokas, 2002). Assuming a collaborative culture exists and customer service practices are extended across the organization, employee satisfaction will increase resulting in a corresponding improvement in customer satisfaction (Harter, 2002, page 270).

CRM is consistent, repeated and complicated to all the staff. Effective CRM challenges the capability of internal linkage of logistics company, the ability of external business partner choice and resource availability included. In next chapter, this paper will try to set up targeted performance level for logistics company to self-check whether CRM activity is done and whether the CRM performance reaches the expectation level of customer from different industry.

5. Setting up internal targeted performance level

5.1 current customer relationship situations

Being informed from internal report of last two year's customer service satisfaction, averagely, customers regard the overall company's performance at the level of 72%, which proves a relative high service performance of the company that brings confidence and reputation of the company to attract customers, but also inform that there's necessity and space to improve the performance to even better level. Transferring the level into 5-mark system, the current overall performance reaches MARK 3.6.

Therefore, it raises the essential part in performance control, which helps company better know How customer expect on the service and Whether the company can meet these expectations that regulate and rule the performance so as to support current customer maintenance. Following sections in this chapter will focus on setting up internal performance level.

5.2 general idea of targeted performance level

Performance level is defined as the efforts to realize competitive practices that focus on internal activities, functions, or operations in order to achieve continuous improvement. The objectives of targeted performance level are to understand existing processes, or activities, and then identify a point of reference, or standard, by which each activity could be improved to be. After clarifying activities needed in a complete CRM procedure, this chapter tries to set up an internal targeted performance level for a logistics company. Levels built up here are used to assess the internal performance of essential CRM activities for meeting customer expectations from different industries so that improve operations in a logistics company to maintain customers.

5.2.1 Survey of customer expectation on CRM activity

Original statistics come from a survey of current customer expectation on CRM activities. This paper designs a Questionnaire (see Appendix 1) and distributes it to current top customers of a logistics company. Items designed in this questionnaire include detailed tasks in each CRM procedure discussed in Chapter 4. Customers of different industries are inquired to mark their expectation on each specific CRM activity, MARK 5 means most highly expected, while MARK1 means least expected or not care. It should reflect the specific expectation due to the difference in customer industry and imply How well a logistics company should perform in ordinary work that does meet customer expectation and help to realize effective customer relationship maintenance.

At the same time, the paper asks whether surveyed customers have further willingness to re-purchase the product of the logistics company. The answers are represented by 1 or 0, for 1 means "Yes, I am willing to re-purchase the product of the logistics company.", for 0 means the refuse to contract furthermore.

Totally, 60 questionnaires are distributed to current main accounts of sales department. Receiver of the questionnaire is the primary contact of customer side. 45 completely answered questionnaires are reverted. 19 feedbacks from electronics industry, 9 from machinery industry, 5 from consuming industry, 5 from chemical industry, 2 from automotive industry and rest 5 from semicon. industry. This paper omits other 7 non-answered feedback and 8 misunderstanding ones.

5.2.2 Survey of internal staff difficulty in improvement

Generally speaking, it is better to set the targeted performance level that reach the balance between customer expectation and realization difficulty or cost in logistics company, rather than simply and strictly say "YES SIR" to whoever the customer is, whatever expectation is and wherever the request is without consideration of improvement difficulty and realization cost. Referring to the idea of Harter below, the paper realizes the importance and power of internal staff's idea that could ultimately lead to better overall customer satisfaction.

"Employee satisfaction and engagement are related to meaningful business outcomes at a magnitude that is important to most organizations".

Harter, Schmidt & Hayes (2002, page 275)

Therefore, this paper adjusts the questionnaire (see Appendix 2) and distributes it to internal staff of logistics company; receivers of the questionnaire are appointed contact points of main customers in sales and key account department. They are inquired to mark difficulties in improving performance on CRM activities on the base of their experience and feeling in handling appointed customer issues, MARK 5 means the most costly and difficult to improve performance, while MARK 1 means the most costless and easiest to realize improvement.

Totally, 25 colleagues received blank questionnaire and revert 21 feedbacks. This paper omits rest 4 non-answered sheets.

5.2.3 Customer contribution

In former studies, customer value is connected to at least three factors: the marginal profit brought by certain customer (m), the discount rate affected by cash value (i) and rate of customer maintenance (r). The simplified formula of calculating customer value issued by Sunil Gupta & Donald R. Lehmann is CLV= m*r/ (1+i-r).

However, in common awareness, above formula still requires highly demanding and complete original data that is hardly get for ordinary study. At the same time, the individual rate of customer maintenance (r) is either 1 or 0; it means little to concern this rate here; while discount rate (i) is the function of a company's capital cost, which is determined by risks of portfolio and structure of balance sheet. Accuracy of (i) is difficult to get under current business. This paper just wants to reach an approximate correct level rather than an accurate mistake.

Therefore, being limited by the data resources and time, this paper omits factors such as discount rate of cash value and rate of customer maintenance, and meanwhile regarding profit as the most direct implication of customer value, thus referring profit brought by customers in 2006 as "Customer Contribution" here.

The level of customer contribution is calculated by the formula:

$$R_{\rm m} = P_{\rm m} \div P_{\rm si} \tag{5-1}$$

R_m: Ratio of individual customer contribution

P_m: individual customer profit

Psi: subtotal of specific customer industry's profit

The result of calculation is used to distinguish the "weight" of individual customer expectations on reaching unified expectation of specific customer industry

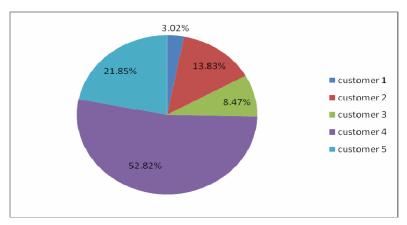
5.3 statistics processing

5.3.1 Specific Industry's expectation on CRM Activity

Firstly, specifying customer feedbacks in six industries: electronics, machinery, consume, chemical, automotive and semicon. And then, ignore the customers who reply

no willingness to re-purchase the products this year. There are 7 customers that occupy 15.5% of surveyed 45 customers are without willingness for further business, while rest 84.5% current major customers are willing to keep the business relationship with the logistics company and re-purchase the service for trusted performance. Therefore, there would be 38 effective original feedbacks for the calculation of customer expectation.

Secondly, due to different ratio of individual customer's contribution to subtotal profits of the customer industry, this paper believes the weight of impact of each individual customer to reach common expectation is various. This paper calculates contribution ratio (R_m , formula 5-1) of each individual customer; Figure 7 of Chemical Industry as an example.



Source: collected data of survey

Figure 7 Individual customer contribution

And then multiply this ratio to individual expectation of all the customers in the same industry on specific activity, later on, sum up these weighed expectations to get the industry's expectation on each activity. Applying the linear formula:

$$E(k)=r_1e_1(k)+r_2e_2(k)+...r_me_m(k), \quad \sum r_i=1$$
 (5-2)

E(k). Expectation of individual industry on specific activity (k is the number of activity) r_m : Ratio of specific customer contribution in a customer industry

Ratio of specific customer contribution in a customer industry

e_m: Individual customer expectation on specific activity k

See Table 5, which is the six industries' specific expectation on each CRM activity.

Table 5 Specific Industry's expectation on CRM Activities

			electronics	machinery	consume	chemical	automotive	semicon
activities	1	Our materials associated with the service (e.g. brochures)	1.70	1.64	1.06	2.40	1.43	3.60
of marketing	2	The professional appearance of our employees	2.38	2.84	2.12	3.47	2.00	3.97
_	3	Our ability to meet your request	4.00	4.10	3.58	3.23	3.36	3.47
	4	Our ability to provide a prompt service/quotation	3.93	3.58	4.61	4.29	4.08	3.11
	5	Our willingness to help you	4.54	3.21	3.38	4.05	2.33	3.32
	6	Our staff's knowledge to answer your questions	3.74	4.33	3.18	3.58	4.41	4.91
	7	Providing services as promised	3.67	3.31	4.16	4.30	4.74	3.06
	8	Us performing services on time	3.84	4.05	4.21	3.54	3.63	3.33
	9	Capability to solve problems	3.72	2.80	3.36	3.82	2.88	3.76
activities	10	To be reachable for you	3.42	2.70	3.43	3.68	3.59	2.17
of sales	11	To provide confidence in you	3.34	2.90	1.76	1.79	4.34	2.53
	12	To make you feel safe in your transactions	3.32	3.42	2.90	1.82	2.14	2.99
	13	To be consistently courteous	3.15	2.61	1.82	1.37	4.37	2.89
	14	To give you the attention you expect	3.77	3.78	3.88	3.18	3.63	3.35
	15	To show competence and professionalism	4.00	4.23	3.88	4.23	3.97	4.00
	16	To have your best interest at heart	2.91	3.50	0.94	1.64	4.50	4.25
	17	To understand your needs	4.24	4.24	4.53	3.14	4.88	4.93
	18	Keeping you informed during the freight handling	3.74	2.83	3.00	3.14	1.90	3.42
	19	Our transport/warehouse capacity at short notice	3.74	2.79	1.05	2.70	4.88	4.23
activities of	20	Maintaining error free records & reports	3.58	3.27	3.70	4.60	4.52	3.67
customer service	21	Making payment adjustments quickly if needed	3.32	2.78	2.18	3.00	2.22	3.88
	22	Sending invoices and payment information on time	3.50	3.99	2.40	3.85	2.27	4.39
	23	Providing accurate and clear invoices	4.01	4.71	4.25	3.33	3.76	4.49
activities of business partner choice	24	Our transport times	4.45	3.87	3.90	3.65	4.33	4.97
activities of IT resource mngt.	25	Our tracking tools	3.72	3.49	2.00	3.45	3.82	4.03

Source: collected data of customer expectation survey

And then, applying the principle of Unitary, the paper rank the activities by the "weight" to clarify what are more important among the 25 activities (Table 6). It should be helpful for logistics company to know what action need making first, what to do secondly.

Table 6 Importance ranks of 25 activities

activity		electronics	machinery	consume	chemical	automotive	semicon	weight
17	To understand your needs	0.047	0.050	0.060	0.039	0.055	0.053	0.051
24	Our transport times	0.050	0.046	0.052	0.045	0.049	0.054	0.049
23	Providing accurate and clear invoices	0.045	0.055	0.056	0.041	0.043	0.048	0.048
15	To show competence and professionalism	0.045	0.050	0.052	0.052	0.045	0.043	0.048
6	Our staff's knowledge to answer your questions	0.042	0.051	0.042	0.044	0.050	0.053	0.047
4	Our ability to provide a prompt service/quotation	0.044	0.042	0.061	0.053	0.046	0.034	0.047
20	Maintaining error free records & reports	0.040	0.038	0.049	0.057	0.051	0.040	0.046
7	Providing services as promised	0.041	0.039	0.055	0.053	0.054	0.033	0.046
8	Us performing services on time	0.043	0.048	0.056	0.044	0.041	0.036	0.045
3	Our ability to meet your request	0.045	0.048	0.048	0.040	0.038	0.037	0.043
14	To give you the attention you expect	0.042	0.044	0.052	0.039	0.041	0.036	0.042
5	Our willingness to help you	0.051	0.038	0.045	0.050	0.026	0.036	0.041
9	Capability to solve problems	0.042	0.033	0.045	0.047	0.033	0.041	0.040
22	Sending invoices and payment information on time	0.039	0.047	0.032	0.047	0.026	0.047	0.040
25	Our tracking tools	0.041	0.041	0.027	0.042	0.043	0.043	0.040
10	To be reachable for you	0.038	0.032	0.046	0.045	0.041	0.023	0.038
19	Our transport/warehouse capacity at short notice	0.042	0.033	0.014	0.033	0.055	0.046	0.037
18	Keeping you informed during the freight handling	0.042	0.033	0.040	0.039	0.022	0.037	0.035
16	To have your best interest at heart	0.032	0.041	0.012	0.020	0.051	0.046	0.034
21	Making payment adjustments quickly if needed	0.037	0.033	0.029	0.037	0.025	0.042	0.034
2	The professional appearance of our employees	0.027	0.033	0.028	0.043	0.023	0.043	0.033
12	To make you feel safe in your transactions	0.037	0.040	0.039	0.022	0.024	0.032	0.032
11	To provide confidence in you	0.037	0.034	0.023	0.022	0.049	0.027	0.032
13	To be consistently courteous	0.035	0.031	0.024	0.017	0.050	0.031	0.031
1	Our materials associated with the service (e.g. brochures)	0.019	0.019	0.014	0.030	0.016	0.039	0.023

5.3.2 Internal difficulty of improvement

Meeting external customers' expectations are essential, but balancing it with the capability and resources of the company is also important. In order to avoid expiring the availability of service provider and its staff, this paper consults the staff of the logistics company to find out difficulty level of performance improvement due to current enterprise strategy, portfolio, customer satisfaction and the business relationship develop plan.

The way of processing these feedbacks apply the similar principle applied in 5.3.1, that slightly adjust the formula in the following way:

$$D(k) = r_1 d_1(k) + r_2 d_2(k) + \dots + r_m d_m(k), \qquad \sum_{i=1}^{m} r_i = 1$$
 (5-3)

D (k): Improvement difficulty on specific activity of customer industry (k is the number of activity)

r_m: Ratio of specific customer contribution in a customer industry

d_m: Individual difficulty of improvement on specific activity k

In this way, every industry reaches its own list of difficulty level in improvement of CRM performance. Table 7 shows detailed result.

Table 7 difficulty level of improvement

			electronics	machinery	consume	chemical	automotive	semicon
activities	1	Increase materials associated with the service (e.g. brochures)	1.52	1.60	1.00	1.61	1.85	1.00
of	2	The professional appearance of staff	1.00	1.00	1.00	1.00	1.00	1.00
marketing	3	Improve our ability to meet customer request	2.83	2.51	4.24	1.69	2.85	2.00
activities of sales	4	Improve our ability to provide a prompt service/quotation	3.49	2.51	3.12	2.80	3.85	3.66
	5	Improve our willingness to help you	2.71	2.54	2.45	2.11	2.15	2.00
	6	Improve our colleague's knowledge to answer customers' questions	2.80	2.82	4.13	2.72	4.15	3.06
	7	Guarantee to provide services as promised	2.84	2.01	3.37	1.86	2.85	2.06

	8	Guarantee performing services on time	2.30	1.79	2.71	2.33	2.15	2.95
	9	Improve capability to solve problems	3.88	3.00	3.87	4.19	4.00	3.94
	10	To be more reachable for customer	2.53	2.62	2.99	2.24	1.85	2.83
	11	To provide confidence in customer	3.20	2.83	3.22	3.47	3.56	2.05
	12	To make customer feel safe in transactions	2.71	2.69	3.12	2.90	2.70	2.17
	13	To be consistently courteous	1.26	1.56	1.67	1.30	2.85	1.17
	14	To give customer the attention customer expect	2.97	2.48	3.39	4.08	2.15	4.49
	15	To show more competence and professionalism	3.82	3.03	4.25	3.50	2.00	4.17
	16	To have customers' best interest at heart	2.46	3.46	3.08	3.72	4.15	4.00
	17	To better understand customers' needs	3.60	2.59	2.99	3.11	3.30	4.83
	18	Keeping customer informed during the freight handling	2.90	2.83	2.53	2.79	2.15	2.34
	19	Improve our transport/warehouse capacity at short notice	3.86	3.06	2.28	3.66	3.15	2.78
activities of	20	Better maintaining error free records & reports	2.46	2.91	2.52	3.38	3.00	2.77
customer service	21	Making payment adjustments more quickly	2.79	3.22	4.03	3.73	2.85	3.06
	22	Sending invoices and payment information on time	2.48	2.14	2.56	2.53	2.00	2.22
	23	Providing accurate and clear invoices	1.59	2.19	2.09	2.03	1.85	2.89
activities of business partner choice	24	Shorten our transport times	3.99	3.05	3.39	3.47	3.85	3.83
activities of IT resource mngt	25	Improve our tracking tools	3.13	3.10	3.52	3.78	4.85	4.77

Source: collected data of internal staff survey

5.4 setting up internal targeted performance level

The targeted performance level discussed here bases on relationships to six customer industry so that consider distinguished performance is necessary.

5.4.1 Performance gap

Before identifying targeted performance level, it is better to clarify the gaps between current performance level and customer expectation. As mentioned in the former chapter, the overall performance that ignores specific activity and customer industry has reached 72% (mark 3.6 in 5) in the past years. In this part, this rate would be applied as a comparable level to surveyed customer expectation to check whether the logistics has done enough for customers. The gap comes from the difference that expectation figure in Table 5 minus 3.6. See Table 8 with detailed results. That is Formula 5-4 below:

$$P(k) = E(k) - P_c$$
 (5-4)

P (k): Performance gap on specific activity k

E (k): Expectation of individual industry on specific activity k

P_c: Current common performance level 3.6

Table 8-performance gap

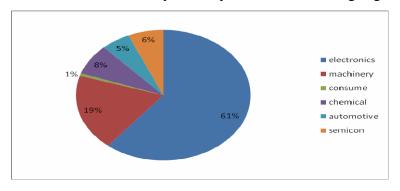
			electronics	machinery	consume	chemical	automotive	semicon
	1	Our materials associated with the service (e.g. brochures)	(1.902)	(1.962)	(2.541)	(1.197)	(2.169)	0.003
activities of marketing	2	The professional appearance of our employees	(1.216)	(0.757)	(1.481)	(0.129)	(1.601)	0.371
	3	Our ability to meet your request	0.403	0.495	(0.017)	(0.372)	(0.244)	(0.127)
	4	Our ability to provide a prompt service/quotation	0.330	(0.023)	1.012	0.692	0.482	(0.486)
	5	Our willingness to help you	0.938	(0.386)	(0.217)	0.450	(1.273)	(0.284)
	6	Our staff's knowledge to answer your questions	0.138	0.731	(0.422)	(0.019)	0.814	1.315
	7	Providing services as promised	0.071	(0.291)	0.565	0.700	1.137	(0.542)
	8	Us performing services on time	0.240	0.451	0.612	(0.059)	0.031	(0.267)
	9	Capability to solve problems	0.124	(0.800)	(0.244)	0.221	(0.723)	0.162
activities of	10	To be reachable for you	(0.181)	(0.899)	(0.168)	0.080	(0.008)	(1.429)
sales	11	To provide confidence in you	(0.258)	(0.703)	(1.842)	(1.812)	0.743	(1.072)
	12	To make you feel safe in your transactions	(0.284)	(0.176)	(0.700)	(1.781)	(1.464)	(0.614)
	13	To be consistently courteous	(0.448)	(0.988)	(1.775)	(2.225)	0.770	(0.713)
	14	To give you the attention you expect	0.171	0.177	0.282	(0.418)	0.032	(0.251)
	15	To show competence and professionalism	0.397	0.633	0.284	0.626	0.373	0.399
	16	To have your best interest at heart	(0.686)	(0.096)	(2.665)	(1.959)	0.897	0.653
	17	To understand your needs	0.638	0.643	0.934	(0.457)	1.279	1.329
activities of customer	18	Keeping you informed during the freight handling	0.138	(0.769)	(0.602)	(0.463)	(1.698)	(0.183)
service	19	Our transport/warehouse capacity at short notice	0.140	(0.808)	(2.553)	(0.897)	1.282	0.635
	20	Maintaining error free records & reports	(0.025)	(0.331)	0.104	0.998	0.920	0.069
	21	Making payment adjustments quickly if needed	(0.280)	(0.820)	(1.418)	(0.600)	(1.384)	0.277
	22	Sending invoices and payment information on time	(0.097)	0.391	(1.201)	0.246	(1.325)	0.789

	23	Providing accurate and clear invoices	0.406	1.109	0.653	(0.273)	0.163	0.894
activities of business partner choice	24	Our transport times	0.848	0.270	0.296	0.049	0.728	1.372
activities of IT resource management	25	Our tracking tools	0.118	(0.114)	(1.599)	(0.151)	0.219	0.428

Source: calculation of survey data

For those figures minus zero in Table 7, they imply that the customer expectations are far below the logistics company's performance level 3.6, which means logistics company has done enough for the customer not only in the past but also for future. Keeping the current performance level as targeted one is fully available to fulfill customer expectation in certain activities.

However, for the figures above zero, which imply there's more should do for customers challenge the capability of logistics company to decide whether and by what level should improve. This decision closely relates to the improvement difficulty mentioned in Table 6 and customer contribution by industry shown in following Figure 8.



Source: collected data of survey

Figure 8 Contribution percentage of customer industry

Figure 8 states the contribution percentage of each customer industry, which clarifies the top 2 customer groups are electronics industry and machinery industry, also guides that

the efforts made by logistics company should focus on meeting major customers expectation.

5.4.2 Efforts to closer gap

5.4.2.1 Reason of improvement difficulty

Referring to the feedbacks from customers and gaps shown in Table 8, improvement difficulty of logistics company mainly consists of four parts as internal staff suggested when they value improvement difficulty level: cost, compatibility, choice of business partner and personnel.

Firstly, improvements relate to the cost issue. Improvements that rely on further investment need to be decided on general resources management by strategic level rather than operation level and cost issue limits how much customer expectation could be met and decides how far the improvement will go. Especially considering providing better tracking tools, it is the construction of global information system that could be imputed information by global branch offices and be searched by customers for any kind of information. However, it is the improvement that relies highly not only on cost plan, but also on double manual work to entry data under current EDI transfer.

Secondly, improvements relate to the level of compatibility between customers' hardware system and the software of both sides that decides the way of doing business is difficult as most customers still keep their production and selling system as business secret, which causes conflicts in sharing information.

Thirdly, improvements closely connect to the performance of business partner of logistics company. Choice of business partner is defined as the communication,

evaluation and relationship building efforts with partner and is hard to change because its preference to shipping line or the service contract signed with carrier is valid for long term. Also, it is decided by management level of logistics company that with the consideration of business regional competence, cost control, customer location and etc. Therefore, improvements in activities that related to business cooperator and partner are not single action from logistics company, in these activities, prompt communication and exchange of partner, choice of partner to realize expected level should be paid more attention.

Fourthly, improvements relate to personnel in all activities is really a very tough issue because to guarantee all the people are always polite to treat customer properly, are qualified to handle customer request or answer questions, are strictly work under standard procedures and so on is difficult. Furthermore, it is common phenomenon that basic staffs are frequently change in this industry which causes barriers for employee training and procedure acknowledgement that focuses on organizational commitment and actions to the development of skills, abilities and knowledge. Personnel work should be standardized and regulated, but difficult to change the long-term working habit in short- term improvements.

In summary, improvements in performance to meet customers' expectation are challenged by many limitations and processed with difficulties. As a logistics company, perform strictly obey what customer expected is ideal, but had better avoid burdening cost that expire the financial resources capability and avoid bringing too much changes at one time that make internal staffs upset. Thus, in the next part, expectation indicator from customer will be adjusted to some extent so that basic requirements could be well met and in specific case, do additional to supplement.

5.4.2.2 Improvement efforts

Decision on whether to set the targeted performance to the level customer expected is not directed by single power of customer, but also being considered with difficulties mentioned by internal staff base on each specific customer industry. Once make efforts to get closer to the customer expectation, how many difficulties does the logistics company to overcome? This paper designs the formula following to see the efforts needed to 100% meet customer expectation:

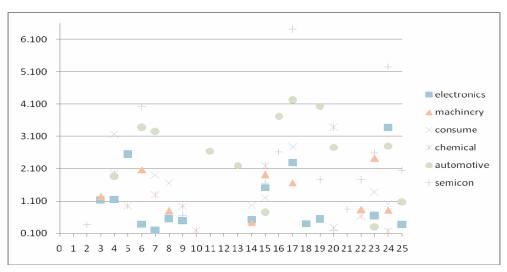
$$Ef(k) = P(k) \times D(k)$$
 (5-5)

Ef (k): Efforts to perform as 100% as customer industry expected

P (k): Performance gap

D (k): Improvement difficulty on specific industry of customer industry

Referring to Figure 9, it clarifies the efforts distribution for the performance to each customer industry. The X axle refers to the number of activity, while the Y axle refers to the effort level.



Source: collected data of survey

Figure 9 Effort distributions for meeting customer expectation

Table 9 Effort level identification

Effort level	Effort	Improvement acts
Low	0.1-1.1	Easy to standardize inter-operation, locally improvement could cover.
Middle	1.1-2.1	Cause intra-organization operation to raise attention for more care to customer.
High	2.1-3.1	Regionally participating and facility investment, re-study of customer.
Very high	>3.1	Re-study of customer and global business partner/ cooperator.

Referring to Figure 9 and Table 9, for activities of marketing (activity no. 1-3), main efforts are required by electronics and machinery industry for meeting customer request.

For activities of sales (activity no. 4-17), it is obvious that the largest efforts are asked by automotive industry, which now only two customers and contribute 5% to logistics company's total profits nowadays. Meanwhile, semicon. industry strongly looks forward for more professional knowledge of staff and being better understood of their needs. These figures reflect the picture of potential business opportunities that if we could improve current performance level to certain extent, which means gaining more clear idea of the customer features and buying habits, the current customers are eager to reaching better mutual understanding and acknowledge that may bring bilateral benefits.

What worth mentioning is activity 15, "to show competence and professionalism"; the current performance is lower than expectations of all the customers. Luckily, feedbacks from staff are inspiring because the efforts are well located among 1-2 that within the middle level of burden.

Activities of customer service (activity no. 18-23) deal with tracing report, document and payment issue. However, large efforts centralize in minor profit contributor. Efforts in activity 23 are necessity to all the customers.

An activity 24 (transport time) causes large difficulty to semicon., electronics and automotive industry, differed customer priority is highlighted here under current limited choice of business partner (land/ocean carrier).

Efforts level of Activity 25 (tracking tool) is within middle level that manual work is possible to make up for technology shortages.

5.4.2.3 Devoted efforts base on specific customer industry

Efforts requirements introduced in Figure 9 have called urgency for logistics company to separate resources to closer performance gap in Table 7 base on customer industry. The level of improvement effort for each customer industry would be decided according to the relative importance to logistics company in below Matrix, with the principle of AHP of comparing criteria. Choose any two customer industry and compare their importance to logistics company mainly according to profit contribution and future business intent. The formal standard of the comparison is shown in the Table 10 below.

Table 10 Comparison standard of two customers

The importance level in comparison	Effort level X	Effort level Y	remarks
Customer industry X is equal important with Y	1	1	
Customer industry X is slightly more important than Y	3	1	If opposite, 1/3
Customer industry X is obviously more important than Y	5	1	If opposite, 1/5
Customer industry X is strongly more important than Y	7	1	If opposite, 1/7
Customer industry X is absolutely more important than Y	9	1	If opposite ,1/9
The effort level range in the middle of each level	One of 2, 4, 6, 8	1	If opposite, one of 1/2,1/4,1/6,1/8

Then combine all the result to form a comparison matrix, shown as follow

$$B = \begin{bmatrix} b_{11} & b_{12} & b_{13} & \dots & b_{1n} \\ b_{21} & b_{22} & b_{23} & \dots & b_{2n} \\ \dots & \dots & \dots & \dots & \dots \\ b_{m1} & b_{m2} & b_{m3} & \dots & b_{mn} \end{bmatrix}$$

$$(5-6)$$

Obviously, in the matrix
$$b_{ii} = 1$$
, $b_{ij} = \frac{1}{b_{ji}}$.

Finally calculate the eigenvectors of the comparison matrixes, which are the weight that could be regarded as the level of efforts devotion to fulfill customer expectation.

Referring to the idea of sales management, the paper concludes below table as the evaluation of customer importance. That is Table 11:

Table 11 importance comparison of two customers

	electronics	machinery	consume	chemical	automotive	semicon.
electronics	1	5	9	6	7	8
machinery	1/5	1	8	5	5	5
consume	1/9	1/8	1	1/6	1/7	1/6
chemical	1/6	1/5	6	1	2	1
automotive	1/7	1/5	7	1/2	1	3
semicon.	1/8	1/5	6	1	1/3	1

Source: results of consultation

That is to say, e.g. for customers from electronics industry, they are much more important than other customers.

Then calculation of weighted effort devotion is transformed by above matrix, and goes to the weight respectively, see Table 12 as detail:

Table 12 distinguished weight of effort devotion

	weight of effort devotion					
electronics	0.48					
machinery	0.24					
consume	0.02					
chemical	0.09					
automotive	0.09					
semicon.	0.07					

Weights in above table decide the improvement efforts level made for each specific customer industry respectively, which means the logistics company would improve current performance by:

$$RP(k) = W(k) \times Ef(k)$$
 (5-7)

RP (k): Rate of improvement effort

W (k): Weight of effort devotion

Ef (k): Efforts to perform as 100% as customer industry expected

5.5 targeted performance level

Regarding differed devoted efforts, it is helpful to focus the efforts made to major customers rather than equally separate efforts to do as customer expected. Thus, this paper set the criteria as follows:

- 1) For those customer expectations below current accepted overall performance level 3.6 (mentioned in Chapter 5.1), set 3.6 as the targeted performance level;
- 2) For those customer expectations above current accepted overall performance level 3.6, Apply formula: min ((max ((3.6+ RP (k)), E (k))), 5) to electronics industry and machinery industry

Apply formula: min ((3.6+ RP (k)), E (k), 5) to chemical, automotive, semicon. and consume industry.

Therefore, targeted performance level could be set up as Table 13:

Table 13 Targeted performance level

targeted per	formanc	e level	electronics	machinery	consume	chemical	automotive	semicon.
activities	1	Our materials associated with the service (e.g. brochures)	3.60	3.60	3.60	3.60	3.60	3.60
of marketing	2	The professional appearance of our employees (e.g. uniform)	3.60	3.60	3.60	3.60	3.60	3.63
	3	Our ability to meet your request	4.15	4.10	3.60	3.60	3.60	3.60
activities of sales	4	Our ability to provide a prompt service/quotation	4.15	3.60	3.67	3.78	3.78	3.60
	5	Our willingness to help you	4.82	3.60	3.60	3.69	3.60	3.60
	6	Our staff's knowledge to answer your questions	3.79	4.33	3.60	3.60	3.92	3.88
	7	Providing services as promised	3.70	3.60	3.64	3.72	3.91	3.60
	8	Us performing services on time	3.87	4.05	3.64	3.60	3.61	3.60
	9	Capability to solve problems	3.83	3.60	3.60	3.68	3.60	3.64
	10	To be reachable for you	3.60	3.60	3.60	3.62	3.60	3.60
	11	To provide confidence in you	3.60	3.60	3.60	3.60	3.85	3.60
	12	To make you feel safe in your transactions	3.60	3.60	3.60	3.60	3.60	3.60

	13	To be consistently courteous	3.60	3.60	3.60	3.60	3.81	3.60
	14	To give you the attention you expect	3.85	3.78	3.62	3.60	3.61	3.60
	15	To show competence and professionalism	4.33	4.23	3.63	3.80	3.67	3.71
	16	To have your best interest at heart	3.60	3.60	3.60	3.60	3.95	3.78
	17	To understand your needs	4.71	4.24	3.67	3.60	4.00	4.04
	18	Keeping you informed during the freight handling	3.79	3.60	3.60	3.60	3.60	3.60
activities of	19	Our transport/warehouse capacity at short notice	3.86	3.60	3.60	3.60	3.98	3.72
	20	Maintaining error free records & reports	3.60	3.60	3.61	3.91	3.86	3.61
customer service	21	Making payment adjustments quickly if needed	3.60	3.60	3.60	3.60	3.60	3.66
	22	Sending invoices and payment information on time	3.60	3.99	3.60	3.66	3.60	3.72
	23	Providing accurate and clear invoices	4.01	4.71	3.63	3.60	3.63	3.78
activities of business partner choice	24	Our transport times	5.00	3.87	3.62	3.62	3.86	3.96
activities of IT resource managem ent	25	Our tracking tools	3.78	3.60	3.60	3.60	3.70	3.74

Source: calculation of survey data

The targeted performance level figures out What the logistics company needs to do for maintaining customer and How well should perform. This targeted level raises an organization's consciousness, provides focus on internal activities, and drives an organization to the conclusion that there are always opportunities within every organization to learn something new. It should raise the attention of all the staff that level is the improvement tool rather than a limitation on the habitual actions.

In detailed action, referring to the information manifested by Table 6, sales team bears the highest burden to improve itself in being acknowledged with customer's industry and production features, showing competence and professionalism in handling cases, being more self-discipline to provide prompt feedback to customers. Furthermore, for customer service team, preparing KPI report / Delay Follow up report (see Appendix 3)

for individual customer from the booking of service to the ending of payment with the comparison of standard agreed time length has been an agreed way to monitor transport / invoice/ payment time accuracy that is strongly supported by management level that acts as an "active pre-feedback of possible complaint". Although the reports mainly rely on manual work to fill in under current web and EDI functions, they provide direct proof How good/bad the logistics company's performance is, and in which link is the disadvantage. This kind of report not only proves the desire of service provider to improve performance, but also provides a way to exam intra-organization or interorganization operation. To certain extent, preparing the report makes up for the defaults in performance. Moreover, marketing team must note that it is their deep insight into customer information capturing, collection and analysis that lay the solid foundation for following activities to be processed.

What worth mentioning is the company need to improve the communication with customers for the customer needs and to clarify with the customers what services could be provided and how they could be done, then gain understanding or agreements of the standard operation procedures.

It should be believed that the better performance of all the staff it is, the more customers will be, the more enlarged business will be, and thus the higher profit will be that benefits everyone of the company. It should be highlighted that:

"Effective internal exchanges are a prerequisite for organizational success."

(Zerbe, Dobni, Harel, 1998, page 167)

6. Conclusion

In the highly competitive situation, the key factors and prerequisites of logistics company's success is to maintain current customer and enlarge business with these customers while pursuing new opportunities to win new customers. Under the consideration, the paper focus on the solution to help CRM activities be more effective and efficient, that is setting up internal targeted performance level for a specific logistics company to monitor performance of activities included in complete CRM process so as to do as much as customer expected. Summarizing main findings of this paper as following points:

- 1. Chapter 3 defines the customers of logistics company and their features, finds out the features of CRM which are closely intra-related in logistics company to lay the foundation for studies of following chapters.
- 2. Base on the study on a specific logistics company, in Chapter 4 the paper clarifies the necessary activities included in CRM processes for customers. The activities are clarified into five processes that span marketing, sales, customer service, business partner choice and IT resource management.
- 3. Chapter 5 focuses on setting up targeted performance level for checking and monitoring the services provided to customers while takes the considerations and difficulties of staff into account.
- 1) In this chapter, the paper simplified the understanding of 'customer value' rather than applying former complicated formula and introduces profits brought by customer as the 'customer contribution' to calculate individual customer contribution rate. And then, apply the rate as the weight of impact on forming up customer industry expectation that

avoid artificialness of preference to certain customer. In this way, different weight origins from objective accounting records that avoid manual influence as much as possible.

- 2) In this chapter, the paper adjusts customer expectation into targeted performance level with the combination of effect of contribution ratio and improvement difficulty. Therefore, each customer industry related matches its own ratio of adjustment while totally keep the overall performance level at current satisfied figure.
- 3) The paper emphasizes on expectations base on specific customer industry rather than reaching common figure in order to differ the customer requirements and help the logistics company sift the customer groups with great profitability.

It is significant for a logistics company to have a targeted performance level to motivate, encourage and monitor daily work that bring with the optimization of process performance and stable customer relationships; the performance level set up in the paper could not be directly used for another logistics company, but instructs a way to reach targeted performance with the balance of customer expectation and internal staff's suggestion on improvement difficulty.

However, limited by time, data and experience in logistics industry, the survey only deals with named top customers of a certain logistics company that has restricted impact on the industry overall performance. For further studies, it is worthy of setting up performance level with comparing standards of competitors or even industry common performance, because developing new customer is no wiser than keeping current customers for extended contracts. In a word, in the study of finding ways to keep customer and realize successful CRM, there's still a long way to go. This paper only makes some foundation for further deeper studies.

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Appendix 1

Questionnaire to Customer	
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Please comment your expectation on below mentioned Activities for us further improvement. MARK 5 means most highly expected, while MARK1 means least expected or not care.

			Mark
activities of marketing	1	Our materials associated with the service (e.g.	
		brochures)	
	2	The professional appearance of our employees	
	3	Our ability to meet your request	
	4	Our ability to provide a prompt service/quotation	
activities of sales	5	Our willingness to help you	
	6	Our staff's knowledge to answer your questions	
	7	Providing services as promised	
	8	Us performing services on time	
	9	Capability to solve problems	
	10	To be reachable for you	
activities of sales	11	To provide confidence in you	
	12	To make you feel safe in your transactions	
	13	To be consistently courteous	
	14	To give you the attention you expect	
	15	To show competence and professionalism	
	16	To have your best interest at heart	
	17	To understand your needs	
activities of customer service	18	Keeping you informed during the freight handling	
	19	Our transport/warehouse capacity at short notice	
	20	Maintaining error free records & reports	
	21	Making payment adjustments quickly if needed	
	22	Sending invoices and payment information on time	
	23	Providing accurate and clear invoices	
activities of business partner choice	24	Our transport times	
activities of IT resource management	25	Our tracking tools	

Please inform the future purchasing intent of our service: 1-YES, 0-NO: _____

Appendix 2

Questionnaire to Staff	

Please comment your idea of improvement difficulty of below mentioned Activities for us reference. MARK 5 means the most costly and difficult to improve performance, while MARK 1 means the most costless and easiest to realize improvement.

			mark
activities of marketing	1	Increase materials associated with the service (e.g. brochures)	
	2	The professional appearance of staff	
	3	Improve our ability to meet customer request	
	4	Improve our ability to provide a prompt service/quotation	
	5	Improve our willingness to help you	
	6	Improve our colleague's knowledge to answer customers' questions	
	7	Guarantee to provide services as promised	
	8	Guarantee performing services on time	
	9	Improve capability to solve problems	
activities of sales	10	To be more reachable for customer	
	11	To provide confidence in customer	
	12	To make customer feel safe in transactions	
	13	To be consistently courteous	
	14	To give customer the attention customer expect	
	15	To show more competence and professionalism	
	16	To have customers' best interest at heart	
	17	To better understand customers' needs	
	18	Keeping customer informed during the freight handling	
activities of	19	Improve our transport/warehouse capacity at short notice	
customer service	20	Maintaining error free records & reports	
	21	Making payment adjustments more quickly if needed	
	22	Sending invoices and payment information on time	
	23	Providing accurate and clear invoices	
activities of business partner choice	24	Shorten our transport times	
activities of IT resource management	25	Improve our tracking tools	

 $\label{eq:Appendix 3} \textbf{Example of KPI report and Delay Follow up report}$

