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WORLD MARITIME UNIVERSITY

Shanghai, China

**Research on KPI Management of the Finished Vehicle
logistics Business Enterprise**

by

Wenxin Hao

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

DECLARATION

I certify that all the 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.

The contents of this research paper reflect my own personal views, and are not necessarily endorsed by the University.

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ABSTRACT

Title of Dissertation: **Research on KPI Management of the Finished Vehicle logistics Business Enterprise**

Degree: **Master of Science in International Transport and Logistics**

This thesis analyzes the business characteristics, present condition and trend of the professional development of the finished vehicle logistics business enterprise first, and explains iteratively necessity and important meaning of performance management for the finished vehicle logistics business enterprise, and analyzes the performance management theories adopted by currently domestic and international business enterprise in detail, and brings up present condition analysis, discusses relationship between performance management and the continuous development of business enterprise; put forward the theories foundation of KPI management, and bring up with the principle that the KPI management should follow and crux that KPI may face.

By analyzing the present condition of the domestic and international KPI management, the construction principle and method of KPI management project is determined. By the analysis of the main business process of the finished vehicle logistics business enterprise, and according to KPI management theories, the KPI management of the logistics business enterprise model is set up; Finally by the contrastive analysis of the cases in the business enterprise, the feasibility of the management project is proved.

This text is totally divided into 5 chapters, chapter 1 synoptically explained the meaning and background of this topic, and the research method of topic; Chapter 2 detailed analyzes performance management theories and present condition in business enterprises; Chapter 3 bring up with the construction of the KPI management project of the finished vehicle logistics business enterprise according to above-mentioned analysis; Chapter 4 certify feasibility of above-mentioned project by the KPI management application in NYK logistics (China) limited company; Chapter 5 briefly explained follow-up research direction and summarized full text.

Keyword: The finished vehicle logistics, the performance evaluation, performance

management, KPI management

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LIST OF ABBREVIATIONS

KPI: key performance indicator

R&D: research and development

NYK: Nippon Yusen Kaisha

OD: organizational development

APM : application performance management

IT: information technology

BPM: business performance management

OPM: operational performance management

MBO: management-by-objective

MBF: management-by-fact

CEO: chief executive officer

TQM: total quality management

HR: human resource

VDC: vehicle distribution center

1. Introduction

1.1 Background and meaning of this topic

The automobile logistics is divided into two plates as production logistics and sale logistics, the former is mainly responsible for distributing parts to production line, and the latter is mainly to deliver the whole product to the customers or accessories sale after sale. The main research object of this thesis is the finished vehicle logistics business enterprise.

Along with the fast development of automobile industry in China, the finished vehicle logistics business enterprises are growing rapidly, but along with increment of business quantity, the market competition turns fiercer. Because of lack of effective performance management in business enterprise, many corruptive practices rear gradually. Such as: The business enterprise's strategic target is misty and the business enterprise profits year by year fall and the employees are overstaffed and the personnel flow rate is high etc..

The forerunners of logistics companies have already escaped from the limit of inner part of logistics section, which is measured by analysis on the simple function index for logistics performance to control logistics performance, monitor circumstance of allocating logistics resource by the accomplishment of the alliance company in the distribution channel. But performance management targets of some logistics business enterprise developing in China are weak, the feedback is little, there is no prize and punishment management basically. They have stronger and correct ideas about mission and organization structure, but keen in controlling and coordinating performance by deploying two levers as operational and finical control, and depending on value pursuit to encourage employee, but seldom deploy performance management system according to strategy.

The ability of management in the developing logistics business enterprise is obviously not good, particularly in following aspects: The enactment of target, providing an explicit performance management feedback, give prize or punishment to excellent or inferior accomplishment, they over-depend on management control and value encouragement, and lack of personnel knowing finance and management, seldom deploy incentive mechanism and develop opportunity to attract and reserve excellent employees.

According to the organization and position segment of the developing logistics business enterprise and the best fulfillment of foreign logistics company, performance management is

process how to carry out target and reach consensus, and management method to encourage employee to successfully attain target. Although the overseas advanced logistics business enterprise has already had similar successful cases of KPI management, because of dissimilarity in nation condition, application background and company management level in China, we can not adopt doctrinarism, but should develop suitable KPI management project to keep with situation of China and suit the management level of the finished vehicle logistics business enterprise, in order to fill up the blank of performance management of the finished vehicle logistics business enterprise.

1.2 The finished vehicle logistics development and trend in China

1.2.1 The present condition of Chinese automobile logistics industry

Chinese automobile logistics industry mainly has two systems as Procurement supply, transport distribution. The vehicle logistics cost in China is two times more than Europe or the United States currently. The empty drive rate is about 37%, among which empty drive rate of the finished vehicle logistics reaches to 39%, integrating warehouse and transport resource of different automobile manufacturers is the important way to reduce automobile sale cost.

1.2.2 The automobile logistics industry develop trend

The third party logistics in the automobile logistics is quickly rising, which has already made the fixed warehouse of automobile manufacturers become flow warehouse and promote circulation efficiency of automobile products.

1.3 Research method

1.3.1 Document inspection method

Extensively collect the Chinese and Foreign data related with this topic, understand basic circumstance, pack up theoretical basis by comprehensive study and discuss, establish scientific viewpoint and attitude by focused studies, develop thought and method of perfecting science and insure the quality and effectiveness of topic.

1.3.2 Benchmark method

Combine with the information of document inspection, find out the commonness of operation in logistics business enterprise and the specialness of the finished vehicle logistics business enterprise, by combining the present condition of local KPI management of the logistics business enterprise design a set of practical viable KPI management project to guide the finished vehicle logistics business enterprise to run.

1.3.3 Activity analysis research method

On the foundation of science proof, concretely analyze the business process of the finished vehicle logistics business enterprise, put forward basic conceive and frame of fulfillment, according to the conceive and frame, construct an own KPI management project, adopts directional, quantitative and qualitative analysis in the practice process, attain continuously performance and improvement of science and real performance in the application to achieve the best integration.

1.3.4 Experience method

Extensive collections of practice experience about topic, basis on the foundation of science proof, according to science research norm, carry through experience summary and generalization, and rise to the height of theories. The author composes thesis and effectiveness analysis according to the application of practices, process and results.

1.4 The main research contents

The automobile manufacturers face the problem how to optimize logistics system, in the other words which to choose method to evaluate performance and efficiency of logistics system. Especially sale logistics of automobile, the effect of finished vehicle logistics play an important role for increasing customers' satisfaction and reducing cost. A poor logistics system even can ruin a good product.

Pass by "the well spray" type continuous development in 2006 and 2005 for two years of our country's automobile market, China has become the fourth manufacturing country in the world, the third automobile market. No matter from producing angle or consuming angle, China

is worthy of the name--the big automobile country. But we still have shortcomings from the automobile industry development angle, which are our automobiles R&D and logistics. The logistics performance has become internal factor to promote core competition of business enterprise. The follow-up chapters will study how the finished vehicle logistics business enterprise set up its own performance management system and its mainly studies contents as follows:

Study on the related performance evaluation theories which could be suit the finished vehicle logistics business enterprise—on the basis of detailed analysis of the related theories and mode of business enterprise performance management, choose the suitable performance evaluation theories for the finished vehicle logistics business enterprise and also take the theories into innovation, which is deployed as the theories basis for project.

The selection by various indicators and research on the main business frame of the finished vehicle logistics business enterprise-- main business classification of the finished vehicle logistics business enterprise, and make definition and analysis of main performance indicator, finally construct evaluation project.

NYK logistics (China) limited company performance evaluation system fulfillment analysis-analysis by combining a concrete valid example deployed a comprehensive model.

2. Methodology

2.1 Related theories and mode of the business enterprise performance management

2.1.1 Business enterprise performance manage system

2.1.1.1 Define of performance management

Performance management, the self-evident is the problem which resolves to let the immaterial assets create the value, what it aim at is knowledge, technical ability and the human resource management. Performance management is a business enterprise typical human resource management problem, and also is a organic constitute part of business enterprise Strategic Management.

Performance measurement is the process of assessing progress toward achieving predetermined goals. Performance management is building on that process, adding the relevant communication and action on the progress achieved against these predetermined goals.

In network performance management, (a) a set of functions that evaluate and report the behavior

of telecommunications equipment and the effectiveness of the network or network element and (b) a set of various sub functions, such as gathering statistical information, maintaining and examining historical logs, determining system performance under natural and artificial conditions, and altering system modes of operation.

In organizational development (OD), performance can be thought of as Actual Results vs Desired Results. Any discrepancy, where Actual is less than Desired, could constitute the performance improvement zone. Performance management and improvement can be thought of as a cycle:

Performance planning where goals and objectives are established

Performance coaching where a manager intervenes to give feedback and adjust performance

Performance appraisal where individual performance is formally documented and feedback delivered

A performance problem is any gap between Desired Results and Actual Results. Performance improvement is any effort targeted at closing the gap between Actual Results and Desired Results.

Application Performance Management (APM) refers to the discipline within systems management that focuses on monitoring and managing the performance and availability of software applications. APM can be defined as workflow and related IT tools deployed to detect, diagnose, remedy and report on application performance issues to ensure that application performance meets or exceeds end-users' and businesses' expectations.

Business performance management (BPM) is a set of processes that help businesses discover efficient use of their business units, financial, human and material resources.

Operational performance management (OPM) focus is on creating methodical and predictable ways to improve business results, or performance, across organizations.

Simply put, performance management helps organizations achieve their strategic goals. Rather than discarding the data accessibility previous systems fostered, performance management harnesses it to help ensure that an organization's data works in service to organizational goals to provide information that is actually useful in achieving them, and focus on the Operational Networking Processes between that performance level.

What performance management emphasizes is the supervision to the process and by activity

observation and valuation of various indicators in the process to promise the realization of strategic target. It isn't based on the Management-by-Objective (MBO), but is based on the Management-by-Fact (MBF). So the emergence of performance management makes business enterprise strategies no longer the mission of business enterprise decision layers, but become mission of both CEO and each employee.

2.1.1.2 The performance management frame applied in logistics business enterprise

The performance management frame which is applied extensively currently is mainly the Indicator of the Key Performance (KPI), the balanced scorecard and other methods, which are particularly seldom deployed by domestic logistics business enterprise. The KPI essence is the constitution of business enterprise performance indicators should be connected with the strategy of business enterprise, "key" means at some stage the uppermost problem that a business enterprise should resolve strategically, which should be resolved by the performance management system in designing.

2.1.1.3 Performance management and business enterprise development

The development and growth of business enterprise is embodied by its performance, the performance of business enterprise includes result and process, result is a basic pursuit of business enterprise, but business enterprise have to pursue the result by controlling the process.

In the performance evaluation of many modern business enterprises, performance contents and performance undertaken relation are the aspects most decisive and hardest to solve. The contents of performance means what kind of state in result and process the business enterprise want to attain; the undertaker of performance means who should undertake to complete the performance of business enterprise. The performance management system of business enterprise depends on four main factors as strategy, value system, responsibility system, management structure.

The design of performance management system of business enterprise generally includes several contents as follows:

- The design of performance contents
- The design of indicators
- The norm of indicator design
- The evaluation period design
- The evaluation relation design

- Performance result realization system design
- Evaluation management system design
- Performance feedback system design

Above-mentioned operation system of 8 aspects constituted an integrated performance management and evaluation system which is supported by strategic system, management structure, value system, responsibility allotment system and so on. The strategic system determine the key successful factor of the business enterprise which is actually the performance contents that the business enterprise wants to pursue in the strategic implement process; The value system of business enterprise mainly decides the relationship between result and process.

The performance contents are confirmed by strategy and value system, the strategy of the business enterprise decides the ultimate target and the basic tactic to reach target that the business enterprise pursue; the value system decides the relationship between result and process of business enterprise.

Designing undertaken relation of performance evaluation is made certain by the management structure and the responsibility allotment system. For example, comparing a power centralization company with a power decentralization company, the responsibility of subordinate unit is different. The subordinate unit in power centralization Company undertakes process performance indicators, but the subordinate unit in power decentralized company undertakes result performance indicators. In the same way, selecting director from subordinate unit, the different management structure request directors have the different abilities of decision, programming and leadership or the ability of implement and operation.

2.1.1.4 The key foothold of building a performance management system

1st, the link of strategic system and performance management—which means performance management system must serve strategic target in the business enterprise;

Pay attention to the match of every link as "performance plan- performance feedback to follow- the performance evaluation- salary reward", in order to create the ecosystem chain of performance management;

2nd, Business enterprise should enhance the training strength of performance management; carry on the training of performance management to the each layer personnel. The objects of training include human resource department, high managers, intermediate managers, even

common employees. The contents of training should include principles and skills of performance management at least, such as how to establish a performance plan; how to talk with subordinate personal, how to give subordinate feedback; how to guide subordinate -only provide the training of performance management for all levels of personnel, could performance management system implementing smoothly comes true.

3rd, Inspire consciousness of participation of each layer personnel.

According to survey result, participation of all levels managers and common personnel in the performance management is not enough which would induce the discounted effect of performance management. The business enterprise should change former way, let the each level personnel participate in every link, as participate in establishing and developing of performance management system which could promote "performance" consciousness in the whole business enterprise.

2.1.2 The important meaning of carrying on performance management

How to keep sustainable development of a business enterprise is the problem a business enterprise concerned very much nowadays. Practice shows that the performance management is the effective way which promotes the business enterprise management's standardization, keep the business enterprise quickly and healthily develop. Its significance lies in the following aspects:

2.1.2.1 The performance management can carry out keeping sustainable development of business enterprise performance

Levinson (1976) pointed out the performance evaluation systems have much shortage which viewpoint is also got extensive understanding. The obvious weakness of performance evaluation lie in: the judgment of the performance is usually subjective, the different governor assessments can't be compared; The delay of feedback, which make employee feel frustrated because the good performance did not get approved in time or angry for the judgment of shortage he or she have long time ago. Practice shows, the effective way to raise performance is carrying on performance management. Because the performance management is a kind of management idea to raise performance of staff and potential energy of the development team and individual that could make the business enterprise continuously achieve success, and also a strategic and integrated management method.

2.1.2.2 Quality management

The performance management process can strengthen total quality management(TQM).Because the performance management can provide skill and tool of total quality management for governor which make TQM become an importance constitute part of organization culture. The process of science design of performance management is the process to pursue quality which could attain or exceed the expectation of inner part, exterior customer and enable the staff to concentrate on quality target.

2.1.2.3 The organization structure

Most structure adjusts are respond to the social economic conditions which are various, such as decrease management layer, reduce scale, adaptability, team work, effective performance work system, strategic business organization, authorization, etc.. Manage idea and style will change after organization structure adjustment, such as give the employee more independent powers, in order to satisfy the customer's demand sooner and better; Morely participate the opportunity of management for employee to promote their devotion in work and raise their satisfaction from work; give the employee more support and instruction to continuously raise their responsibilities characteristic, etc.. But all theses could come true by establishing performance management system.

In a word, the meaning of successful performance management should make all employees reach target and standard that the company expected. There is more development space to pursue better performance or maintain the present condition for good performance employee; for doing not reach performance standard employee, supervisor should talk personally with him or her to draft improvement plan and measure which could make the employee be able to attain the standard as soon as possible.

2.2 The basic principle of KPI management

Key Performance Indication namely key accomplishment indicators, is the importation which passes to the organization internal some top-grade distance transport, the exportation transport of the key parameter transport on constitution, take a sample, compute, analysis, a kind of target amount of type which measures process performance turns management indicators, is resolve the strategic target of business enterprise for can operate of the tool of prospect target be

the foundation that business enterprise performance manages system. The KPI is the accomplishment examination which is wide spread valued in the modern business enterprise method.

Key Performance Indicators (KPI) is financial and non-financial metrics used to quantify objectives to reflect strategic performance of an organization. KPIs are used in Business Intelligence to assess the present state of the business and to prescribe a course of action. The act of monitoring KPIs in real-time is known as business activity monitoring. KPIs are frequently used to "value" difficult to measure activities such as the benefits of leadership development, engagement, service, and satisfaction. KPIs are typically tied to an organization's strategy (as exemplified through techniques such as the Balanced Scorecard).

2.2.1 The principle of KPI establishment

2.2.1.1 The target guide

KPI must be made certain by target of business enterprise, section, job and so on.

2.2.1.2 Pay attention to product quality

The product quality is the core competition of business enterprise which is hard to measure, so that controlling establishment of product quality indicators is very important.

2.2.1.3 Maneuverability

Key accomplishment indicators should promise the maneuverability of indicators from the technique and give explicit definition to each indicator to build up perfect information collection channels.

2.2.1.4 Control of input and output process

For establishing KPI indicators, the input and output condition of process should be top-priority and made together for point control.

2.2.2 The key point of establishing the KPI indicators

1st, the target of personal and section and the strategic target of company should be contacted. Consider problem with the idea of overall situation.

2nd, the indicators should be stable, which means if the business process was unchanged, the item of key indicators should also unchanged or changed a little.

3rd, the indicators should be able to control and attain.

4th, the key indicators should be concise and comprehensive and easy to transport out, be accepted and understood.

5th, definition to the key accomplishment indicators should be normal—establishing "KPI indicators definition form" for each KPI indicator.

2.2.3 The difficulty of carrying on performance assessment by deploying KPI

The point of the performance management is that let employees understand the request of company for them, in the other word, what is the KPI of the section, while the supervisor also understand the employees' character, in order to allot different work and make different target for different employee.

The performance assessment is a part of performance assessment circulation which have two purposes as performance improvement and value evaluation. By the assessment evaluation of employ from supervisor is not only the feedback of employee's work performance, and also the embodiment of the supervisor's management art. Because the target of the supervisor and the target of the employee are consistent, and the employee's result is also the supervisor's result, the supervisor continuously communicates and guide with inferiority in the process of work and continuously record the employee's work data or fact basis, which is even more important than assessment itself.

The point of value evaluation is equity, because which is linked with the employee's benefits directly. This kind of assessment request accurate evaluation of supervisor, same measure for the same kind personnel strictly, because creating value period of this kind position is short, their activities' results embody quickly and the standard is also explicit and the repeated work is much.

There is a kind of method unifying performance improvement and value evaluation, which is durative improvement of emphasizing performance in daily assessment, but human resource department establish unify evaluation standard for the whole business enterprise when evaluation need to be carried on. Therefore, the result of evaluation will be fair; on the other hand, the employee's performance improves high level, employee could acquire more reward and approbation with outstanding work. The KPI is a basic gist for evaluation of the employee's performance improvement and result which could provides direction, data and fact of evaluation basis.

2.3 The present condition analysis of the KPI

2.3.1 Local present condition

China business enterprise performance management system still is placed in an entry-level stage, concrete performance is:

1st, Most of the business enterprises have not enough knowledge of performance management.

From the purpose of the performance management, circumstance of dissimilarity understanding of business enterprises as followed form:

Table 2.3.1.1 the purpose of the performance management

The business enterprise knows the main purpose of performance management	The ratio of total investigated companies
Salary and performance knot put together	75.9%
Assure the performance target of each employee	28.90%
The change of the organization culture of business enterprise	19.30%

From the aspect of design the performance management system, the condition of staff participation as followed form:

Table 2.3.1.2 the aspect of design the performance management system

the stratum which establishes performance management system	The ratio of total investigated companies
Intermediate managers	59.30%
General employees	16.50%

From the aspect of the main function of the performance evaluation system as follows:

Table 2.3.1.3 the aspect of the main function of the performance evaluation system

The aspect of the function of	The degree of function
-------------------------------	------------------------

performance management system	
Deliver a company's strategy	Have little function
Promote employee's accomplishment	Have little function

The above investigation has shown that, no matter from the purpose of the performance management, or From the aspect of design the performance management system, or From the aspect of the main function of the performance evaluation system, the domestic companies are lagging behind with the position of the performance management.

2nd, the performance management system is not qualified in most companies, and a lot of places need to be improved:

Table 2.3.1.4 the unqualified performance management system

Have no formal, the writing form performance plan	The ratio of total investigated companies
Top managers	46.78%
Medium managers	40%
Common staff	53.10%
Have no formal writing form of training development plan	The ratio of total investigated companies
Top managers	73.11%
Medium managers	71.08%

Another investigation shows:

Table 2.3.1.4 another investigation shows the unqualified performance management system

Main performance aspects	The ratio of total investigated companies
The manager establish the performance management system, the employees only participate formally, but don't have real function	46.40%

Although there is performance investigation committee, produce no result	19.40%
Have no performance investigation committee, but plan to establish	15.70%
Have no the performance investigation committee, also have no establishment plan	44.70%
No training of the performance management on any top managers	63.50%
No training of the performance management on any medium managers	61.7%

All the above data has shown that the HR systems of domestic companies are not perfect, a lot of mistakes may happen in the implement process, the domestics companies should try hard to perfect the currently existing system.

3 rd, the satisfaction of the most companies for performance management is not high.

Table 2.3.1.5 the dissatisfaction of the most companies

.

Satisfaction Performance management item	General	Isn't a satisfaction very	Very dissatisfied
Performance plan of establish/target enactment	45.50%	17.3%	10.4%
The process that the performance investigate	49.50%	21.7%	9.4%
The method that the performance investigate	46.30%	16.4%	8%
The performance investigate a result of usage	36.90%	24.8%	12.8%
The implement effect that the performance investigate	45.20%	25.4%	13.1%

All the above data have shown that most of the domestic companies are not satisfied with the current performance management. The domestic companies should analyze the reasons which cause the current situation and adopt the effective methods to improve the total satisfaction of the performance management system.

4th, the business enterprise development direction of establishment performance management system in China

(1) Attach importance to performance management from the strategic height

First, the senior managers should attach importance to performance management, they could not do performance management as normal regulations of human resource department but should consider how to promote the whole performance level by performance management from the strategic aspect to achieve strategic target of company.

Secondly, all levels managers and employees should change the understanding of performance management. The performance management is a good management tool which is exploited by human resource department to improve performance level of operation department and employees. They should deploy performance management by proper attitude instead of unbending even rejecting attitude.

Thirdly, human resource department should understand the development strategy of company first at the time of designing performance management system, then from the company development strategy consider how to made use of performance management to push to achieve the company strategic target. In the implementing process of the performance management, should even consider how to let the performance manage contribute efforts to implement company strategic target better every moment.

At last the business enterprise should consider how to promote accomplishment of the company and the sections even and all levels managers and employees when design performance management system, but shouldn't only stay around some kind of prize, promotion and so on.

(2)By dint of “outside brain”, the fast establishment of the science management system

Greatly part of foreign business enterprises have already had a mature performance management system, so that the local business enterprise completely could draw lessons from experience of foreign business enterprise by employ some consultation organizations and consultants which built up the performance management system for other companies, which is called “outside brain”. By dint of “outside brain” company could built up relative science and canonical performance management system quickly.

2.3.2 The present condition of the finished vehicle logistics

The advanced company has already escaped from the inter part of limited logistics section, could measure logistics performance method by analysis simply function indicators. They stand on the angle of the whole company and the supply chain to establish and dispose logistics strategy and supervisor the allocation of logistics resource by measurement of accomplishment of channels alliance and control of logistics performance. The performance management of logistics business enterprise in China has much problem as weak target, little feedback, no prize and punishment management basically and so on.

The logistics business enterprise has strong and correct idea of mission and organization structure, but high on to make use of control operation and finance to control and coordinate performance more, and depend on value claim more to encourage employee.

So the business enterprise usually highly depends on advocating some kinds of values as "become industry leader", "business enterprise loyalty" and so on, which represent formally as hanging photos of leaders and slogan, singing the anthem of company and so on to create

atmosphere to encourage employee, but seldom use strategic performance management system used usually by advanced business enterprise.

The ability of management and strict degree in the developing logistics business enterprise in China is obviously not good, particularly in following aspects: The enactment of target, provide an explicit performance management feedback, give prize or punishment to excellent or inferior accomplishment, they depend on management control and value to encourage, lack of personnel about finance and management, seldom deploy incentive mechanism and develop opportunity to attract and reserve excellent employee.

The automobile logistics company in China mainly has four kinds of forms:

One is private enterprise changed from the traditional transport and warehouse business enterprise;

Two is state or joint-stock enterprise separated from the automobile manufacture enterprise;

Three is overseas-funded enterprises accompanied with rapid growth of automobile market;

Four is Chinese and Foreign joint-stock automobile logistics business enterprise. Although some logistics business enterprises which have foreign capital absorbed some excellent advance management idea, but the management foundation of majority business enterprises are weak as poor information-based, weak target of performance management, little feedback, have no prize and punishment management basically, make use control of operation and finance to control and coordinate performance, and depend on value claim more to encourage employees. Along with the global economics, automobile industry is in line with international economy quickly, the most automobile logistics business enterprise in China need to improve management mode and incentive system, fetch in and establish advance performance assessment system which is imperative under the situation.

3. KPI management project design

3.1 main business frame

3.1.1 The business analysis of the finished vehicle logistics warehouse

The warehouse is the central point of the finished vehicle logistics system of the automobile manufacturing industry which stores the various products constantly and continuously transported from every place, then send out to each retail and customer, which is divided into

several type according to business contents as follows:

Reserve type: Reserves for the purpose such as strategic supplies reserve, season supplies reserve, prepare against want supplies reserve and circulate to regulate storage etc..

Gather to distribution type: Take organizing supplies to gather to distribute with as a main purpose, which could be divided into little species amount-large quantity distribution and many species-little batch quantity distribution. This kind of warehouse once was designed and constructed completely, which would be rebuilt for other purpose hardly and flexible badly.

Transit cargo type: this kind of warehouse take transfer supply for main purpose, the function of transfer is like little pieces-large quantity distribution type and the function of reserve is like reserve type, which is one of the main models of the finished vehicle warehouse.

Transport type: Mainly as transfer center, take linking up with different transport tools, which is also one of the main forms of the finished vehicle warehouse.

Processing type: Take circulation processing as the main purpose, this kind of warehouse compared with general factory contains more storage facilities. General processing warehouse is to gather processing plant and warehouse two kinds of function.

Otherwise, business flow changed much recent years, which cause the warehouse development become a new trend as the rise of circulated warehouse, circulate warehouse is regarded by people day by day because of rapid shipment. Generally speaking circulate warehouse have characteristics as follow:

Its position is placed in Social circulation.

Its property is be engaged in medium storage of supplies which take quickly delivering as a premise.

Have warehouse function and transport function.

Apply intelligence report handles system as automatic telegram typewriter, computer system (as print of the finished vehicle warehouse system) etc.

Adopt modern handling and custody mechanism as goods dish system etc.

Have facilities for camion discrepancy conveniently and dispensation vehicle instruction etc., in the aspect of operation could undertake shipment of camion to integrated whole to turn.

The operations as goods packing, product classification, packing etc., can meet the requirements, correspond of carrying on.

Circulate the warehouse is the main form of the finished vehicle logistics warehouse business.

In the logistics system, the storage makes an important role. In the other words, storage is the link of manufacture and distribution, like bank which could regulate river flow, undertake regulate function of two kinds of activities, play a crucial role in whether business enterprise logistics carry on smoothly. And the functions of warehouse also improve along with the development of logistics technology.

3.1.2 Distribution business analysis

The finished vehicle distribution is divided into land-carriage, water-carriage and rail-carriage. The Ro-Ro logistics technique is adopted widely recent years which is a kind of transport method that make use of the character that finished vehicle could move itself and combine the other transport methods. Its operation mode mainly has:

Car-carrier mode: The carrier is trailer which is more than 10 meters long and could carry six to twelve sets automobiles by land. The operation of this mode is driving automobile onto trailer and placing in two layers or alongside in one layer (for miniature automobile). The characteristic of this mode is quick speed and flexible quantity accommodate.

Container mode: This mode is basically similar with car carrier mode, just drive automobiles into container, which is used to transport by sea.

Ro-Ro mode: This is the most economic transport method. When Ro-Ro ship docked at the pier, stretch out bridge plank, the automobile could directly go aboard, then put on layer and position. The characteristics are convenience shipment, large quantity, low cost and so on. This kind of mode has already got an extensive usage currently in ocean, coastal, and Yangtze River transportation.

Train mode: The operation of this mode is driving automobiles in customized rail containers, the train generally adopts wholly mode to circulate. The whole capacity is considerable, have scale economy, and transship time is less than by ship.

Each finished vehicle carrier carry on “door-to-door service” in the process of delivering in China. Carrier is responsible for the whole transport process of finished vehicles as receiving finished vehicles from manufactures and delivering them to the appointed sale transfer warehouse or receipt company. The service contents includes checkout and acceptance,

warehouse, packing, delivery and handover...etc. and undertake all risks of the safe quality in the finished vehicle transport process.

3.2 The principle of choosing evaluation indicators

3.2.1. Take the strategy-oriented as the principle

If performance assessments do not insist strategy oriented, it will be very difficult assurance the performance assessment support company strategy effectively. The guidelines of the performance assessment is achieved by performance indicators, whether performance assessments could achieve strategy-oriented depend on the design of strategy-oriented performance indicators.

This means that firstly as the indicators of measuring each post work performance, the measurement concern embodied by the key performance indicators depend on the strategic target of company. When the key performance indicators constitutes an effective constitute or support system of the company strategic target, the responsibility of measured post should be related to achieve strategic target of company.

The KPI comes from the decomposition toward the company strategic target, its second layer meaning is that KPI could make company strategic target further thin and development. The company strategic target is long-term, instructional, general, but the key performance indicators contents of each post are abundant, fixed for post, with a view to the work performance assessment and measurable. Therefore, the key performance indicators exhume the concrete factor of the real drive company strategic target and embodied the company's strategy requests to each post work performance.

The last meaning lie in that the key performance indicators adjust along with the development of company strategic target. When the point of company's strategy transfers, should the key performance indicators be revised to reflect the new contents of company strategy.

3.2.2 Take basic on work analysis as principle

The work analysis is the foundation of the whole human resource management, which is the foundation of designing performance assessment indicators basis. According to assessment target, it investigate and analysis the contents, property of the work and the conditions for completing these work etc. of different post, in order to understand the expected target and the adopted work

method for the different post and confirm each factor of performance assessment primarily.

3.2.3 The principle of carrying through comprehensive business process

Many companies applied strategy-oriented and indicators design method basis on work analysis, but some of which neglected a very important process as design assessment indicators basis on comprehensive workflow. The performance assessments indicators should be held from the process. According to the different role, responsibility and relationship with upstream and downstream of assessed object, certain the performance target of measured work. In addition, if process has problem, it also should optimize and reorganize the process.

3.3 The constitution of KPI assessment

According to the organization setting of the logistics business enterprise in China, orientation of logistics organization, the best practice of advanced logistics company, the author combines above theories analysis and carry on the constitution of the whole KPI assessment project. The constitution of KPI assessment project is a systematic project, which involves disassembly of business enterprise strategic target, analysis of main business process, establishment of section KPI indicators, the analysis of every job function and the establishment of performance target etc.

3.3.1 The characteristics of KPI indicators

To set up the KPI assessment project, it should distill key performance indicators from each business unit of business enterprise firstly, the key performance indicators is the measurement indicators used for measure staff member work performance, which is important part of performance plan. It has following characteristics:

1st, The disassembly from company strategy target

This means that firstly as the indicators of measuring each job performance, the measurement content embodied by the key performance indicators depends on the strategic target of company. When the key performance indicators constitute an effective part or support system of the company strategic target, the responsibility of measured job should be related to achieve strategic target of company.

The KPI comes from the decomposition of the company strategic target, its second layer meaning is that KPI could make company strategic target further detailed and developed. The

company strategic target is long-term, instructional, general, but the key performance indicators contents of each job are abundant, fixed for job, limited to the work performance assessment and measurable. Therefore, the key performance indicators exhume the concrete factors of the real driving strategic target and embodied the company's strategy requirement on each job performance.

The last meaning lie in that the key performance indicators adjust along with the development of company strategic target. When the emphasis of company's strategy transfers, should the key performance indicators be revised to reflect the new contents of company strategy.

2nd, The key performance indicators measure the controlled part of performance constitution

The performance of business enterprise management activity is the result of composite effect of internal and external factors, in which internal factor is the part controlled and influenced by each employee and measured by KPI. KPI should reflect direct controlled effect of employee's job and get rid of other influence of environment or others. For example, sale quantity and market share are the standards of measurement of market exploitation ability, in which the sale quantity equates total market scale multiply market share, in which total market scale is uncontrolled variable. In this kind of case, comparing two multipliers, market share embodies more importantly the core content of job performance, and is more suitable for being a key performance indicator.

3rd, The KPI is the measurement of key management activity, but not reflection of all operation process.

The content of each job involves different aspects, the work mission of senior managers is more complicate, but KPI only measures the work which plays a crucial role influence on the holistic strategic target of company and achieving strategic target.

4th, KPI should be recognized by superiors and sub-ordinates in the organization

KPI is not forced from superior and also not made by person on the job, which should be designed by superiors and sub-ordinates together and consistent with opinions of both parties. It is not tool for oppression, but the common understanding of job performance request for related personnel in organization.

KPI contribute to many aspects as follows:

- According to organizational development programming/target plan, to make the personal/departmental performance indicators. Monitor operation process related to performance target

- Discover potential problems which need to be improved in time and feed backed to related section/personal.

- The KPI output is the foundation and basis of performance evaluation.

After the company, section and even job define the clear KPI system, it could link the targets of company, section and personnel.

For governors, the phased evaluation and control of the section/personal KPI output could lead correct target development;

Concentrated measure the behavior needed by company;

quantitatively and qualitatively make evaluation to direct and indirect profits source.

3.3.2 The basic method of the design of the key performance indicators

The usual methods are "fish bone figure" analysis method and "nine blank figure" analysis method currently, which could help us seize and solve main problem.

The main step of "fish bone figure" analysis:

1st, Identify the emphasis of personal/section business and the factors influence company businesses

2nd, Identify business norm. Define the successful key factors and the tactic need by business.

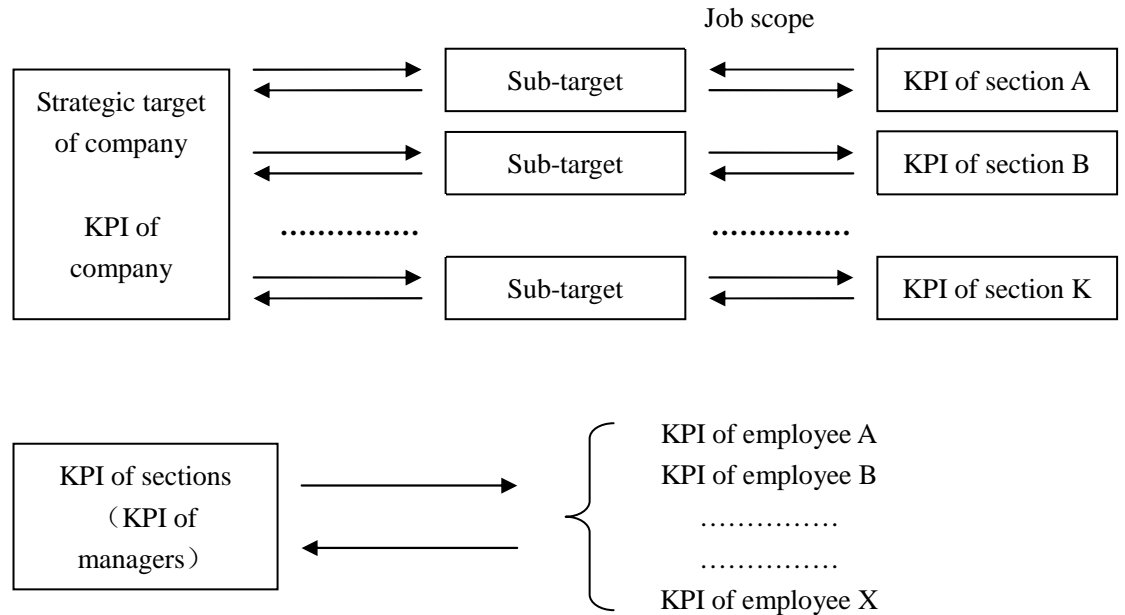
3rd, Identify key performance indicators, judge actual factor whether an performance standard attain. Disassemble the KPI to every level of company step by step to identify key performance of ever section and job quantitatively and qualitatively.

The job KPI measures the responsibility of the employee in this job which embodies the contribution of the employee to company and section.

3.3.3 The KPI indicators system establishment process

The selection of KPI indicators to attain assembling strategy target vertically, horizontally combining business process in each level is not easy affair. The pick-up process of KPI indicators explained as following form:

Figure 3.3.3.1 The KPI indicators pick-up process

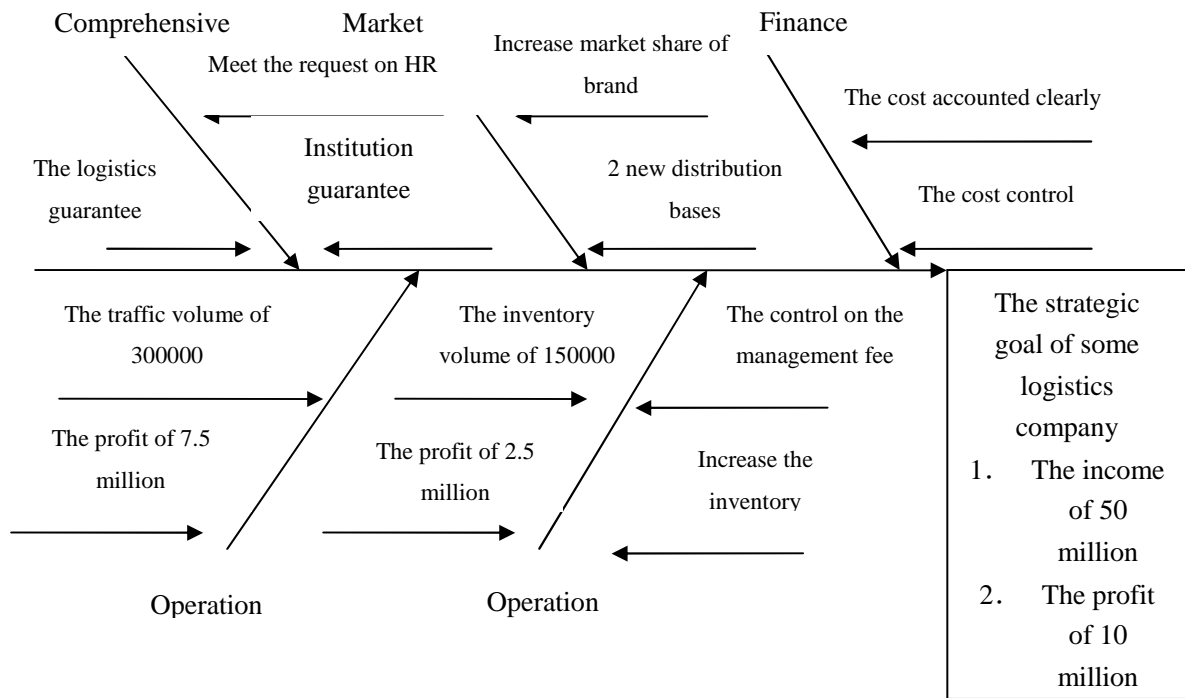


1st, Disassemble strategy target of business enterprise, analysis and establish contact of each subdivision target and main business process

The total strategy target of business enterprise usually can be disassembled to several support temperament target which need some kind support of main business processes to some extent. Therefore, on this link it's necessary to complete the following work:

- (1) Senior level of business enterprise establish strategy target (by using the fish bone figure)
- (2) Business enterprise medium level strategy target disassemble the strategic goal into main support temperament target (can use the fish bone figure)
- (3) Establish connection of the main business process and the support temperament target of business enterprise.

Figure 3.3.3.2 strategy targets disassembly the fish bone



2nd, Identify each support target of the business process

After confirming the support business process of each strategic subdivision target, it need further confirmation of the total target of process itself based on reaching support strategic subdivision target, and using nine blank figure to further confirm detailed disassembled contents of total target in different dimension.

Table 3.3.3.1: Confirm process target example

dimension process target	The utility of traffic equipment	The layout of logistics network	The customer needs
Meet the quality and service requirement with low cost	Empty driving rate, heavy driving rate The deployment of trucks	The reasonability of the knots of the logistics network	The quality management The safe, fast delivery

The organizational process target	The degree of the customer satisfaction	The high customer satisfaction	The high customer satisfaction
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3rd, Identify the connection of each business process and each working function section

By establishing the connection of process and work function, further establish the connection of process and work function in the micro level to establish the connection of strategic target and KPIs of sections.

Table 3.3.3.2 Confirm the connection of business process and the working function section

	Operation department	Finance department	Customer service department
The finished vehicle distribution	Attain the resource according to the manufacturing; design the plan; organization; deploy the traffic	Organize the capital; Pay the freight	Monitor the traffic in the halfway Provide the cooperative information for the driver Provide the tracking information for the customer

4th, The pick-up of section class KPI

In this link it selects sectional KPIs from the connection of process and section responsibility established in above-mentioned link.

Table 3.3.3.3 The selection of section class KPI example

KPI dimensional indicator Performance variable dimension	Evaluated objective	Evaluated target	Evaluated result
time	Efficiency management department	The finished vehicle traffic	Rate of on-time arrival
cost quality	Investment department Manufacturi ng department Quality department Customer service department	Production process Product and service	Cost decrease Rate of manufacturing cost Rate of satisfied quality Rate of customer satisfaction
amount	Capacity management department	Sale process	Sale income Total income

5th, The unify of target, process, working function, job target

According to section KPI, business process and each job, establish the unification of business enterprise target, process, working function and job. Some logistics company operation department work target (KPI): ensure quality, ensure quantity, and ensure superior-quality completion of the whole car distributing mission process: manufacturing factory give out the order of distributing cars→ logistics company traffic department organizes the drivers, lift car and check car → assign car distribution mission → organization car distribution→ en route management →hand over car → be over

The first post- duty: Receive plan, organize drivers to lift car, do procedure, cent car;

The first job target: put forward request plan timely, lift car in time, carry on the procedure accurately in time, subcontract car transportation fairly, no claim.

The second job duty: Organize car distribution, carry on en route management, be responsible for all accidents en route, coordinate the car transfer.;

The second job target: Carry on well-timed en route management, no claim during handing over a car.

3.4 The selection and assessment contents of the performance indicators

According to our country the organization of the logistics business enterprise constitution, logistics organization fixed position, and abroad logistics company of the best practice, logistics performance of management had better is establishment is taking logistics ability as core, with the supply chain cost and end customer's satisfaction of intelligent sex analysis is foundation, the company assessment at the performance of logistics section. Concrete of measure system can from three parts constitute: The supply chain logistics ability assessment and the company logistics performance assessment and the logistics section performance assessment.

1st, mercantile rate of return: the efficiency of the asset's profitability, reflecting the speed of the cost recovery. It equals to the profit after the tax divided by the debt and equity.

2nd, the profit growth rate: it reflects the level of profitability, which equals to the total profit divided by the total income.

3rd, the income growth rate per activity: it reflects the level of profitability

4th, the cost decrease rate of per activity: it reflects the cost control capacity.

5th, the cost decrease rate of total cost: it reflects the cost control capacity.

6th, the rate of the receivables recovery: it reflects the income management capacity

7th, the growth rate of the total income: it reflects the income management capacity

8th, the rate of on-time arrival: it is the guarantee of the fluent material flow, reflecting the traffic quality, easy for the logistics company to optimize the deployment, and increase the timeliness of the transportation

The rate of on-time arrival=the times of on-time arrival/the total times of arrival

9th, the utility of miles: it reflects the heavy-load and empty-load of the trucks, which can be used to measure the traffic deployment, to promote the logistics staff to adopt the effective

countermeasures to reduce the empty load to increase the vehicle utility.

The utility of miles: the miles of heavy load/the total miles

10th, the utility of the traffic capacity: the actual traffic volume/ the total traffic capacity in some period

11th, the rate of accident: it reflects the rate of the accident happens in the transportation process.

The rate of accident: the times of the accidents/the total transportation times

12th, the rate of intact cargo: it is the basic indicator for the warehousing service, reflecting the quality of the warehouse.

The rate of intact cargo= $1 - \frac{\text{the cargo loss in some period}}{\text{the average inventory at the same time}}$

13th, the rate of accurate delivery: it reflecting the possibility of receiving the right cargo in some period

The rate of accurate throughput= $\frac{\text{the total throughput in some period} - \text{the wrong throughput}}{\text{the total throughput in same period}}$

14th, the rate of on-time throughput=it reflects the timeliness of the cargo delivery.

The rate of on-time throughput= $1 - \frac{\text{the unpunctual throughput}}{\text{the total throughput}}$

15th, the inventory velocity: it is the comprehensive indicator to measure the inventory procurement, the inventory custody and inventory sales, which is the ratio of inventory sale divided by the average inventory in custody at the same period.

16th, the availability of the inventory: it reflects the capacity of the inventory to meet the customers' needs, when the needs exceed the availability, shortage will occur.

17th, the time for order processing: t is the time from the order given out from the customer to the cargo received by the customer.

18th, the order tracking: the capacity to track the condition of the cargo

19th, the rate of order completion: the ratio of the number of completed orders divided by the total number of orders

20th, the rate of customer complain: the ratio of times of the customer complains divided by the total times of service

21th, the time of processing the complaint: the time of investigating the complaint, adopting

the remedial measure and meeting the customers' needs.

22th, the growth rate of the traffic volume: it reflects the capacity of exploiting the market, increase the market share.

23th, the growth rate of the contract amount: it reflects the freight increasing speed

24th, the profitability per staff: the total profit/ the total staff number

25th, the staff satisfactory level: the satisfaction in aspects, like: career promotion, training, income

26th, the coverage of the training: it reflects the vigor of the training by HR department

4. KPI management application and evaluation for NYK

4.1 The general situation of the company

NYK logistics limited company of China was established in 2000, through hard work of more than ten years, it already has developed as comprehensive sex business enterprise group which has the ability of the whole car logistics programming, the whole car conveyance, and warehouse and logistics information system. Group's register capital is USD 19,540,000. In the whole country, it establishes 8 subsidiaries, 10branches, and the employee number is more than 1000 people.

For more than ten years, NYK logistics limited company in China develops quickly but steadily, especially in new century, comprehensive business volume continuously grows for three years with yearly 50% speed, is one of quickest growth whole car logistics business enterprises of China.

Facing the arrival of ages of integral world economy and network economy, NYK logistics China limited company strengthens its core car logistics business; in the meantime, it is expanding other business realms, gradually becoming top-grade 3P logistics supplier with ability to provide comprehensive logistics solution.

Through more than ten years of profession operation, NYK logistics China limited company has already established conveyance network spreading all over whole country, which based in East China, radiating the integral whole car logistics conveyance network system of whole country.

NYK logistics China the limited company carried on organization restructuring in 2006,

which integrates three major business into three departments, make the group company become a decision, investment center; The departments become profit centers; the manufacturing units become production centers; responsibility, power and benefit are left manufacturing units; the management and operation are separated; which make manufacturing units full of managerial independence power. In the meantime it established KPI performance management system with encouragement mechanism to exaltation the employee's working aggression. The contents underneath is beginning from the NYK logistics China limited company main business process, detailed introducing KPI performance management system establishment and application of evaluation.

4.2 The main business process

The whole carload carriage is one of the main businesses of NYK logistics, which is a bridge of link manufacturing and sales, provide sales resource for division market, buffer the conflict between market demand and manufacturing capacity. This article will introduce main function of the business and main business lines of the carload physical distribution from carload in the factory to log out to start to carload arriving at distributor, take carload shifting as cardinal line.

4.2.1 The finished vehicle enter VDC

Before the finished vehicles leave the factory, the car should be checked by the quality department. These checking activities include the car external painting, internal decoration, electronic equipment and machine condition. After the car finish all these checking, the car will be sent to car distribution zone. The process of whole car receiving is completed.

4.2.2 The constitution and implement of dispatch plan

The car conveyance order comes from the plan of the sales department; however, the plan of the sales department comes from the demand of the regional distributors. So the central mission of the car distribution is to meet the demand of the regional distributors at the right time with the right quality and quantity. Firstly, the NYK logistics center will decide the transportation mode according to the cargo package, traffic volume, destination, cost and transportation capacity. Secondly, organize the transportation resource to transfer the finished vehicle in the car distribution zone. Thirdly, the preparatory work will be done before the

distribution, like: cleaning, washing, packaging and insurance.

The haulage is the predominant driving mode, which occupies 70%-80% of total transportation quantity. In order to assure the quality of carload in the transport course, it requires the seal and binding of the double layer truck should use the uniform standard which is determined by quality department and NYK logistics.

The railway transportation is similar with the haulage in the working process; and the seal and binding of the rail carriage tier truck is consistent with the haulage.

The multimodal transportation of land and water is an important transportation mode which NYK logistics made a lot effort. The double layer trucks carry the finished vehicles to the port, then these finished vehicles will be loaded into the Ro-Ro ship. After the ship arrives at the destination port, the finished vehicles will be distributed by double layer trucks

To reinforce supervision of vehicle transport in the way, NYK enforces satellite supervision to each double layer truck, which is also called GPS system. By terminal, we can supervise and control the position of the cars at any time, thus and NYK effectively strengthen the transportation management of the double layer trucks.

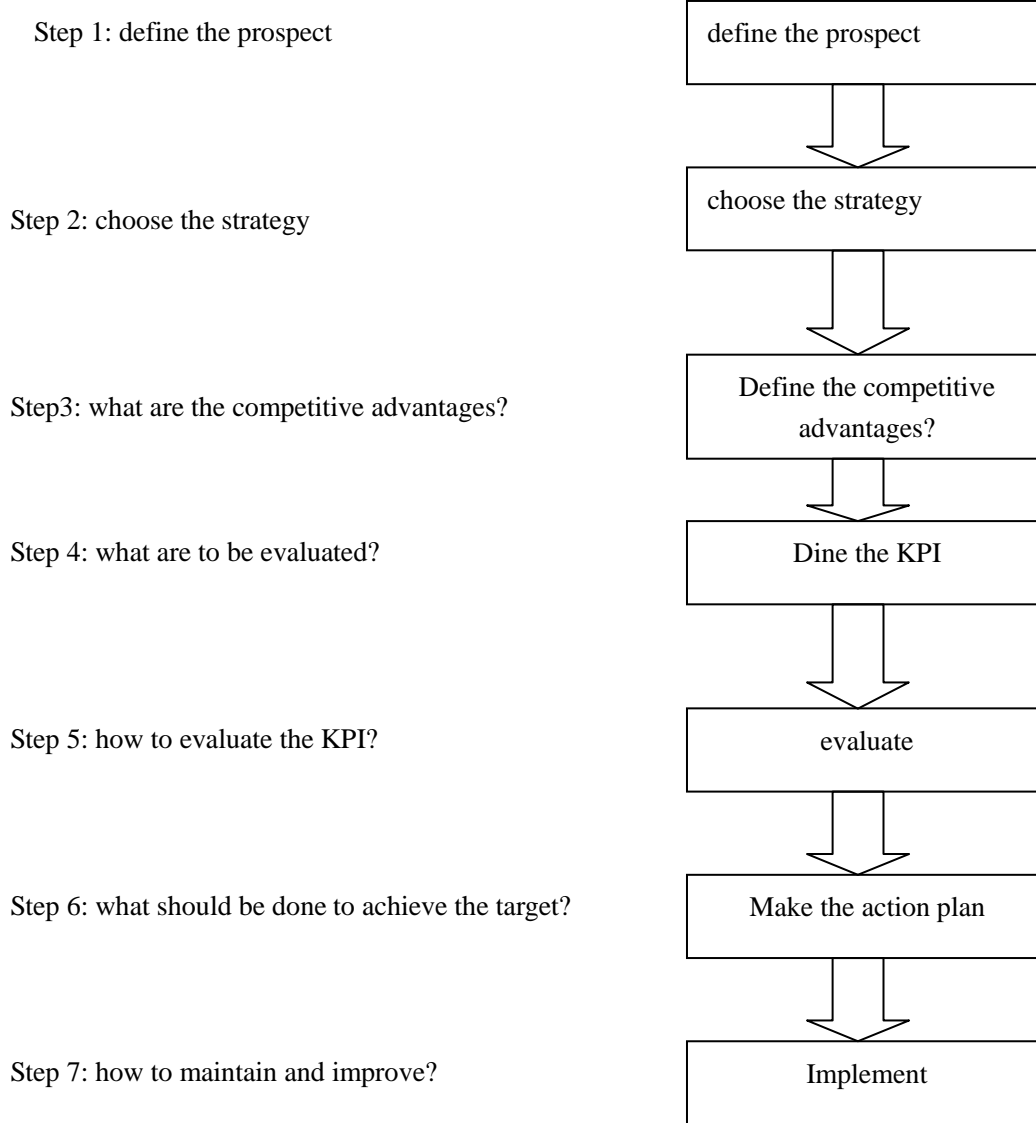
4.2.3 The management of redistribution warehouse

NYK has 5 redistribution warehouses, which have already 30,000 car inventory ability. After the finished vehicles arrive at the redistribution warehouse, the staff will check the car, if any problems happen, it will be noted. After the check, the car will be handed over to the redistribution warehouse and this will be recorded into the computer.

The distributor receives the car from the redistribution warehouse, which should be authorized from the automakers. The staff in the redistribution warehouse should check the car comprehensively, and then the car will be handed over to the distributor. This transaction will be recorded into the computer.

4.2.4 The maintenance of finished vehicles in warehouse

According to the agreement with the automakers, the inventory car in the warehouses will be responsible for the maintenance and care of the cars. Every month, the warehouse staff will check the car, including: the battery, tier, paint, engine and so on. The monthly care report will be sent to the quality department of the automakers.



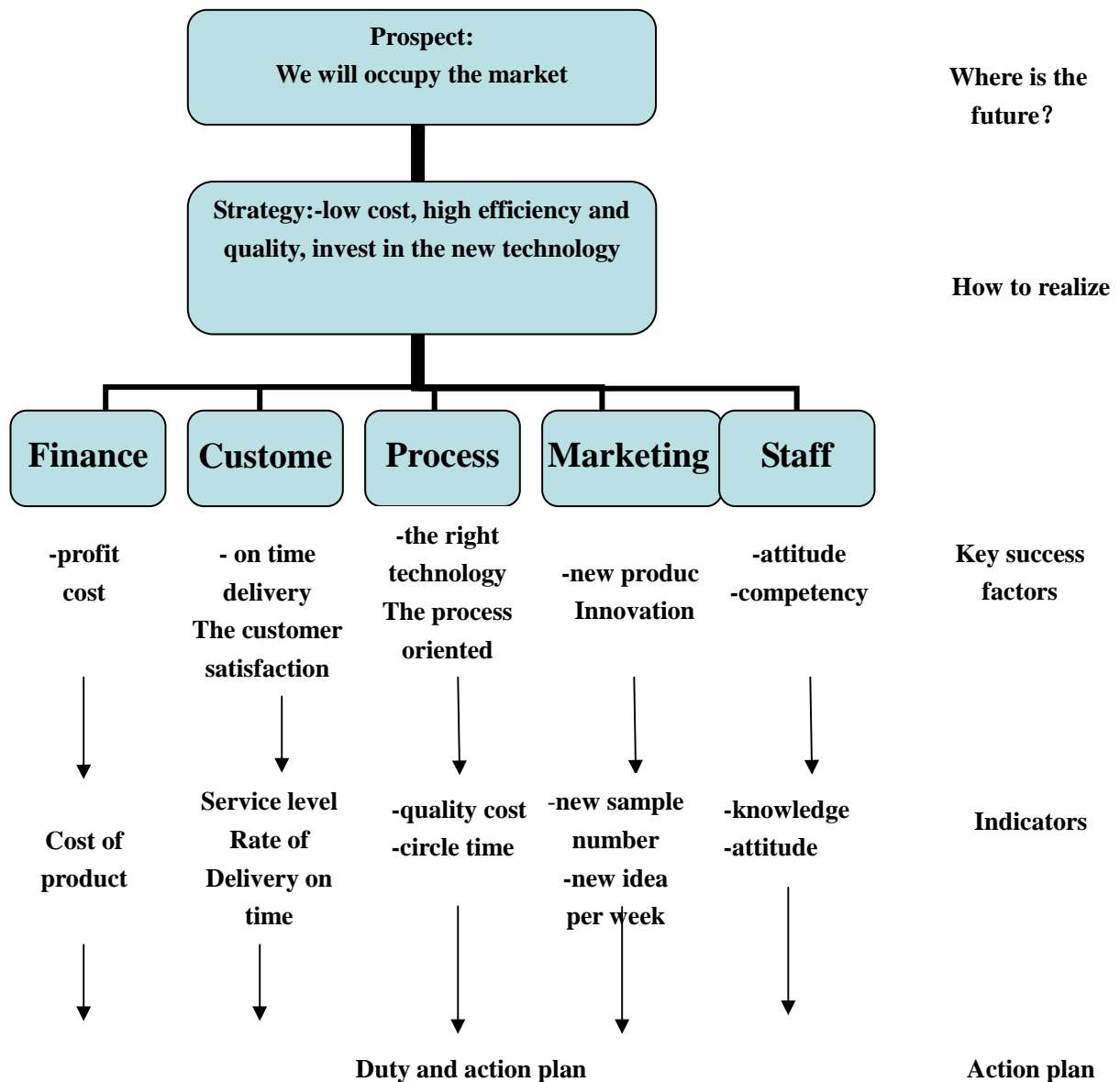
4.3 The selection and optimization of KPI

Before the selection of KPI, it's important to know where the company is going. Make a proper strategy, which will bring the company to that target. We should define the factors of success, but this doesn't mean we should do well in every aspect. The KPI is that we should focus on the important things, how we are doing? How can we achieve the goal? How do we manage the KPI? What kind of the report do we need?

Figure 4.3.1 KPI indicator selection process

The figure above demonstrates the breakdown of the strategy prospect of a very common company, combining workflow and job responsibility to come to define the KPI of company, department and the employees.

Figure 4.3.2 company strategy targets resolve sketch map



According to the characteristics and workflow of the whole car logistics, we analyze strategy target to divide KPI into as follows several types :

Table 4.3.1 the concrete classification form of KPI

department	target	KPI
finance	asset profitability	mercantile rate of return
	profit level	the profit increase rate
		the income growth rate per activity

	cost control	the cost decrease rate of per activity
		the cost decrease rate of total cost
	income management	the rate of realized receivables
		the growth rate of the income
operation	deployment management	the rate of on-time arrival
		the utility of miles
		the utility of the traffic
(distribution warehousing, customer service)	risk management	the rate of accident
		the rate of safe cargo
		the rate of accurate of delivery
	process management	the rate of on-time delivery
		the rate of on-time documents
		the availability of the inventory
	customer service management	the rate of order completion
the rate of customer complain		
market	market share	the increase rate of the traffic volume
		the increase rate of the contract volume
HR	staff efficiency	the profit per staff
	staff encouragement	the satisfaction level of staff
	staff training	the coverage of the training

According to the choice principle of KPI and enactment of work target, we can more integrally investigate work. Then we carry on sieving to the KPI according to the job duty and the work essence. Underneath with logistics department general manager for example come concrete elucidation of the whole process.

Figure 4.3.3 selecting and optimizing the KPI of each job

Job: manager of the logistics department

duty: control the profit and efficiency, and train the core competency

the emphasis:

1. by enhanced market plan, design the logistics/warehousing layout
2. increase the customer size, enlarge the business scope
3. establish the brand, maintain the sale income. solid the

Finance

- . The return on the investment
- . Cash flow
- . Profit before tax

Operation

- . Sale income
- . Rate of new customer
- . Rate of empty driving
- . Market share
- . Rate of completion
- . Sale cost
- . Management cost
- . Cash circle time
- . Receivable circle time
- . Inventory circle time

.....

Organization

- . Income per person
- . Profit per person
- . Management cost per person
- The target of job
- . The customer satisfaction

Finance:

- . Rate of return on the investment
- . Free cash flow
- . Profit before tax

Operation

- . Rate of new customer
- . Rate of assets 10%
- . Rate of inventory circle

Organization

- . Profit per person
- . Management cost per person
- The target of job
- . The customer satisfaction

4.4 KPI application effect analysis and evaluation

With the increase of levels of business enterprise norm management consciousness and science management day by day, governors begin to understand importance of performance management at improving business enterprise management accomplishment, developing excellent employee's troops, molding the competitive core advantage of the business enterprise

etc. However, after NYK logistics limited company of China begins to promote performance management, it just detects many crux, feel them hard to resolve, through one-year's operation and several powerful adjustment, currently, performance management basically comes to an expected target.

4.4.1 General situation of NYK logistics limited company results in China

NYK logistics limited company in China is medium-size business enterprise, before 2005, it established human resource department, finance department, operation management Dept (which has traffic section, warehousing section and customer service section), market department, comprehensive management Dept. five major sections, had more than 600 persons of employee. Usually the company carried on democratic measurement to review the employees at the end of year, and review results are related to employee's cash. Because of review tool is too simple, the function did not actually have differentiated the good and the bad. In the end of year, the prize allotment would be balanced by management layer in business enterprise; the average doctrine atmosphere was very strong.

Key figures of business enterprise have fully understood former management style already severely limit development of business enterprise. For decision matching company's strategy transformation and organization adjustment, at beginning of year 2006, it started promoting a new management style in the business enterprise, among which performance management is a key. However, along with expansion of the new management style in the business enterprise, key figures of business enterprise and the human resource management Dept. detected the following tough and hard nut around performance management:

1st, Enactment of norm investigation project. In the term of the performance management of certain department, the review plan should have included target, norm and relative weight, etc., but the actual application effect usually was not so good. In the terms of target, the problems majorly embody as oneness of target content, the lack of foresight, ignorance of other important sources, lack of communication and lack of integrity. At evaluating the importance of the target, it lacks the internal communication so that it contains much subjective deviation.

2nd, The performance investigation is unsatisfied. The key of performance management is to want to distinct the good and the bad by investigation, but the actual operation result of business enterprise is opposite. In investigation, some section have occurs almost all employees to gain

excellent results, which is the result of mutual boost, while those colleagues carrying on real earnest evaluation will be treated more bad. So such investigation caused very big mental unbalance between the sections and the employees, also lowered credit and effect of investigation.

3rd, The performance management system can hardly get a integral effect. For the view of operation condition of performance management system, there are typical 4 disjoints: the disjoint between department investigation and staff investigation, which means that the staff investigation is not based on the department investigation and the department investigation will have no effect on the staff investigation; the disjoint between target evaluation and essence evaluation, which means that the evaluation on the staff is too much result-oriented and ignores the objective evaluation on the staff's activity; the disjoint between quarterly (yearly) evaluation and daily evaluation, which means that the quarterly (yearly) evaluation is not based on the daily evaluation, which will increase the evaluation deviation; the disjoint between the performance evaluation and performance feedback, which means that the evaluation result has no guideline effect on the staff's activities and performance.

Actually, the above problems are not particularly, which are common in the process when the company starts to run the performance management. But these problems are closely related to the organizational structure, business process, company culture and the evaluation system. The top managerial level talked with the consultancy company in second half of year 2006, and made some adjustment for the current plan, the details are below:

1st, Perfect the performance management system from the root. It is different from the traditional performance evaluation; the performance management is a closed loop, which contains performance plan, performance operation, and performance feedback and performance improvement. A perfect performance management system must base on the above 4 keys and combine with the organizational structure and business process to establish a tridimensional performance management system. The so-called tridimensional means that the target system is consistent with the organizational structure from the top to the bottom, while it should take account in the typical business process of selecting value, providing value and communicating value; at the same time, it should consider the dynamic binding between the past performance record and future performance improvement. NYK logistics China co.ltd consider this is the key

for the resolving the performance evaluation problem.

2nd, Establish the effective KPI management system. KPI management system is the base of the enterprise performance management. Most problems in performance management can be attributed to the defects of the KPI system. The KPI system will be structured according to the below procedure: the KPI draft proposed by general meeting of shareholders or board of directors or managers; interpellation of the KPI draft; the confirmation of the KPI draft.

3rd, Make the effective operating plan of performance management. The implementation of the performance management system will affect the whole company, so it must be carried on carefully and strictly based on the plan. In the first half of year 2006, NYK logistics China co.ltd had no norm operation process, which made the company can hardly run systematic or orderly and performance management was not the tool for improvement. Hence, when the effective performance management is carried on, it's necessary to make comprehensive and detailed regulation on the every parts of the system, like: the data collection, the performance ranking, result confirmation, result feedback and file documenting.

4th, Establish the staff salary system which is closed related to the performance measurement. The content of "closed related to the performance measurement" has meanings in 2 parts: the performance measurement must be realized in some way, like: bonus or position change; the mode of measurement should be the basis of the mode of benefit distribution, which means that the team performance evaluation should use the team stimulation method, vice versa for individual.

4.4.2 Analysis of application effect of KPI performance management

After NYK logistics China co.ltd adjust the KPI performance management plan, the company performance and staff performance have great achievement by half year, which embody the below aspects:

1st, KPI performance management put business enterprise of strategy and all levels personnel of concrete work together, and give employee explicit direction for working, avoiding employee being busy vacantly and resources and energy waste. By value logic analysis, KPI breakdown, and norm standard work process, the company's development target can be break

down onto every individual staff, which achieves the consistence between the company and staff, the staff value will be maximized.

2nd, The KPI performance management should distinct the staffs who work hard and who don't. The staffs who work hard should be awarded and those who don't should be punished. By this, all the staff should all work effectively.

3rd, Free the managers' time. By the establishment of the KPI and Target, the managers will no longer participate the operators' daily work, so the time of the managers to indicate and supervise the staffs is saved.

4th, Find out the differences between the staffs, and this will be foundation of the promotion and demotion to optimize the HR structure and allocation.

5th, Free the responsibility and pressure from the managers. Before the performance measurement, all the pressure was put on the managers, the staff just needed to ask the managers and needed not to afford any pressure. After the performance measurement, every person should be responsible for the individual job, so the sense of responsibility will be enhanced.

6th, By the performance improvement of individual, the performance of the company has improved a lot. Next, the author will take the automotive department of NYK logistics as an example to explain the contribution of the individual improvement for the whole improvement.

Table 4.2.2.1 original data from NYK logistics (some confidential data have special treatment)

Year	2004	2005	2006
Revenue (RMB)	27236182	90305496	182677304
unit	65423	266823	461364
Carrier (the number of trailer*the number of cars which can be pulled by the trailer)	40*6	40*6+100*8	40*6+200*8
rate	1.1rmb/unit/km	1.04rmb/unit/km	1.34rmb/unit/km
km/vehicle	153445	216246	212642
km/vehicle with heavy load	103124	157521	157485
km/vehicle without empty load	50321	58725	55157

Table 4.2.2.2 the KPI of NYK logistics (calculation based on the above table)

department	target	KPI	time		the KPI Change	explanation
			2005	2006		
finance	asset	mercantile rate of	20.0%	20.0%	0.0%	the average mercantile rate of return is 20%

	profitability	return				
	profit level	the profit increase rate	51.2%	102.3%	51.1%	add some high profit customers, like: BMW, Porsche
		the income growth rate per activity	-3.5%	1.4%	4.9%	the decreased freight rate
	cost control	the cost decrease rate of per activity	4.5%	6.7%	2.2%	optimize the route
		the cost decrease rate of total cost	4.7%	6.6%	1.9%	optimize the route, increase the management efficiency, slim the management fee
	income management	the rate of realized receivables	95.6%	99.6%	4.0%	enhance the management power
		the growth rate of the income	54.2%	112.0%	57.8%	add the new customer
operation	deployment management	the rate of on-time arrival	91.2%	95.6%	4.4%	add GPS system, enhance the management power, measure the driver
		the utility of miles	74.5%	86.4%	11.9%	after adding the customer, it's easy to optimize the route, measure the deploy officer
		the utility of the traffic	83.0%	85.3%	2.3%	use the IT technique and share the information with the customer, thus know better the customer s' needs
(distribution	risk management	the rate of accident	96.2%	97.9%	1.7%	train the staff ,evaluate the driver
n		the rate of safe cargo	98.2%	98.9%	0.7%	train the staff ,evaluate the driver
		the rate of accurate delivery	100.0%	100.0%	0.0%	the all-rounded IT system which assure the zero mistake, evaluate the deployment officer
warehousing,	process management	the rate of on-time delivery	71.2%	79.2%	8.0%	use the IT technique and share the information with the customer, thus know better the customer s' needs
		the rate of on-time documents	73.0%	84.0%	11.0%	train the staff ,evaluate the driver
		the availability of the inventory	100.0%	100.0%	0.0%	use the IT technique and share the information with the customer, thus know better the customer s' needs
customer service)	customer service management	the rate of order completion	100.0%	100.0%	0.0%	setup the cooperative relation with the alliance company, secure the completion of the customers' needs

		the rate of customer complain	0.5%	0.4%	-0.1%	enhance the staff training
market	market share	the increase rate of the traffic volume	307.8%	72.9%	-234.9%	increase the share traffic volume of the existing customer, add the new customers to create more value
		the increase rate of the contract volume	231.6%	102.3%	-129.3%	increase the share traffic volume of the existing customer, add the new customers to create more value
HR	staff efficiency	the profit per staff	710	960	35.2%	enlarge the traffic to slim the management fee
	staff encouragement	the satisfaction level of staff	85.0%	83.2%	-1.8%	the increase of the working press with the increase of business volume
	staff training	the coverage of the training	50.0%	100.0%	50.0%	to establish the training system

4.4.3 Results management evaluation

Although there are a lot of management methods, the performance management and evaluation is the most common practice. But this performance management and evaluation can not work if it lack the support of other management foundation.

Many problems in performance evaluation is not rooted in the performance evaluation system, but in the management foundation. The NYK logistics will show this.

For the ambiguity of the value system and management relation, many companies are in the condition of lack of strategy: lack of core competency, lack of competitive advantages, lack of key successful elements and the management capacity. At the same time, some domestic companies have much difficulty in organizational division and management relation. They have no business process record, no job instruction, no accident report, no clear management relation. In such condition, the performance measurement is based on nothing.

The responsibility system is not clear, because of the chaos in the management relations. The job responsibility is not defined clear enough, so it is hard to attribute the specific duty to specific people.

The measurement technology is not qualified, because the measurement technology is copied from the book or foreign experience and lacks of the practical direction. All the staffs,

even in different department are used same evaluating indicators, evaluating system, evaluating methods, which is dogmatism.

The system only has the function of evaluating, but has no function of improving. Many domestic companies hope that the performance measurement can resolve the problems, but they ignore a key problem: if the bad performance is caused by poor business process and practice, the performance measurement will be fruitless in the long term.

From the practice of NYK logistics China co.ltd, the performance interview for establishing the partner relation is a powerful guarantee for the performance management system.

In the traditional evaluating process, the ratees and raters are opposing each other. The evaluating system is full of different opinions, the unqualified results and the bad environment. The ratees don't get improved by the evaluation. The basic problem is that the unbalanced statuses of the ratees and raters. In KPI method, the ratees and raters should be the partners, who learn from each other and get improved together.

This partnership first embodies in the evaluation plan. KPI asks for a evaluation plan which is the consensus of 2 parties. They should have the common understanding and explicit targets, which embody the mutual trust and team spirit.

The rater should feedback the evaluating results to the ratee, which should be kind to accept and easy to understand. Both the good and bad aspect should be shown, the good should be encouraged to maintain, the bad should be encouraged to overcome.

In the whole evaluating process, the raters should be strict and help the ratees improve toward the performance target by investigating and researching the ratees' activities.

From the process of NYK logistics China co.ltd implementing the performance management, the goal of management is not the management itself, so it's not for management to manage. All the management should be rooted in improving individual performance, realizing the company's performance goal and perfecting the business condition. Hence, there are 3 key words in performance management: goal, performance and management, which can all be summarize as business operation. No matter what the demand of the company for the management is , no matter what the problem the management is going to resolve, performance management is by evaluating and stimulating to achieve the strategic goal and business goal.

Only by doing so, the company can position the performance management as strategic importance, rather than the HR tool.

5. Conclusion

5.1 Thesis summary

To review the dissertation, although it has systematically researched the current condition and planned construction of KPI management, it still has much to be improved.

1st, Define the finished vehicle logistics, and explain the current management condition of finished vehicle logistics company. Analyze the importance of the performance management, and further come up with the idea of establishing the performance management system which is to be applied in domestic finished vehicle Logistics Company.

2nd, Analyze the various methods and suitable scope for performance management, and come up with the theoretical foundation for finished vehicle logistics company.

3rd, Analyze the business process of the finished vehicle logistics, and constructs the performance management framework and implement plan for the logistics company.

4th, According to the above performance management framework and implement plan, take the example of NYK logistics China company to illustrate the performance management application results and the contrast between the management elements before and after the performance management.

5.2 Follow-up research outlook

The domestic finished vehicle logistics is still in the primary stage. For the imperfect regulation frame and the lack of the norm, it has much disadvantage compared with the advanced countries, like: large quantity, wide spread, small size, single service, low efficiency and high competition. The continuous development of the company is based on the continuous internal changes to face the continuous external changes. These changes should define the job and the performance target, and help the staffs to confirm the norms.

Management revolution is the topic of sustainable development of business enterprise, but reconstruction of performance management is core of the business management change, only the

reconstruction of performance management of high quality can ensure the company gains the competitive advantages and long term development on the brand new platform. The performance management is a long term management tool, which can ensure the consistency between the strategy, department target and staff activity.

Currently the domestic companies are keen in the performance management, especially the KPI management, but the effect of the KPI is not so good.

Currently in the performance management of business enterprise, “quantification” excels all the rest, so the other aspects are usually ignored. This kind of one-sided understanding of the performance management is to misunderstand the performance measurement as the performance management.

The performance management is to improve the management system and organizational efficiency by diagnosis in the dynamic process. The final goal is same as the business administration: to gain the max profit.

The quantification may take too much energy that misguides the direction of the performance management and can hardly achieve the expected efficiency.

Hence, the performance management should combine with the business administration, which is next problem to be researched and confronted the domestic companies.

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