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Supplier performance evaluation documentation and process in the textile and garment manufacturing industry
Company case: X

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Abstract

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Nowadays, suppliers play vital roles in the supply chain, especially in the textile and garment industry. Besides choosing the right suppliers, the importance of evaluating and monitoring their performance should be taken into account in strategic planning. The scope of this thesis focuses on current suppliers of the company case, named X, and excluding potential ones.

This project, in the form of a product-oriented thesis, aims to provide company X with a tailored package including a supplier evaluation performance platform and a proposed implementation plan. An additional research is conducted to gain the insight of how to achieve an effective implementation and encourage suppliers' involvement. The platform includes one final form for evaluating suppliers plus detailed explanations and guidelines for scoring method. It is designed with Microsoft Excel, which is easy and convenient to use, while the implementation plan is presented as a part of the report.

The theoretical framework is comprised of four aspects: highlighting the benefits of this system, choosing appropriate KPIs, suitable approaches and implementing process. The literature review aims to build a robust base for the platform and implementation plan. In parallel, semi-structured questionnaires and in-depth interviews with two experts in the field are carried to obtain the reliability and validity of information analysed.

Due to company X' current competencies, this system of supplier performance evaluation is considerably applicable thanks to its simplicity and manageability. To gain long-term benefit from this system, the commitment of top managers is required. Based on the principles of creating the evaluation guidelines, the platform, basically, can be changed and updated to adapt the company's changes in strategy and priorities. Especially, the form should not only focus on basic indicators such as cost, quality and physical logistics, but also promote the metrics that are able to bring in added value and competitive advantages like continuous improvement and customer relationship. Suppliers' awareness and participation vary from their international involvements; therefore, company X should actively provide supporting activities to suppliers.

Keywords
Supplier performance management (SPM); supplier evaluation system (SES); key performance indicators (KPIs); textile and garment manufacturing industry; supplier scorecard

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1 Introduction

This chapter draws on the understanding of what the whole study aims to achieve. The background of the study will be presented first, while the project objective and project tasks are introduced in sub-chapter 1.1. The rest of the chapter mentions the key concepts, benefits for stakeholders, risk management, and company background. The structure of the report will be shown in sub-chapter 1.7.

1.1 Background of the study

There is a saying, "If you cannot measure it, you cannot fix it"; hence, measurement is necessary to get a picture of overall performance, pinpoint the roots of problems and identify the improvement opportunities. Thanks to Cohen (2005, 187), measurement is the sole way to understand the process performance either improving or declining, and whether action is required. From the persepective of supply chain, this thesis focuses on one aspect of purchasing; that is supplier performance evaluation.

The thesis' puspose is to design supplier performance documentation and propose the implementation process in the textile and garment industry for the case company. Since the firm wants to keep anonymous, it will be named company X in this thesis. Company X plays the role of an outsourced manufacturing supplier for fashion players, therefore, the importance of maintainance and development of quality of its 1st-tier suppliers is absolutely vital not only for the company itself but also for their various B2B customers.

This thesis is product-oriented, offering the company a compact package of a ready-to-use form and an implementation plan, meanwhile, an additional research will be conducted to study an efficient implementation with suppliers' involvement , where the proposal plan will be discussed as a result. The figure below can precis this idea, where the red items are the expected products.

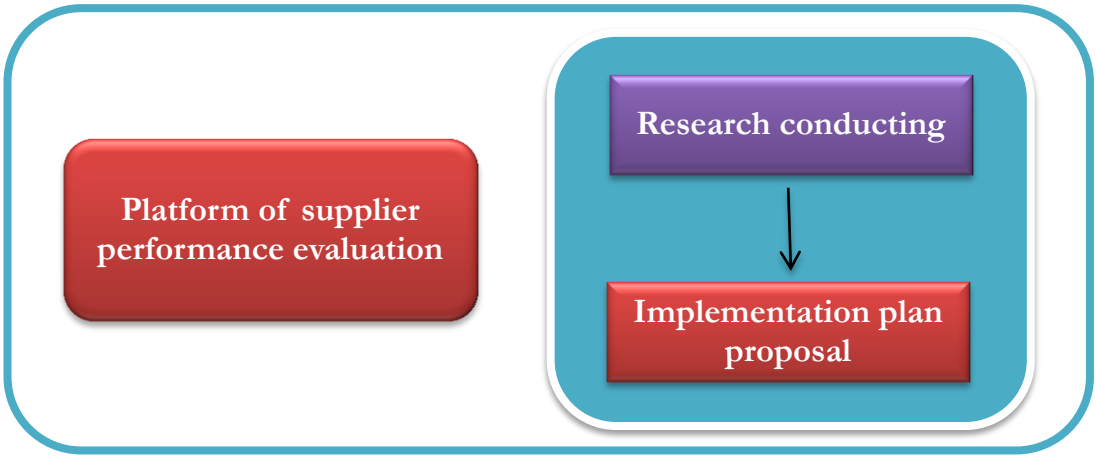

Figure 1. Expected product package

Because company X operates in a market where its role and title change due to different stakeholders' sides, in this thesis, these following terms would be considered from the company case's point of view.

- Buyers/ Customers: If the buyer of the company X is mentioned, that would be fashion companies, such as Dressmann, O'Neil or Peak Performance. The company mainly focuses on B2B customers instead of final consumers.
- Suppliers: are the ones who supply materials to company X or the mentioned buyers.

1.2 Project objective and project tasks

In an integrated supply chain, purchasing plays an important role, where the results of suppliers' performance can have significant impact on the rest of the supply chain: product quality, time delivery, B2B customer relationship and so on. This thesis topic concentrates on the measurement of suppliers' performance in supply chain perspective.

Since company X has not applied any formal and serious processes or systems to evaluate its suppliers' performance, this thesis aims to create a tailored platform and propose an implement process which includes an empirical analysis of the additional research conducted.

Project objective is: **Designing a supplier performance documentation and process in the textile and garment industry. Company case: X**

The project tasks (PT) are respectively achieved during the thesis process:
PT1: Literature review
PT2: Creating documentation for supplier performance evaluation
PT3: Conducting research
PT4: Propose the implementation plan

Basically, task 1 requires the author to cover the theories that relate to topics that occurred in tasks 2, 3 and 4. Project task 2 will create the main aimed product of this thesis: the platform for evaluating supplier performance, which includes activities of collecting data, choosing KPIs, and design the platform. After that, task 3 is the research carried out by conducting qualitative interviews to bring out better insight of suppliers' awareness and involvement in this system. Finally, task 4 is the analysis of the findings from task 3 and suggestion for an implementation. This table below presents the overlay matrix for the product.

Table 1. Product-oriented overlay matrix

The project objective is **Designing a supplier performance documentation and process in the textile and garment industry; Company X**		
The project tasks are:	Theory	Output (chapter)
PT1: Literature review	Theory relating to P2, P3, P4	2
PT2: Creating documentation of supplier performance evaluation	Supplier performance evaluation KPIs, approach and method	3
PT3: Conducting research	Supplier performance evaluation	4
PT4: Propose implementing plan	Supplier performance evaluation implementation	5

1.3 Key concepts

In this thesis, there are four main key concepts focusing on supplier performance management. They are supplier performance management, supplier performance evaluation, key indicator performance and supplier scorecard.

Supplier performance management (SPM) is defined by Gordon as

> The process of evaluating, measuring, and monitoring supplier performance and supplier's business processes and practices for the purposes of reducing costs, mitigating risk, and driving continuous improvement (Gordon 2008, 4).

In another phrase, SPM is considered as a mutual flow of understanding between companies and suppliers, relating to communication and negotiation of performance expectation in the supply chain.

Supplier performance evaluation is a vital component of SPM.

> A system that strikes an appropriate balance between financial and operational performance measures, translates strategic vision and objectives into actions for individual employees, provides a set of forward-looking (predictive) performance indicators, and links performance to recognition/reward (Hoffecker & Goldenberg 1994 cited by Beijer 2012, 18).

Key performance indicators (KPIs) are also called performance indicator or success indicators that measure various aspects of organizational performance towards the strategic goals (Parmenter 2010, 4).

Supplier scorecard is a tool to collect and display supplier performance data. It provides managers insights to manage and make decisions based on supplier performance. (Gordon 2008, 113.)

1.4 Scope of the thesis

From the broad field of supply chain management, this report will only take into consideration one specific branch: purchasing/procurement. There are various aspects to measure and evaluate concerning the performance of purchasing and supply chain in general, but the scope of the thesis aims to study the evaluation of supplier performance. This evaluation occurs after the business is delivered by the suppliers, which is different from a more common topic of choosing the right suppliers to start the business. Suppliers considered in this report are current partners with company X. Customers who are mentioned in the report would be B2B customers of company X. This report also focuses on the textile and garment industry as this is the sector where the company X operates.

The process of the project starts from creating the platform and finishing with a plan to implement the system, without a real testing due to the limitation from company X's current resources.

1.5 Aimed benefits for stakeholders

For company X: The company should be able to run a-ready-to-use supplier performance evaluation system, with which they can improve their purchasing procedure, quality control and development in order to gain more competitiveness. The company can enhance their relationships with, at least, the first-tier suppliers. Sustainable development should also be achieved in the long-term. Finally, the company can strengthen their image from various stakeholders: B2B customers, suppliers, partners, and employees.

For the suppliers: The suppliers are encouraged to improve their performance, including: product and service quality, price, value added, and performance in delivery and so on. They would also become more competitive by benchmarking with other suppliers. In a mutual way, long-term relationships with the company should be maintained. Lastly, the suppliers should be able to get support from company X.

For the B2B customers: Company X's B2B customers would indirectly benefit from being offered better price with improved and controlled quality services and products. Evaluation results of their nominated suppliers are also provided to point out positive and negative aspects of their performance. In that way, they can ensure the sustainability in purchasing.

For the author's field of specialisation and further studies: The author wishes to gain a deeper understanding of purchasing aspects, specifically in evaluating suppliers. Experiences in the design of documentation and carrying out research and interviews should be academically achieved, precious and enjoyable.

1.6 Company X

This sub-chapter discusses about case company: X. General information about the firm is provided to generate a picture of its business and operation, and then followed by the description of supplier types dealing with the company.

Overview of the company

Company X was established in 2007 in Hanoi, Vietnam with 38 employees (excluding workers at the manufacturing site). It is a trading and production company, operating in the textile and garment industry. It owns a manufacturing factory in Nam Dinh province (Vietnam). The company's vision is to offer sport-lovers the best products with high quality services at competitive prices.

The company focuses on sport clothings, including winter sports, hunting, and other outdoor activities. Their products are exported to European countries like Sweden, Finland, Norway, Netherland and others. The company plays the role of a manufacturing vendor for such customers like Dressmann, Peak Performance, O'neil, WE, SOS, AGU and many other brands. Their activites as finding buyers, offering prices, ordering materials, transportation, manufacturing, and export. In this business, company X is the link between buyers and suppliers. (Manager X 2012- 2013.)

In an additional activity, company X plays a role of an outsourced manufacturer for other trading and manufacturing firms with a processing contract. The number of activites are decreased to a great degree. There is no contact with suppliers in this business situation.

As a young firm, company X has a fairly simple organizarional structure. At the head of the firm are the excutives, consisting of one director and two vice-directors. At the second level, there are the operating departments, including merchandising, accounting, quality control, R&D and manufacturing site. Merchandising staffs are the ones who mainly work and deal with suppliers, while the quality control department focuses mainly on internal activities like manufacturing. There are also two members of staff that work to support the importing and exporting activities at company X. This chart briefly visualises the firm's operation. (Manager X 2012- 2013.)

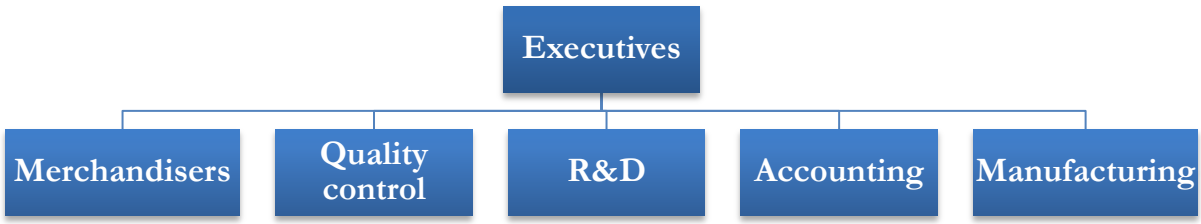

Figure 2. Company X's organizational structure

Business activities with suppliers at company X

According to the manager of company X, the firm has a huge number of suppliers without a statistical figure due to the annual or seasonal changes. Most of the suppliers are located in China, Hong Kong, Taiwan and few others from Thailand, Holland or Vietnam. Materials are sourced from neighboring Asian countries because of the advantages of competitive prices, short transit time and low transportation cost.

Basically, there are two types of suppliers from the point of view of company X. The majority one is the nominated suppliers from buyers. In the normal manner, buyers of company X have their own contacts with suppliers with tested material types at a dealt price. For this supplier type, the activities completed by company X are: reviewing the prices, ordering, and making payment. The changing of suppliers depends on the buy-

ers. The second type is the opposite. Company X has its own contact with these suppliers to purchase supplementary materials; and they are usually small enterprises who are found from fair trade, recommendation or direct sales to company X. Figure 4 will briefly show the picture of relationships among company X, buyers, and suppliers.

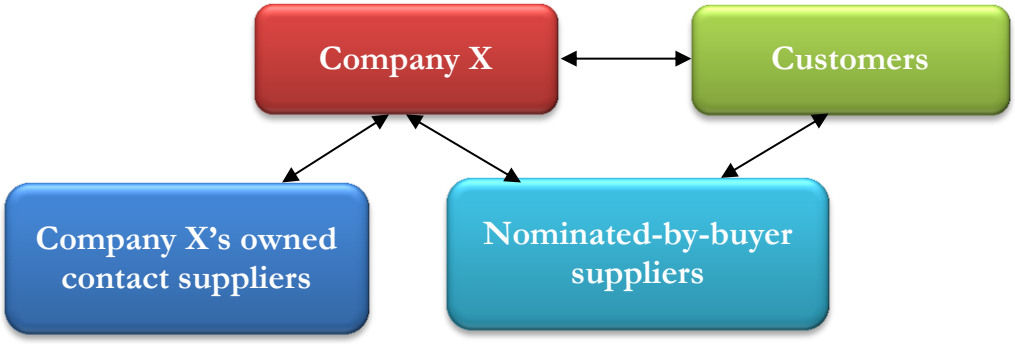

Figure 3. Relationship among company X, customers, and suppliers

1.7 Report structure

This report is going to present the four project tasks which include the theoretical framework, documentation design, research conducting with three investigative questions and proposal of implementation plan. The following chart briefly illustrates the main structure of this report.

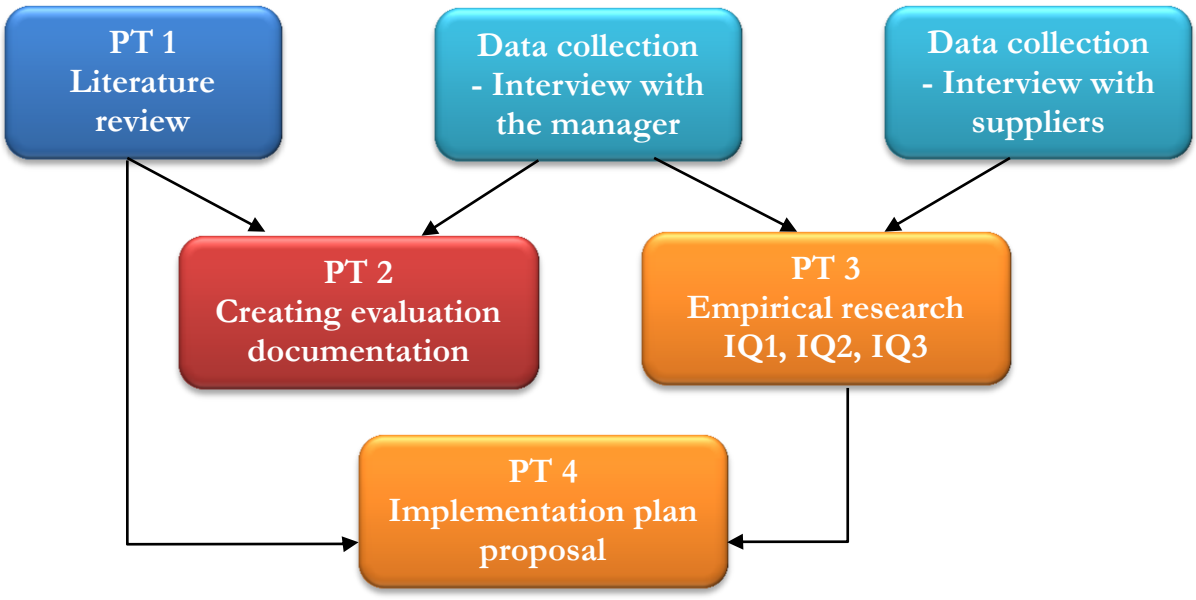

Figure 4. Description of project and research process

The theoretical framework provides supporting ideas for both the evaluation platform and implementation plan; hence, it is presented first in chapter 2. The procedure of creating supplier performance evaluation documentation is thoroughly analyzed in chapter 3. Research methodology is discussed in chapter 4 with the data collection approach and process, plus the key findings for three investigative questions. Finally, the implementation plan proposal is described in chapter 5 before coming to the conclusion.

2 Supplier performance evaluation (PT 1)

This chapter of project task 1 briefly reveals all the theories, definitions, and models which are the base for the empirical research and other project tasks. The definition, benefits for implementing the system, considered features, criteria, methods and approaches, and implementing process will be discussed in the following sub-chapters.

2.1 Definitions and benefits of supplier performance evaluation

Definitions

Lysons (2012, 611) simply defines performance measurement as "quantification or the expression of a quality or attribute in numerical terms", or in another definition of measurement: "The systematic assignment of numerical values (quantitative) or verbal descriptors (qualitative) to the characteristics of objects or individuals; designation of the status of such characteristics". Evaluation also means to acquire information to form judgments for further decision making.

From Cousins et al. (2008, 144), to assess supplier performance, more subjective and non-financial measures are considered, consisting of information sharing, responsiveness in problem solving, collaboration level, supplier satisfaction, certified suppliers and supply base characteristics. These activities are also closely associated with developing supplier's performance and capabilities, like recognition and awarding, training and education, financial assistance and so on.

Benefits of evaluating supplier performance

In general, a well-balanced performance evaluation system can profit from various operational aspects. Those are organizational decision making, communication including internal and functional level, visibility of purchasing activities and departments, waste identified and limited, and motivation for recognized staff. Furthermore, Simpson's results reflex the extensive degree of evaluation process with 41.7 percent agreement. (Cousins 2008, 147; Simpson 2002, 32)

Gordon (2008, 4-5) observes that the first advantage can be withdrawn from the concept of supplier performance management is to concentrate the resources on value added activities, and reduce the effort resolving problems induced from supplier performance, such as late delivery, defects, competitiveness weakening, or excess inventory. The second plus is a competitive advantages that companies can benefit from, including competitive boost with low costs, responsiveness and high quality services and goods, technology, reducing order cycle times, and aligning practices between firms and suppliers. Afterwards, firms can identify supplier's capacity in innovation and improve their key relationships. Also confirmed by Simpson et al. (2002, 29-30), the supplier verse buyer relationship can gain the utmost benefit from the evaluation system. As a result, the firm can identify its top best vendors for long-term development, as well as, the communication among the channel can be improved by supportive information flow. That can help the vendors obtain a better understanding of buyers' demand and needs, knowing which specific dimensions to improve. All in all, upgraded supplier's performance is parallel with firms' overall objectives.

An interesting report from Aberdeen Group (2002) collected the figures for significant difference in average improvement of supplier performance from a system with supplier performance management program verse non-program system. There are noticeable gaps in the percentage of improvement in quality aspect: 21 percent with SPM program verse contrast 5 percent of those without the system. Meanwhile, there are similar big gaps, about two times in categories of price and on-time delivery; in sequent 23 percent verse 13 percent and 23 percent verse 11 percent. However, service is the sector where there is least amount of difference in supplier performance between the use of the SPM program and no program.

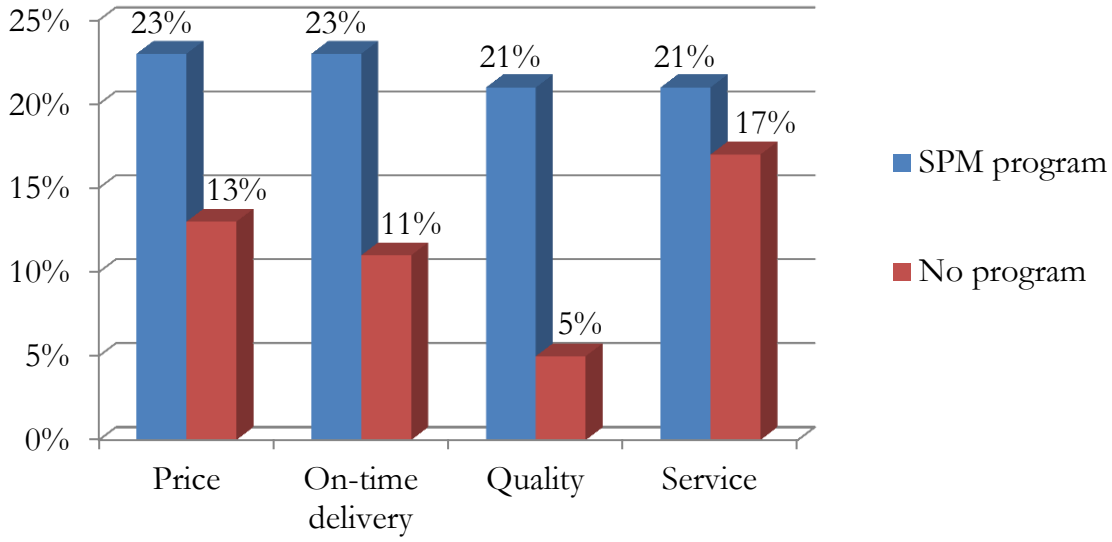

Figure 5. Average supplier performance improvement (Aberdeen Group 2002)

At the same time, from a different angle, manufacturers can benefit to a greater extent than non-manufacturing firms, 28.2 percent compared with 25.4 percent. This can be the reason for the aggressive involvement with huge supply base of manufacturing enterprises, where there are good returns in supplier performance improvement.

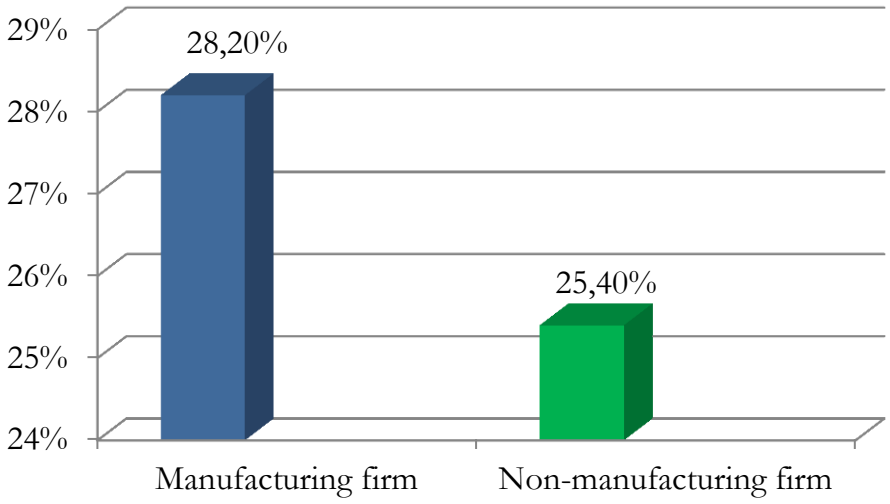

Figure 6. Percentage of overall supplier performance improvement between manufacturing verse non-manufacturing firms (Aberdeen Group 2002, 14)

2.2 KPIs for supplier performance evaluation

This theory from Weele (2010, 306) is considered to be the main concept of the empirical part for creating the platform. This author illustrated the key areas for performance measurement based on the purchasing dimensions: effectiveness and efficiency. Meanwhile, Cousins et al. (2008, 149) first defines the performance as an "extent to which purchasing achieves set goals with given resource", then second, the effectiveness as the "extent to which a goal can be met, using a chosen course of action", and last, the efficiency as the relationship between the planned and actual resource used, where a function is meeting the goal.

To explain the two concepts of purchasing effectiveness and efficiency, Weele (2010, 307- 309) pinpoints the sub-groups and sub-metrics in each category. Purchasing prices, product quality, and purchasing logistics are the first three elements belong to the purchasing effectiveness; while the purchasing efficiency consists of only purchasing organization. Some common sub-criteria in each category will be listed in the below table.

Table 2. Key areas of performance measurement (Weele 2010, 306)

Purchasing effectiveness	Purchasing material costs/ Prices	Materials price/cost control
		Materials price/cost reduction
	Product/ Quality	Involvement of purchasing in new product development
		Purchasing and total quality control
	Purchasing logistics	Adequate requisitioning
		Order and inventory policy
		Supplier delivery reliability
Purchasing efficiency	Purchasing organization	Personnel
		Management
		Procedures and policies
		Information system

Thiruchelvam and Tooke (2011, 443), in the research of "Evolving trends of supplier selection and criteria and methods", showed a table of comparison of selection attributes from 2 periods of time 1966 to 2001 verse 2001 to 2010. The table below demonstrates the top 5 factors. The figures clearly show that price, delivery and quality are among the top criteria relating to suppliers. Although the supplier's production and technical capacity are rated far below the top three, they are still important metrics that belong to supplier's continuous improvement and innovation efforts.

Table 3. Comparison of selection attributes between 1966-2001 and 2001-2010 (Thiruchelvam and Tooke 2011, 443)

Criterion	**Frequency 1966- 2001**	**Frequency 2001- 2010**	**Overall**
Quality	71	37	108
Delivery	75	36	111
Price	81	37	118
Production facilities and capacity	35	20	55
Technical capability	30	24	54

Demonstrating similar results, Simpson et al. (2002, 34) introduced a list of supplier characteristic categories considered in evaluation system. Among the list, Quality, Physical distribution and other factors are the most considerable metric groups. Quality is the primary concern in every firm, which includes the largest amount of sub-metrics on the list of almost 2278 mentioned items. The distribution indicators include delivery, inventory, warehousing, ordering, while the rest metrics are the continuous improvement and innovation behaviors.

Table 4. Supplier evaluation factors considered by frequency of mention and importance – the top ten criteria categories (Simpson et al. 2002, 34)

Evaluation criteria	**Percentage mentioning**	**Relative importance rating**
Quality and process control	24.9	1
Continuous improvement	9.2	2
Facility environment	8.2	2
Customer relationship	8.2	2
Delivery	8.1	2
Inventory warehousing	8.2	2
Ordering	5.8	2
Financial condition	5.5	2
Certification	3.6	3
Price	3.6	3

Interestingly, another metric group that is mentioned in this survey is channel relationship factors, like trust, commitment and communication. Although this metric group has attracted the attention of managers, the application and relevance in this system have been clearly widespread. However, the change in the trend of KPIs chosen is also considerable, for example the low recognition of internet criteria in Simpson's survey; hence, the use of relationship factors can be considered in different situation (Simpson et al. 2002, 30.)

In a recent study of Imeri et al. (2009), those authors present a similar criteria ranking and importance level. What is highlighted in the study is that these rankings introduce new metrics that were not emphasized with high ranking in previous publications. Those new metrics include warranties and claim policies, reputation in the industry, desire to do the business, labor relations record or training aid, which also reflects the trend changes.

Furthermore, the characteristics of metrics for a successful system are identified to be, first, matched with the business strategy; second, balanced and inclusive; perceptible and supervised; used as a continuous improvement tool and applied via a formalized implementation plan (Cohen 2005, 188).

2.3 Approach for evaluating

Gordon (2008, 5) states that quantitative metrics are not enough to provide managers the whole picture of supplier performance management, but also required qualitative methods. Qualitative metrics are usually intercompany communication including information sharing, trust, and business relationship management (Lysons 2012, 376). These factors are comparatively more difficult to measure due to human factors of feelings, relationship, judgment impressions and bias tendency than normal quantitative metrics, like quality defects, on-time delivery, and cost and others. However, these qualitative metrics can have an impact on the value of a channel relationship. In this thesis, the documentation designed to evaluate supplier performance will be studied principally in the aspect of quantitative measurement approach and a few qualitative metrics.

There are two famous methodologies for performance evaluation: Hoshin Kanri and Balance scorecard. Basically, Hoshin Kanri is a Japanese term for "direction and alignment", which consists of four metric groups: quality, cost, delivery and education. Meanwhile, the balance scorecard is the concept that was developed from Hoshin Kanri. However, both of them are suggested to augment two new groups of employee satisfaction and environment. The comparison between these two concepts is shown in the following table. (Parmenter 2010, 19.)

Table 5. Hoshin Kanri verse Balance scorecard (Parmenter 2010, 19)

Hoshin Kanri	**Balance Scorecard**
Quality	Customer focus
Cost	Financial
Delivery	Internal process
Education	Learning and growth
Both of these approaches should be augmented by	
Employee satisfaction	Employee satisfaction
Environment/ community	Environment/ community

Scorecards and supplier rating are among the most common methods for evaluating supplier performance besides site visits, paper or website based supplier questionnaire, third-party reviews or internal and or external certification (Wheaton 2009). An example of a scorecard is shown in the appendix 1. It consists of several criteria groups, also called KPIs, such as quality, delivery, responsiveness, innovation and others. In the second level, these groups can be sub-categorized like percentage of on-time or early delivery, actual verse quoted lead-time in delivery group; or emergency change requests, payment compliance and overall communications for responsiveness groups. In this research, the concept of balance scorecard is used to present and group the KPIs, while the idea of supplier scorecard and rating is combined to utilize the adaption to company case.

Discussing the weighting method; it is the most common model which has been used for both large and small firms, instead of categorical and cost-ratio model. The weighted model offers the company the ability to rank the suppliers, having moderate implementation costs, and flexible combination of qualitative and quantitative metrics (Imeri et al. 2009). In this study, this approach was carefully chosen because its characteristics suit with company X's situation. Taken as an example, Rotek Incorporated has introduced their weighting method. With three basic criteria groups of delivery, quality and price, the firm assesses separately; after that, the overall score is the final combination. In the detailed picture, each metric category consists of several sub-criteria with a

certain contribution percentage that reveals its importance level. The following table from Rotek Incorporated can illustrate the concept.

Table 6. Criteria and weighting of Vendor evaluation at Rotek Incorporated (Rotek)

Main criterion	**Sub-criteria**	**Weighting**
Delivery	On-time delivery performance	60%
	Quantity reliability	40%
Quality	Total quantity rejected verse Total quantity received	50%
	Required documentation	30%
	Quality management system	20%
Price	Price level	60%
	Price trend	40%

The sub-criteria are measured with 100 points, where the score is given based on the performance of suppliers. This following example shows how to measure the metric of quantity reliability which belongs to delivery category. Provided that the delivery amount was agreed as 100 units, the supplier happened to provide only 90 units on delivery day. Hence, the deviation reduced quantity is 10 percent, which means the supplier only scores 40 points for the quantity reliability, based on the table of scoring instruction for this sub-metric shown in appendix 2. The 40 points for the quantity reliability sub-criteria will be transferred to the total score of delivery group with the percentage of 16 (Explanation: 40 points * 40 percent = 16 percent). Afterwards, the assessment results will guide the firm how to continue with their suppliers. With a measurement of 100 points, outstanding performance with 81 to 100 points will help the vendor to be treated preferentially by the firms making orders. With the result of a good performance (61 to 80 points), the suppliers are recommended to improve continuously. With an average performance (41 to 60 points) and re-qualification required (0 to 40 points), the suppliers are requested to response to the evaluation, and a strict plan to improve performance as well as personal meeting, frequent audit are required. (Rotek)

Besides the spreadsheet, there are various software applications for supplier performance management- SPM. They are called SMR software or SPM software. The information gathered can be used to manage suppliers, making procurement decisions focusing on quality, identifying supplier development opportunities, tracking supplier improvement and so on. ERP vendors like Oracle and SAP also offer this tool integrated into their system. (Gordon 2008, 5.)

2.4 Implementing the system

Suppliers may regard this system of supplier performance evaluation as a method that companies use to manage them, and consequently feeling uncomfortable. "In what way, and how effectively, the firm ensures a two-way flow of understanding between the company and its suppliers, specifically as it pertains to communicating and negotiating requirements and performance expectations with the supply chain" acknowleges Gordon (2008, 5).

In a shorter summary, Cohen (2008, 202) introduces a four-stepway to start a performance programme. Firstly, setting objectives of supply chain strategies, which is started with company's strategy. Interviewing company managers or literature reviewing are two ways to find out the criteria priorities. In the second step, supporting metrics and targets must be chosen; defining groups of KPIs that are parts of an overal supply management and align company strategy. An aggressive but achievalbe goals are recommended. After indentifying supporting innitiatives and elimiating the redundant or misaligned ones in step 3, the firm can start implement the program in step 4. That requires a supporting system, which can be either an in-house system or a purchased data warehouse like ERP. Moreover, the firm consider its organization capacities when introducing a new measurement system, creating a frequency up front for assessment to avoid the reimplementation of data structure, and finally, indentifying the data resources and make them accessible.

Reflecting the same idea but with an intensive study in supplier performance measurement, Gordon in another research (2005, 20-24) has mentioned a process for developing and deloying supplier measurement, consisting of seven steps:

- Step 1: Align supplier performance goals with organizational goals objectives
- Step 2: Determine an evaluation approach
- Step 3: Develop a method to collect information about suppliers
- Step 4: Design and develop a robust assessment system
- Step 5: Deploy a supplier performance assessment system
- Step 6: Give feedback to suppliers on their performance
- Step 7: Produce results from measuring supplier performance

From this process, Gordon demonstrates the last two steps of giving feedback to suppliers and producing the final results. It is also the main aim of the process, improving and "educating" the suppliers with weakness pinpointed and positively constructive feedback. A well-reported analysis can be used also for benchmarking suppliers and for manager's decision making.

In another way of expressing, more concrete and strategic, to attain the sterling return from this system, Aberdeen Group (2002, 13-18) identified four common key strategies. The first one is to widen the supply based tracking for the performance, which can help firms to gain better supplier performance improvement. It was reported that the enterprises who have more than 50 percent of supply base tracked can achieve 38.5 percent of supplier improvement, compared with only 17.4 percent of ones whose is less than 50 percent of supply base coverage.

The second step is that the enterprise must standardize this procedure across the organization. Supplier performance which has a formalised and continuous process of evaluating can improve averagely more than 26.6 percent, compared with 15.8 percent of those without an offical process. Moreover, lightly less than 55 percent of firms in Simpsonl's survey reveal that they commit for a long-term and formal evaluation system. (Aberdeen Group 2002, 15; Simpson et al. 2002, 31.)

The third strategy involves the suppliers on performance metrics, reporting, and improvements. Similarly with Gordon in the discussion above, giving feedback to suppliers is one important step, which is also a chief reason to encourage the performance

improvement, in this process. This feedback should include constructive improvement suggestion for suppliers and programs to assist them. That is called incentive- based approach, where both of the parties can obtain value from their relationship. This group also released the figure comparing the difference between firms sharing performance data (27.4 percent of improvement) with their suppliers and who do not (with just 17 percent).

Coming afterwards is the strategy of automating the process of key supplier performance measurement. Nowadays, it is easy to recognize the role of automation and IT. With its support, enterprises can benefit from a greater efficiency in procedure with 28.1% of improvement. Firms are without IT support such as database management may lessen its opportunity to improve by 10.1%.

This self-gathering table below summarizes the comparing figures in percentage of supplier improvement of four discussed aspects: broad base of supply for tracking performance, a formalized procedure, sharing results with suppliers and IT support.

Table 7. Percentage of supplier performance improvement comparison in four aspects (Aberdeen Group 2002)

Supplier performace improvement percentage of enterprises who	**apply**	**are without**
Broad supply base tracking performance (50%)	38.5%	17.4%
Formalised procedures	26.6%	15.8%
Data sharing with suppliers	27.4%	17%
IT support	28.1%	17.9%

3 Creating Supplier performance evaluation platform (PT2)

In the project task 3, this chapter discusses the process of design the documentation of supplier performance evaluation for company X. After the procedure of studying about the company's strategy and criteria to choose and evaluate the KPIs is the explanation of chosen KPIs with final evaluation form.

3.1 Data collection

There are three main sources of information to build this platform: literature review, email discussion and an interview with company X' manager, who would be named as manager X in this thesis. In addition to referencing to some published systems of MTU or Rotek, the process of choosing KPIs and evaluating its importance level are decided by discussion with company X's manager. Besides continuous discussion via email, a phone interview was carried out on the 6th February. This interview was aimed to discover the important logics and information to design this system as well as proposing the implementation plan in chapter 5.

The questionnaire is designed for a semi-structured interview with open-ended questions. The reasons for choosing qualitative method will be discussed thoroughly in the next chapter of research methodology. The questionnaire is shown in appendix number 3. In the survey form, the third part of key performance indicator will offer the findings and the base for the author to create this documentation.

3.2 Establishing KPIs

Theoretically, the chosen KPIs should correspond to company's strategy and strategic criteria. They should focus on the same goal and finally, be able to generate practical results.

Company's strategy

As manager X confesses, their current strategy is, still, vague and abstract. It is stated that the firm finds it difficult to confirm a solid statement for its strategy due to the lack in strategic management of a young established company as well as the unstable market. However, in a general level, the company is able to pinpoint its competitive advantage in complicated styling manufacturing, as the casual clothes are currently more competitive at price in neighboring countries such as China and Cambodia. As the result, worker skills and high quality products and service can offer company X better tools to compete in this business sector. The manager affirms the focus on quality, price, physical distribution and value added from their suppliers.

Other criteria

Apart from the company's strategy, other criteria discussed to choose and prioritize the metric groups are customer requirements, compulsory quality improvements, and price war. Manager X revealed that any strategic decision concerning to suppliers must consider, firstly, the requirement of customers to their supplier for certification of environment, corporate social responsibility or quality issue like non-toxic materials like lead-free, azo-free, and Ecotech. Their suppliers are mainly from Europe; hence, these requirements are compared strictly to other markets. Secondly, quality is mentioned as an obligation to survive in the market, which is absolutely essential for high-class fashion and high qualified products. Furthermore, price wars are highlighted in the discussion with the increasing crisis in years to come. To be able to adapt target prices of customers, the firm has to maintain its competitive price.

The company manager also mentioned that in some cases, one item can be purchased from more than one supplier. For example, there might be several different types of textile that are one hundred percent cotton; and each supplier offers different prices. The firm would try to optimize the quality and price when purchasing such items.

KPI categories

The reasons for selecting these KPIs are based on, firstly, company strategy and other essential requirements; secondly, the study and suggestion of the author based on company situation and capabilities plus metric's feasibility. There are basically five KPIs categories:

- **Quality**: This group belongs to the first concern and attention of the company. Quality is not only the compulsory advantage of company X, but also the backbone to survive in this tough industry. It will include sub-metrics of defect rate, quality management and sample complaints rate.
- **Price and financial issue** concerns about price level, price trend; invoicing accuracy and responsiveness to discrepancies. Despite the relatively low ranking of price in the key performance of Simpson et al. (2002), in the economic situation globally in general and Asian market in specific, considerably low price is the key factor that maintain the competitiveness of this area and in this industry. Hence, in this form, price issue would be placed in the second most important metric group.
- **Logistics** includes physical issues like on-time delivery with right quantity and adequate delivery documentation, ordering process and packaging. These last two sub-criteria also consist of some second-tier metrics.
- **Customer relationship** relates to the responsiveness of suppliers, how effective they handle complaints, information sharing and management aspects.
- **Continuous improvement** group is about the certification of suppliers in environment and CSR. Other concern relates to technology development and increasing variety in products and service.

These categories belong to two groups, which reflect the efficiency and effectiveness in purchasing performance. While the effectiveness group consists of quality, price & financial issue and logistics categories, the other two left, customer relationship and continuous improvement are components showing the efficiency in purchasing.

3.3 Design the platform

Based on the concept of the well-known model- Balance scorecard, the platform built in this study would be a tailored design for case company X. The approach is in the form of supplier scorecard with a specific weighting system. Similar weighting method used in MTU and Rotek would be referenced in this thesis. There is a total of 100 percentage points, each criteria group contributes a certain percentage. The percentage is decided based on the importance level of each metric. Chosen criteria and its weighting are shown in table 8 below.

The final documentation is designed with Microsoft Excel. The company is able to fill the rate, automatically having the final score, grouping the supplier thanks to its performance, and flexibly adjusting the percentages of metrics. The guideline includes a general instruction for grouping the suppliers, one final evaluation form and five detailed weighting instructions for five metric categories. The whole package is shown in the appendix number 5.

Table 8. Criteria and weighting

Main criteria categories	Weight.	Sub-criteria	Weight.	2nd- tier criteria	Weight.
Quality	34 %	Defect rate	50 %		
		Quality management	30 %		
		Sample complaint rate	20 %		
Price & financial issue	30 %	Price level	50 %		
		Price trend	30 %		
		Accuracy level of invoice	10 %		
		Responsiveness to discrepancies	10%		
Logistics	20 %	On-time delivery	40 %		
		Quantity reliability	30 %		
		Ordering	15 %		
				Prompt ordering process	40 %
				Lead time	30 %
				Flexibility	30 %
		Packaging	10 %		
				Protectiveness	70 %
				Unpackaging easiness	30 %
		Adequate delivery documentation	5 %		
Customer relationship	8 %	Responsiveness	35 %		
		Complaint handling	30 %		
		Sharing information	25 %		
		Management	15 %		
Continuous improvement	8 %	Society focusing	30 %		
		Environment	30 %		
		Product/ service improving	20 %		
		Proactively innovation	20 %		
Total	100%				

3.3.1 Weighting system

During the designing process, this following basic principle is retained to establish the weighting. This principle can help the firm to flexibly adjust the weighting to fit the firm's situation over period of time.

- The first idea is to focus on company X's strategic priorities. In this case, quality is of the utmost concern; following right behind is the price. Both items are weighted heavily because of their importance.
- Second idea is to not forget the added value. Other components in the list aim to bring company X competitive advantages which have not been paid attention to Asia, such as environmental issues, CSR or in a relatively small firm innovation, management process, packaging, ordering. These features can be skipped easily thanks to the lack of time, human staff and working efficiency. With the aim of the author is to highlight these factors, in this form, these metrics can be found with considerable contributions.
- Thirdly, company X might purchase more than one item from a supplier. The evaluation would be applied for the most major goods relating.

Each of individual criteria will be scored from 1 to 100 based on its performance from the supplier. The evaluation basis is clearly indicated for different metric. The score of each criteria category is separately calculated by the sum of the multiply from sub-metrics' point with its contribution percentage. The overall score of a supplier is a combination of 5 criteria group's contribution percentage multiplying with its score. When the final overall score is given, it will be classified to four groups:

Table 9. Classification of supplier performance

Point	Group	Assessment
100- 80	A	Outstanding performance
80- 60	B	Satisfactory performance
60- 40	C	Average performance
40-0	D	Re-qualification required

For each group, company X should have different improvement steps and requirements. Company X should aim to enhance and encourage long-term relationships with suppliers from groups A and B.

- Group A: Supplier is not required to respond. Preferentially considered as placing orders.

- Group B: Suppliers are encouraged to improve performance continuously.
- Group C: Supplier has to respond with a written form. The supplier also needs to identify plans to improve performance. Re-evaluation is required to ensure that new steps will allow the supplier to improve its performance. However, there will be limited and more cautious future order.
- Group D: Supplier has to respond with a written form. An urgent identify plan to improve performance and corrective measures is required with a compulsory and agreed-timeframe for performance improvement. There must be more frequent audits scheduled for this supplier group. Repeated poor performance will result in completed disqualification and jeopardize the supplier status.

3.3.2 Description of quality group

As the quality group has the most vital metrics, its contribution to overall score is 34 percent. This group is coded as number 1, shown in the appendix 5; consisting of three components: defect rate (50%), quality management (30%), and sample complaints rate (20%).

- **Defect rate**: Instead of PPM (part per million), defect rate is used in percentage approach thanks to a simple and applicable platform. Company X also buys materials in different measurement units (buttons, zips) or meters, hence, the percentage suits better for any measurement. For each supplier, the defect rate should be determined for the basis of major good groups. In the starting period, company X can test the most major product group.
- **Quality management** includes the quality certification required from customers (like Dressman). Usually, it is the certification for product/material quality and quality process management, like ISO, non-toxic chemical. In some companies, the suppliers are certified by other parties of by the companies instead of achieving any certification. This is also taken into consideration.
- **Sample complaints rate**: Before the company makes an order to a supplier, it has to request a sample in order to make sure the right quality, color and type of goods to purchase. When the sample is incorrect, the supplier is required to

make it again or send another suitable sample. This metric is important for the supplier to save time and effort of fixing errors with increasing quality in the sample. The complaint rate is calculated by the percentage of number of quality notifications of sample orders against the number of sample deliveries. For example, company X orders four samples of buttons to supplier named A. When these four samples are delivered, there is one button sample having an error of color or size for instance, the supplier will be requested to send again that sample. In this case, the sample complaint rate is 25%, and the point is 50.

3.3.3 Description of price and financial issue group

Being second important metric group, price and financial issues amount to 30 percent in the total performance score. The five components of this group are: price level (50 %), price trend (30 %), accuracy level of invoice (10 %) and responsiveness to discrepancies (10 %). This group is coded number 2 in the form, shown in appendix 5.

- **Price level** is the comparison of the price offered by the supplier for its major materials or products in the report period with market price. The point is given based on the deviation from offered price and market rate. In this thesis with an estimated approach, the market rate is the average price of the same products offered by various suppliers.
- **Price trend** also called price development it is the comparison between price trend offered by supplier and the rate of market price trend. The point is given also based on the percentage deviation. The example is mentioned in the guideline (appendix 5), under part 2.2 of price trend.
- **Accuracy level of invoice**: This metric is considered because a smooth and accurate invoicing process would save time, effort and non-added value communication.
- **Responsiveness to discrepancies**: When there is any problem or faults occurring relating to payment, banking, or financial issue, the faster and more sufficient suppliers response, the less impact it is on financial and sequent aspects.

3.3.4 Description of logistics group

This category of logistics and physical distribution comprises of 20 percent in the overall score with five metrics: on-time delivery (40 %), quantity reliability (30 %), ordering (15 %), packaging (10 %) and adequate delivery documentation (5 %). Coded as number 3, the details of evaluation basis are shown in appendix 5.

- **On-time delivery**: Because there is the involvement of third-party outsourced by company X, the delivery is not considered as arriving at company X, but the agreed place where third party will receive the goods. The score is given based on the deviation from the delivery due date and actual date. There are points for both late and early incoming goods. Both two situations cause more spent on warehousing and sequent affects.
- **Quantity reliability**: This metric evaluates the ability to ensure the right quantity in delivery as agreed in the contract by supplier. The quantity is checked as received by company X.
- **Ordering**: consists of three sub-metrics: lead-time compared to average lead time from other suppliers in market (30%), flexibility (like short-time notice, making changes) (30%), and prompt ordering process (40%). Although the lead-time is almost the same in very cases as stated by the manager, the shorter and flexible one should be counted.
- **Packaging**: evaluates the level of packaging in two aspects: protectiveness (70%) and easiness to unpack it (30%). Well-performed packaging can help to protect the goods condition, bringing possibility in re-use the package and smarter way to store as inventory.
- **Adequate delivery documentation** is a small detail in a perfect and smooth process, which will bring in delay in delivery with the lack of appropriate documentation.

3.3.5 Description of customer relationship group

Although customer relationships are considered slightly less important than the above groups with 8 percent of the overall score, the author still want to highlight the important role in maintaining the relations and bringing added value to this group which is coded as number 4 in the appendix 5 with detailed evaluation basis. It includes four components: responsiveness (35%), complaint handling (30%), sharing information (25%) and management (15%).

- **Responsiveness**: Responsiveness relates to the response time and effectiveness of the supplier. How fast and sufficient the supplier responds to company X's for questions, requests and problems.
- **Complaint handling**: Checking how open and objective the supplier is in receiving complaint, effective in problem solving and taking experience for next business deal.
- **Sharing information**: This metric examines the level of information communicated between supplier and company X. Whether it is only basic data for buying and selling or strategic information for a strategic partner? How smoothly the process is? Strategic partners are usually open and willing to share information for further cooperation.
- **Management**: This indicator takes into consideration the cooperation, flexibility and policies from supplier to the company X. How the supplier consider "win-win" perspective for seller-buyer relationship

3.3.6 Description of continuous improvement group

With the same weighting of 8 percent, continuous improvement group is selected with the same aim of customer relationship. That is to emphasize benefits that are less paid attention to and forgotten in a normal evaluation. This group is coded as number 5 in the final handout in appendix 5, containing four metrics: society focusing (30%), environment (30%), product/ service improving (20%) and proactively innovation (20%).

- **Society focusing**: concerns about the certification for CSR, supplier's attention and efforts in social issue. Two initiative certifications are SA8000 (Social Accountability International) and BSCI (Business Social Compliance Initiative), which were highlighted by manager X (6 Feb 2013).
- **Environment**: Although environment is the hottest debate all over the world, the concern and actual behavior towards this issue is considerably low in this area. Some common certification for environment in textile and garment industry is ISO, Oeko-Tex, Bluesign, EU Flower and EcoLabel, Green Leaf Mark, WRAP, NICE, LEAF and so on.
- **Product/service improving**: Improving is not only about quality but to adapt the rapid changes in fashion industry. Well-performing suppliers are required to be able to either be aware of market trend or lead it.
- **Proactively innovation**: Innovation from supplier side is a plus not only for supplier themselves but also company X, who is its customer. Innovation in technology is the most concerned besides manufacturing capacity and innovation in management and operation and other aspects.

4 Empirical research (PT3)

Project task 3 will conduct research to support the implementation plan in project task 4. Firstly, this chapter describes the research methodology and data collection process with several interviews with company X manager and one supplier. After that, the empirical findings are analysed as the base for proposal for implementation plan in the following chapter.

4.1 Research objective

As mentioned in chapter 1, being included in a product-oriented study, this small-sized additional research is carried in order to, at the same time; get a better picture of how to implement the system by collecting information from involving parties in the market. In general, the final aim of implementing this performance evaluation system is to gain more added values for enterprises from the aspects of finance, competitiveness, quality and customer relationship. The concern is how the system can be applied smoothly and what factors involved should be considered. Furthermore, this concept appears fairly underestimated in either this sector or general current partners, stated the company X manager, a research is conducted to collect the information to both raise the awareness and encourage involvment from suppliers. The reseach findings will be utilised further in the chapter 5 to propose an sufficient implementation plan. Research question is:

"How can company X effectively implement the system of supplier performance evaluation with raising supppliers' involvement and commitment?"

The investigative questions (IQ) are:

IQ1: What to consider to effectively implement the supplier performance evaluation system (SES)?

IQ2: How is this concept perceived by suppliers?

IQ3: How to attract and enhance suppliers' involvement in this system?

This overlay matrix is designed for the research, where the corresponding theory and data analysis can be found respectively to each investigative question.

Table 10. Research-oriented overlay matrix

Research question "**How can company X effectively implement the system of supplier performance evaluation with raising supppliers' involvement and commitment?"**		
The investigative question	Theory	Findings
IQ1: What to consider to sufficiently implement the supplier performance evaluation system?	Implementing supplier performance evaluation	4.5.1
IQ2: How is this concept percieved by suppliers?	Supplier performance evaluation concept; Current approach and method	4.5.2
IQ3: How to attract and enhance suppliers' involvement in this system?	Benefit of supplier performance evaluation system	4.5.3

4.2 Research method

In both process of designing the documentation and conducting the research to come up with the implementation plan, besides the secondary research literature review, the main information source is collected by qualitative research. Hence, the description of qualitative method chosen below is applied for chapter 3 and 4.

Briefly about the **literature review**, Fielding et al. states that one of the main reasons for considerating secondary research is its access to rich data base with prior finely reported studies anf projects. Moreover, secondary research is considered to be alongside the other methods, where sometimes becomes the primary analysis undertaken. In the case of design the platform, in addition to qualitative data provided from discussion with managers, the role of literature review is conderably vital.

The **qualitative research method** is mainly applied in this thesis in addition to literature searching. Since the quantitative research aims to describe causal relations or disclose attitudes and opinion of the respondent, while the qualitative can offer the understanding of a specific phenomenon (Ghauri and Grønhaug 2010, 196). Moreover, based on inductive process, qualitative research proceeds from specific to general, covering some simultaneous factors affecting the results. Its data collection method is usually flexible, unstructured and focusing on general and broad understanding of the issue. By this way, this study can benefit from the free flow of information, exploration and deeper insights in how KPIs should be chosen and prioritized and how the system should be implemented. Not only aiming to design documentation and a guide for implementing the system for a specific case company, the author also attempt to gain a better view of the whole general process. Moreover, taking into considerations the culture constrains, like revealing information to strangers, qualitative research is suited to this thesis context. (Marschan-Piekkari & Welch 2004, 387)

The **semi-structured interview** would be mainly applied in this study for following reasons. According to Ghauri and Grønhaug (2010, 125- 126), this interview type is suitable for determined topics and respondents, not by random chosen. However, the sub-questions are not pre-determined, where the respondents can also be free to widen their answers to reveal some new unexpected and unknown aspects. This semi-structured type can reveal why events occurred and gaining "insights into participant's reaction" (Marschan-Piekkari & Welch 2004, 395). Supporting this concept, Matthews & Ross (2010, 181- 183, 322) also define three characteristics of semi-structured interview. The first one is a common set of topics and questions for each respondent; then, the topic can be introduced in different orders to suit each interview. Finally, the questions should be mainly open-ended questions, where the respondents can express their ideas with their own words. In this survey, about twelve to fifteen questions prepared in advance would be the framework to secure the necessary data to be collected.

Thanks to the small size of the additional research in a product-oriented thesis, an **open-ended interview** would be done with about 4 personnel, including: company X's manager, two suppliers, and one manufacturer in the same market. Demographic

factors like business position, location, and role of supply chain would be mentioned instead of private personal data like sex or age, which is not so relevant to this topic. In order to secure the reliability and validity of the information, the records of the interview would be revised by the participants.

The interviews would be mainly done via phone-call due to the different locations of the parties involved. The questionnaire is used for the company is almost similar to the one used for suppliers. The appendix number 3 is the telephone interview questionnaire for companies, followed by questionnair for suppliers in appendix number 4. For the respondents' access, the author aim to gain the trust, agreement and involvement to ensure the quality and reality level of the answers.

4.3 Reliability and validity

With selected and believable source of information, the interviews should secure the quality of the findings. The contacted supplier was suggested by manager X. Both of two informants have huge experiences in this industry and the supplier has actual involvement in the process. The languages can be English either Vietnamese, which is translated to English afterwards for the analysis process. The interviews were recorded and transcribed while emails were used for further concerns and explanation, which can ensure the accuracy of the findings.

According to Matthews & Ross, the definition of reliability is shown:

> A measure of research quality, meaning that another researcher would expect to obtain the same findings if they carried out the research in the same way, or the original researcher would expect to obtain the same findings if they tried again in the same way Matthews & Ross (2010, 479).

They also regard reliability as dependability. These features of research should be able to demonstrate throughout the whole process and be reflected with transparent decisions made by researcher. Meanwhile, validity is considered with the credibility. Mathews and Ross define the meaning of validity as:

> A measure of research quality, meaning that the data we are planning to gather and work with to address our research questions is close representation of the aspect of social reality we are studying (Matthews, B. & Ross, L. 2010, 480).

Ghauri and Grønhaug (2010, 210- 211) have emphasized the validity concerning qualitative research, consisting of descriptive, interpretative, theoretical and generalizable factors. The descriptive validity involves whether the actual description is true. In this research, this matter should be limited from the bias of the respondents during the interviews. It is also the reason why the secondary research is used to support the design of the platform in PT 2. The second factor is interpretative validity. It is clear that proper interpretation is an important stage in the analysis to get the final accurate results. The author uses the semi-structured interview, not only for deeper insight knowledge but also for ensuring suitable limit for results analysing. The third one is theoretical validity, which refers to the adequacy of discussed theory for explanation. Coming last is the validity of generalizability. Although the sample size is limited to two interviewees, the interviews were deep and various in topics discussed. Moreover, the supplier is among the well-known companies with high expertise in the industry, which means the supplier and manufacturer chosen in these interviews should be generalized enough for the whole textile and garment industry.

4.4 Data collection

The first interview was done with manager X on 6 February 2013 with the questionnaire in appendix number 3 via Skype. The actual time was around one hour because the content was freely and open discussed. The information was generally enough to both create the evaluation form in chapter 3 and reveal valuable findings to this research.

The second Skype interview was done on 28 February 2013 with one current supplier of company X. That supplier is KAVI International Ltd from Hong Kong. KAVI Ltd has partnered with company X for almost four years as a seasonal supplier. This interviewee is named as Informant K in the next discussion. The questionnaire used for

suppliers is shown in appendix number 4. The discussion with informant K was indeed open and informative. It opens some new approach to this concept of performance evaluation.

4.5 Data analysis

Two interviews were first carried out and transcribed before the information was grouped into separate topics to highlight the investigative questions, aiming to find out the answer for what is the current awareness of the performance evaluation concept and potential ideas for a successful implementation and raising the involvement of suppliers. During the interviews, the discussion focused on four main topics: effectively implementation of the system, current situation of the concept of supplier performance evaluation; and promoting suppliers' involvement. Following discussions both present and interpret the findings from the interviews, while the implementation plan in the next chapter would utilise the value of this analysis.

4.5.1 Effectively implement the SES system (IQ1)

Due to the bulkiness in operation of old and big capital companies, the company X has the advantage of small and manageable operation. Hence, this project should be able to run with a small number of people and less procedures. Manager X also insisted that to be able to implement, the system must ensure the two factors of applicability and correctness. Hence, the author suggests that this should be a simple process or controllable system, possible to monitor and the results should reflect the right performance of suppliers.

In this system, informant K affirmed in the relationship maintaining and trust among the partners. These two factors can help strengthen the communication, minimizing misunderstandings and utilize the information sharing. The more systems operating, the more complicated and slower the process is; hence, with trust, each party can enhance the flexibility and speed up the system and more efficiently.

In the textile and garment industry, the objects for evaluation can vary from other industries. Suppliers should operate perfect in all the processes of dyeing, fabric process, and samples handling. Since there is significant need for a large number of workers, the problem with child labor and human resource related issues required much more attention from top managers, which should be considered in the evaluation process.

4.5.2 Current situation of performance evaluation (IQ2)

Currently, as a supplier, KAVI has been building a robust quality management program. By continuous quality control with ISO 9002, they try to minimize the defects in procurement, manufacturing, dyeing process and maximizing customer satisfaction and prevent them from any failures in quality, which shows that the firm is truly customer-oriented. The concern toward environmental issues is also raised with eco-friendly products like new fabric material from bamboo. Moreover, social corporate responsibility (SCM) plays an important part in their system.

Informant K reviewed that, as a supplier's point of view, the firm has experienced several evaluation processes with its main customers. In a normal manner, KAVI are audited by its customers, when the staffs from its buyers make the site-visit to KAVI's factories annually. In addition, KAVI's vendors are supported with its performance self-assessment that is done annually regarding to international standards of Bureau Veritas (BV) or international testing services. BV is a global leader in testing, inspection and certification, locating in 140 countries and operating in 8 businesses. (Bureau Veritas Group)

From a vendor's standpoint, KAVI does the evaluation for its suppliers and subcontractors for their quality, systems and processes, and specially, their employee issues to prevent the child labor, which is of significant concern in developing countries. Informant K mentioned that the firm uses the auditing monthly and BV or international testing services annually for their suppliers because it aims to achieve and maintain long-term relationships with these partners.

Informant K mentioned the reverse evaluation of suppliers, which has been currently done by KAVI. That means the evaluation is not only done by the company X, but also completed in advance by the suppliers through their advance inspection, quality control and certification.

4.5.3 Attracting and enhancing suppliers' involvement (IQ3)

This investigative question can be solved by showing about the benefits of suppliers as participating in this performance evaluation process, and studying the expected supports that vendor companies can offer to suppliers. Such support activities should also be considered in IQ1 to achieve an effective implementation.

Benefit for suppliers

One of the supplier benefits is improved quality and brand enhancement, which are resulted from the continuous improvement to meet customers' requirements. KAVI has slowly become nominated supplier of some well-known brand names for some kind of fabrics. Moreover, service is the key point and competitive advantage of the firm. In this case, KAVI would support their buyers like company X in communicating with the next-level tiered buyers for the sample, and all the contact email are copy circulated to company X, which can help company X both saving time and communication effort. (Informant K)

In this industry of textile and garment, informant K disclosed that a communication gap may occur when more than two people are involved in the process. As an expertise in its role, mastering the fabric technique, each party in the supply chain should try to ensure the right quality. As a result, the supply chain can speed up the flow of goods and information, and again, saving time, money and communication. With "one step ahead" the suppliers show their active involvement and directly benefit.

Supporting suppliers

According to informant K, the enticement for suppliers to committing in this system vary on different corporates' situation, where some may be eager for performance evaluating while some are not. This philosophy might be more known for firms who

have experienced working with international partners. Hence, in the case of company X, the author suggests the firm should provide trainings, instructions and supports to aim for long-term relationship with suppliers.

In order to encourage the suppliers, before asking for their commitment, the firm should make attempt to understand the suppliers. From knowing how their factory works, purchasing process, quality control, machine management and so on, the firm can inspect and control what the problem roots are; knowing suppliers' capacities and levels. That helps the firm to evaluate and give helpful feedbacks (Informant K). Incidentally, it highlights the importance of supplier selection. It is not only for assessing the right suppliers but also information collected, investigated and analyzed which are recorded and helpful for this evaluation process. Therefore the investment in an internal system is worth to consider, which can benefit the firm with time saving, cost saving and the ease of controlling.

In case of goods failure occurring, the suppliers can be supported with international or internal audits to inspect whether their products pass the international requirement; at the same time, the suppliers should have a back-up plan to replace the goods in a fast manner to fulfill the orders. Moreover, the company should be flexible and have goodwill to develop the relationship by suitably maintaining the orders. Trend prediction, development instruction and some particular know-how in measurement and manufacturing should be reasonably shared with suppliers. This action is not only strengthening the communication and ensuring the quality, but also sharing the same goals to achieve. One interesting idea was shared by informant K about the sharing responsibility and flexibility in fixing the problems. At KAVI, they pursue the concept of helping other partners, solving the problems when they are able to. The reasons for this should be to shorten the waiting time and goodwill of adding value.

5 Implementation plan proposal (PT 4)

With the ready-to-use platform from project task 2 of chapter 3, and findings from research presented above, this chapter is continued with project task 4 of proposing the implementation plan for the company X. Simply, this part aims to provide basic framework and guide for an implementation while highlighting some noticeable points during the process.

5.1 Management overview

In general, the description of the project overview, specific process, resource plan, approach and timeframe are discussed in this part of management overview.

5.1.1 Implementation description

Before becoming a part of strategic plan and being committed to by the top management, the system of evaluating supplier performance should be tested. The project can first be done with suppliers who are individually contacted by the company. The implementation plan can apply for both stages: testing stage and strategic integration.

The brief idea of this project is: after an order is delivered, the supplier is evaluated by company X's staff with self-evaluation which is accomplished by suppliers. There is one person from merchandising department taking the main role for the whole process. The information for evaluation is collected from internal customers who are from different areas relating to specific metrics. The final result consists of the overall score, classified group of supplier and ranking of the supplier for its performance. If suppliers has a below average performance, they are required to continue with further improvement actions. These results are recorded in supplier database for decision making in the future such as placing order, prioritizing suppliers, and so on.

The evaluation system has to be considered as a part of strategic commitment from top managers in order to ensure its continuity and long-term results via the continuous improvement. There are thee simple principles of this system: 1. Keep it simple, by

involving the right internal users and enough information, 2. Being corporative and constructive, 3. Evaluating and ensuring quality, performance improvement and develop supplier relationship, not for figuring errors. These principles aim to secure the project being objective and effective.

To obtain a thorough preparation and an effective implementation, this system should be first applied to their own outsourced supply base, which are the suppliers that they have the whole control of communication and power of the relationship. For the nominated suppliers, some close and frequent ones should also be considered in the second testing period. By evaluating nominated suppliers, the company can provide added value recommendation and feedback to their buyers.

5.1.2 Implementation process

To cover all necessary activities, the author suggests a seven-step process for implementing this system in company X

- Step 1: Approved by the top management to make sure the project aligns with company strategy and committed to by managers.
- Step 2: Announce the application of this system to suppliers and staff for:
  + Communicating expectation with suppliers
  + Training staff
  + Information collecting is ready when the business deal starts
  + Evaluators are chosen thanks to the rule that the merchandiser who work and contact mainly with the evaluated supplier is chosen as the evaluator for that supplier in a specific purchase.
- Step 3: Data is recorded during the business process. This step is done by staffs that are in charge of the objective evaluated.
- Step 4: After the order is delivered or supplier finishing fixing any defects, the evaluator can start the evaluation by filling the supplier performance evaluation database, which is designed in chapter 4. Supporting information is recorded and collected in this step.

- Step 5: The result is ready to be announced to the manager and communicate with suppliers by the final form. The results are kept in the supplier's profile for further decision making.
- Step 6: Further recognition and improvement steps required for suppliers. Follow-up activities.
- Step 7: Follow-up and monitor the system.

5.1.3 Resource plan

For each supplier evaluation process, there should be the following participants; those are managers, evaluators, contact persons from warehousing, internal customers from accounting or import/export department and suppliers. From the tasks of each function which is revealed by manager X, the information can be recorded and collected easily.

- Project Manager is in charge of the general management process, ensuring the strategic alignment, and communicates with suppliers (if needed).
- Evaluator is the person who has the most experience with suppliers and involvement in the purchasing process. They are usually from merchandising department, taking the main responsibility for working, communicating and dealing with specific suppliers. Hence, in this evaluation system, tasks of an evaluator are contacting the evaluated supplier, collecting information for evaluation, completing, reporting the form and continuing any further steps with the supplier, like support or guide them in new development plan. Such information like defects, or quality in goods from goods delivered or internal feedbacks should be recorded and afterwards, collected by this person.
- Contact person from warehousing: According to manager X (2012-2013), this person participates in the activity of receiving and checking the delivery. His (or her) responsibility is to record and report the defects of goods, packaging condition and missing quantity of delivery to the merchandiser that is the evaluator in this case.

- Internal customers are staffs from accounting or import/export department. They will give feedback for invoice accuracy and delivery documentation or the general issues relating to suppliers.
- Suppliers: After the testing period, company X can consider the participation of suppliers with their self-evaluation parallel with the company's evaluator.

In each separate evaluation process, there should be a clear point of contact and task delegated to each participant, which is shown in the table below.

Table 11. Points-of-contact and tasks delegating

Role	**Tasks**	**Contact (email, phone number)**
Project Manager	General management of the process, ensuring the strategic alignment, and communicate with suppliers (if needed).	
Evaluator	Playing the main role in the evaluation process. Contacting with the evaluated supplier, collecting information for evaluation, completing, reporting, supporting or guiding suppliers about new development plan.	
Contact person from warehousing	Recording the figures relating to number of defects, goods quantity of delivery, and packaging condition.	
Other internal customers	Giving feedbacks for invoice accuracy, delivery documentation, so on.	
Supplier	Self-evaluation and further steps of improvement	

5.1.4 Project approach and timeframe

The project is simply done with Microsoft Excel to produce the evaluation results. This enables company X to keep the results in a supplier's profile and prepare a database for any IT integration in the future. Ideally, any defect information would be recorded in an information system, and the evaluator can collect the data afterwards, which also ensures the transparency. However, in the situation of having applied any information platform yet, information can be recorded by individual assigned function by hand.

A suggestion for the evaluation and ranking time is that evaluation should be done after an order is delivered to give feedbacks immediately to suppliers; afterward, the ranking and overview conclusion is made annually. According to manager X, any defects or missing should be reported to suppliers within seven to ten working days after the goods are delivered. This time period is considered to be suitable for suppliers to re-make or fulfill the missing goods to its buyers. In the situation when the order is large, the time for reporting defects can be flexibly extended to two or three weeks. Following this working rule, supplier performance evaluation system should be done within this time period; suggested within 14 working days after the final activity from suppliers are done. That means in the case there is no defect in goods delivered, the evaluator can start evaluating that supplier immediately; otherwise, the performance evaluation can be done after the replenishment from suppliers. This tight timeframe aims to evaluate the whole process of business, the performance of supplier during the ordering, delivering, communication and solving problems occurring. It also keeps the performance up-to-date, especially for quality and price aspects.

For a supplier from groups C or D who need to provide further development plan and to be approved, these steps should be accomplished in an agreed time period. Gantt chart can be used as tool for time schedule management.

5.2 Implementation Support

In order to implement the system, the project requires taking into consideration other supporting aspects like facilities and materials, training, communication, and risks management.

5.2.1 Facilities, Materials, Software

Materials. There are two available documents for company X to use. They are: the evaluation form and description in Excel format, and the implementation plan that is this part- chapter 5 of this thesis.

Software. Beyond the scope of this thesis, company X is suggested to consider the purchase of an official application for database management like ERP or tailored software.

Facilities can be considered as physical facilities. Basically, this project should not require any more workspace, except training space for staff or meeting with internal customers. Such activities can take place in ordinary places like meeting room or staffs' offices. Other facilities that company X can support evaluators are communication means like phone calls or transportation means (if required).

5.2.2 Personnel training

Training personnel can ensure that the system being implemented is done in the proper manner. Training, feedback or improved method, should be applied for involving stakeholders, including evaluator and manufacturing staff. The frequency and intensiveness can vary for different participants. The top manager should update the system once a year, while the evaluators and manufacturing staff can be trained semi-annually.

5.2.3 Project communication

In this project, communication occurs among internal customers, evaluators, top management and suppliers. The top management should always make clear and update

their expectations and strategies to the employees. Communication from internal customers to evaluators should be managed to avoid the gap in understanding, overlapped or misused information and feedback.

To avoid the system failure from supplier reasons, the evaluation results must be regularly shared with suppliers to make sure they know what performance expectation from company X. This situation is common when the suppliers are asked for participation but the goals of the project appear vague for them to achieve. Hence, not only the results, but also the targets and expectation from company X must be clearly communicated with suppliers.

The continuity and follow-up activities after the results are revealed should be paid close attention to. The suppliers should be recognized for its performance with long-term relationship enhancement statement from company X for outstanding suppliers or corrective actions and intensive communication with suppliers from group C and D.

5.2.4 Suppliers involvement

Presently, in the industry of textile and garment, on one hand, many suppliers have substantially active involvement and good awareness of this performance evaluation concept. On the other hand, there are still many who underestimate the need for this system. It can be the lack of information, limit in business scope or differences in core priorities. However, to achieve the same goals, the suppliers should, at the same time, be able to align this system with company X, which requires the firm to either educate their suppliers, intensively communicate with strong information sharing or requiring this system as a compulsory part in it business. Another approach is to show the suppliers their benefits from this system, which has been found from the research. Suppliers will not only improve the performance in quality, costs, logistics and other performances, but also get preferential treatment from company X. In addition, company X should attain an active position, being able to commit support to suppliers like guiding, problem fixing instruction or flexibly sharing responsibility. In a win-win situation, both parties are willing to strengthen their long-term relationship.

During the first introduction of this evaluation concept, the main role belongs to company X, consisting of evaluating, and instructing suppliers. When the system is officially implemented, the company can consider the more active involvement from suppliers like self-evaluation for its performance. After that, the suppliers can even be tasked with self-report and evaluation, which is done with internal audit like KAVI example.

5.2.5 Risks management

During the project of supplier performance management, Hebrand (2012) has mentioned four common pitfalls, including: lack of internal resources, supplier commitment, organizational involvement, and expertise like IT. These risks have a high possibility of occur for company X as well.

- The lack of internal resources. Dealing with a large of suppliers, company X only has a limited number of staff who can complete the evaluation. Company X might have trouble with tracking performance of each individual supplier. Other lack of staff involving can be manufacturing site managers and staff, who can collect directly the figures of delivery, defects of goods and packaging condition. This can cause over-workload employees. Possible solution for this risk is follow the principle 1 of the project "Keep it simple". By simplicity and well recorded database can help to limit this pitfall.
- The lack of supplier commitment. This risk has been discussed in the research in chapter 5. In general, suppliers vary their awareness and commitment levels thanks to its international business integration. Possible solution of this risk is turning this system into company X's part of strategic and business process in every supplier relationship.
- The lack of IT expertise in integrated supplier performance system. For further development and adaption of this system to company, there might be the need for a professional software. That requires the support for IT, costs, time, and staff capacities.

6 Conclusion

This chapter is dedicated to the summarization the outcomes of the thesis, giving recommendations and suggesting rooms for continued research or further development. The thesis is completed with the author's self-learning and evaluation.

6.1 Main results of the thesis

The project is carried out for the purpose of "Designing a supplier performance documentation and process in textile and garment industry" for the company case, named X All four project tasks have been accomplished, which draw a completed picture of a theoretical base, an available platform, and a proposed implementation plan with noticeable points about supplier involvement from the additional research conducted. The reliability and validity are ensured during the research and designing process.

There have been many research papers and applications for this concept all over the world, which are used as the literature references in this thesis. Specific benefits, approach for choosing KPIs and framework to implement this system are visualized with detailed charts and figures. The KPIs must be aligned to company's strategy and goals.

Supplier's awareness and involvement has been increasingly strong and remarkable; meanwhile there are still a number of suppliers who pay less attention to this concept. Benefits for joining the system are discussed to highlight the enticements for suppliers. Support activities are expected and possible to be done by buyer companies are also analyzed for better approaching and enhancing suppliers' commitment.

The supplier performance evaluation platform is fully designed and introduced in chapter 3, which is shown in appendix 5. This documentation aims to highlight the priorities in the company's strategy, concern and competitive advantages. Besides the three most common metrics of quality, costs and physical distribution of logistics, the author deliberately added there the metrics for customer relationship and continuous improvement, which are paid less attention to , but surely add values to company X and suppliers' performance.

The implementation plan is the values from both the research findings and literature review. Based on company X's capacity and situation, the plan is designed in a simple manner, including the project steps, timeframe, resources plan, supplier involvement, training, communication, materials and risk handling. All is company X- oriented.

6.2 Recommendations

Based on the principles and corporate strategy, company X can flexibly update and adjust the contribution percentage of each metric or add new ones. This evaluation system can stimulate promoting characteristics that enhance competitive advantages to the company. The firm should encourage the philosophy of trust, win-win situation and objectiveness in evaluation. However, foremost, company X must establish an applicable strategy, vision and mission, which ensure all the employees aligning the same goals to achieve.

In order to utilize the ready-to-use documentation, company X should pursue an information system to store and track the evaluation results that are used to make decisions for ordering and prioritizing supplier relationship. The firm can build internal system or purchase database management software which can promote the strategic integration. Thanks to this situation, an immediate evaluation should be done after the order is made and delivered; otherwise, it may be very difficult to track back the number of defects three months ago or evaluation of communication during that business period, billing defect, or any improvements in products and process.

To evaluate the benefits of this system, it requires a long-term commitment from the top managers, because the continuous improvements as well as quality control are not short-term gains and vivid concepts to see and measure.

6.3 Further research and development

There is room for further development in this system. First of all, it is the need for pursuing an application to handle the database. It is essential to consider carefully what

software to purchase and how to integrate the system with company X. Secondly; a real testing of the supplier performance evaluation system in order to adjust and update the combination of metrics should be also useful; especially when a new strategy is established. Furthermore, when this system is set up and implemented, it would require the change in workload, communication and effort. The staff may show their resistance to the old system of working manner and refuse to change. That is the symptom where the change and transition management may be helpful to apply, which aims to support, coach and manage human staff when the change is radical.

6.4 Personal learning evaluation

Finally, this thesis achieves all four tasks set in the beginning of the project, which has been officially accomplished in slightly two and half months, from middle of January to end of March 2013. The process of contacting the case company, collecting general information and choosing the topic happened in a few months previously.

In order to secure the quality of the research, I have read materials, generating ideas, communicated with company X and supplier K, conducting research, and processing the design intensively and effectively. Continuous revising, updating and restructuring have been repeated during the project to attain the best flow of information. Luckily, things went smooth and on track thanks to the active involvement of all participants. Company X showed its commitment and support during the research by continuity replying to emails promptly, providing various types of information, and suggesting contacts within potential informants, as well as offering flexibility to ensure my power in this project. The informant K was also eager and willing to discuss and sharing information.

One of my challenges is the additional research. In order to keep its size suitable for this thesis work, the research question in the chapter 3 has been changed several times, which might cause the inconsistence while creating the questionnaires. At first, I expect all the data discussed in the interview will be analyzed, but it turns out to be that about seventy percent of the information is suitable to interpret. Being confused to a small degree and wonder if there is something incorrect; luckily, after revising the transcript,

I recognize that all of the information, even not used, it helps to clarify the situation and capacity of the company and suppliers. Other challenge is to interpret the interview content, and ensure its reliability and validity.

I am particularly fascinated to learn and apply theory to practical tasks. It is not only me trying to align theory into design the platform and implementation, but also do the suppliers in their business. It is amazing to follow real companies in implementing quality control and management, which reflects the knowledge taught from school. In a nutshell, this thesis has brought me a wonderful opportunity to lead and experience an interesting journey on my academic study.

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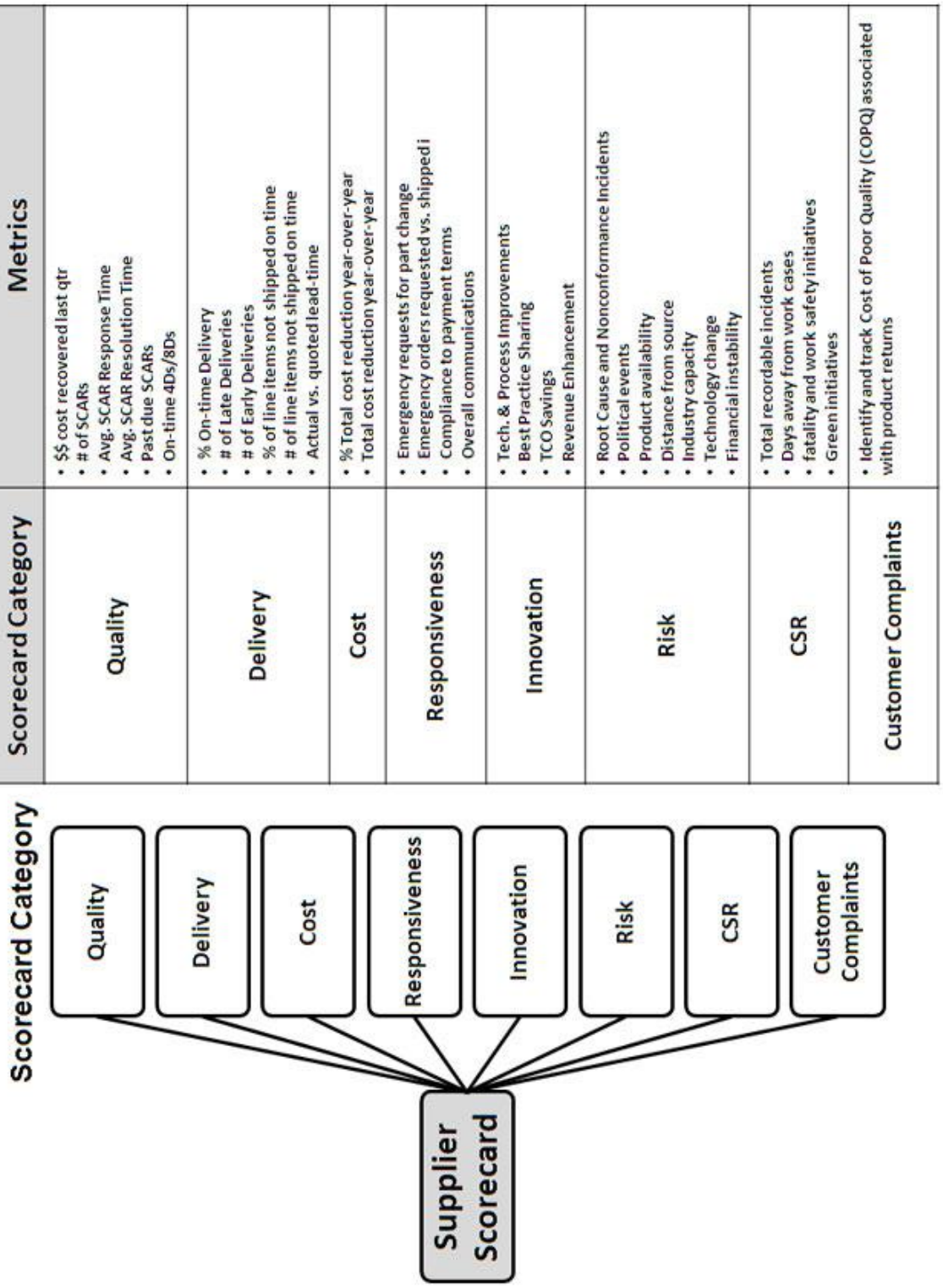
Attachments

Appendix 1. Supplier scorecard

(Source: Metricstream)



Scorecard Category	Metrics
Quality	• $$ cost recovered last qtr • # of SCARs • Avg. SCAR Response Time • Avg. SCAR Resolution Time • Past due SCARs • On-time 4Ds/8Ds
Delivery	• % On-time Delivery • # of Late Deliveries • # of Early Deliveries • % of line items not shipped on time • # of line items not shipped on time • Actual vs. quoted lead-time
Cost	• % Total cost reduction year-over-year • Total cost reduction year-over-year
Responsiveness	• Emergency requests for part change • Emergency orders requested vs. shipped i • Compliance to payment terms • Overall communications
Innovation	• Tech. & Process Improvements • Best Practice Sharing • TCO Savings • Revenue Enhancement
Risk	• Root Cause and Nonconformance Incidents • Political events • Product availability • Distance from source • Industry capacity • Technology change • Financial instability
CSR	• Total recordable incidents • Days away from work cases • fatality and work safety initiatives • Green initiatives
Customer Complaints	• Identify and track Cost of Poor Quality (COPQ) associated with product returns

Appendix 2. Scoring table for quantity reliability sub-metric

(Source: Rotek Incorporated)

Points	Percentage deviation excess quantity	Percentage deviation reduced quantity
100	0	0
90	+2.5	-1.5
80	+5.0	-3.0
70	+7.5	-4.0
60	+10.0	-5.0
50	+12.5	-7.5
40	+15.0	-10.0
30	+17.5	-15.0
20	+20.0	-20.0
10	+22.5	-25.0
1	+25.0 and more	-30 and less

Appendix 3. Interview questionnaire for company X

Part 1. General information

1. Can you describe the company structure?
2. Please state the company strategy.
3. How does company X perceive the concept of supplier evaluation?

Part 2. Suppliers participating in the evaluation

4. What kind of suppliers should be considered in the system? Choose and explain. (Nominated/ owned contact, long-term/short-term/ seasonal)
5. How is communication between the firm and suppliers? (Frequency, tools , departments/staff involve)

Part 3. Key performance indicator (KPI)

6. Can you give the priorities for the criteria listed below by numbering them from the most important to the least

Quality (ex: number of defect, quality management, audit)	
Price (cost reduction, price level, price trend, so on)	
Delivery (on-time delivery, late delivery, right quantity)	
Ordering (process, accuracy)	
Procedure and policies	
Information sharing	
Customer relationship	
Inventory	
Certification of suppliers	
Continuous improvement	
Other suggestion	

7. Do you have any other criteria that company X want to evaluate their suppliers?
8. Based on what factors the indicators are set?

Part 4. The implementation

9. What size of the project is suitable for company X?
10. What is your opinion about a trial testing?
11. Based on the communication and involvement of suppliers, how does the company expect suppliers' involvement in the system?
12. Being ready for implementing the system, what are the company's capabilities in: human resource, time and IT?

Appendix 4. Interview questionnaire for suppliers

1. What your firm's relationship with company X?
2. How is the communication between the firm and company X?
3. How does your company perceive the concept of supplier performance evaluation?
4. Has your company applied any system to evaluate your suppliers' performance?
5. Does your company have such experience with other customers? If yes,
   + What is your role and activities in the system?
   + Can you point out any aspects that we should pay attention in this system?
6. How can your company benefit from the evaluation results?
7. What makes your company involve in this project? Should it be a compulsory part in the business?
8. How are/should be your firm supported by the company in and after this project?
9. In your opinion, what are the hooks for suppliers in this system? What do you like from the point of view of a supplier?
10. What do you think can encourage suppliers' commitment in involving in the system?
11. How to avoid the bad impacts from culture in giving unexpected feedbacks?

Appendix 5. Supplier performance evaluation guidelines

Supplier Performance Evaluation
Case: Company X

This document can be used to evaluate the performance of suppliers who are the partners of company X. They can be the one who is nominated by customers or independently working with the company X.

This system consists of 5 main criteria categories, including: quality, price and financial issue, logistics, customer relationship and continuous improvement; with total 21 sub-criteria and 5 second tier sub-metrics.

This excel file includes:
+ 1 available form for presenting evaluation result

+ description of five criteria categories

The idea of weighting system is
+ Each of individual criteria will be scored from 1 to 100 based on its performance from the supplier. The evaluation basis is clearly indicated for different metric.
+ The score of each criteria category is separately calculated by the sum of the multiply from sub-metrics' point with its contribution percentage.
+ Applied the same rule, the overall score of a supplier is a combination of 5 criteria group's contribution percentage multiplying with its score
+ Based on overall point, the supplier performance is classified into different groups:

Point	Group	Assessment
100- 80	A	Outstanding performance
80- 60	B	Satisfactory performance
60- 40	C	Average performance
40-0	D	Re-qualification required

Continuous steps for each supplier group:

Group	Explanation
A	+ Supplier is not required to respond. + Preferentially considered as placing orders
B	+ Encourage suppliers to improve performance continuously
C	+ Supplier has to respond with a written form. + Identify plan to improve performance + Re-evaluation + Limited and more cautious future order
D	+ Supplier has to respond with a written form. + Urgent identify plan to improve performance and corrective measures with a compulsory and agreed-timeframe for performance improvement

	+ More frequent audits scheduled + Repeated poor performance will result in completed disqualification and jeopardize the supplier status

Company X should aim to enhance and encourage long-term relationship with supplier from group A and B.

Supplier Evaluation Report

Supplier | Date

Supplier number | Evaluator

Main criteria categories	Weighting	Point	Sub-criteria	Weighting	Point	2nd- tier criteria	Weight.	Point
Quality	34 %	**0**	Defect rate	50 %				
			Quality management	30 %				
			Sample complaint rate	20 %				
Price & financial issue	30 %	**0**	Price level	50 %				
			Price trend	30 %				
			Accuracy level of invoice	10 %				
			Responsiveness to descrepancies	10 %				
Logistics	20 %	**0**	On-time delivery	40 %				
			Quantity reliability	30 %				
			Ordering	15 %	0			
						Prompt ordering process	40 %	
						Lead time	30 %	
						Flexibility	30 %	
			Packaging	10 %	0			
						Protectiveness	70 %	
						Unpackaging easiness	30 %	
			Adequate delivery documentation	5 %				
Customer relationship	8 %	**0**	Responsiveness	35 %				
			Complaint handling	30 %				
			Sharing information	25 %				
			Management	15 %				
Continuous improvement	8 %	**0**	Society focusing	30 %				
			Environment	30 %				
			Product/ service improving	20 %				
			Proactively innovation	20 %				

Overall evaluation	**0**	**Classification**	D- Requalification required

1. Quality

1.1 Defect rate
1.2 Quality management
1.3 Sample complaint rate

1.1 Defect rate

50 %

Explanation Defect rate is done in percentage approach thanks to a simple and applicable platform aimed. Moreover, company X also buys materials in different measurement like units (buttons, zips) or meters.

Formula = defects or rejections/ total shipment

Point	Percent defect rate
100	0 %
90	5 %
80	10 %
70	15 %
60	20 %
50	25 %
40	30 %
30	35 %
20	40 %
10	45 %
0	50 %

1.2 Quality management

30 %

Explanation Including the quality certification required from customers (like Dressman). Usually it is the certification for product/material quality and quality process management

Point	System
100	ISO9001, non-toxic cerfitication
85	Other registration
60	Certified by Company X's customers
40	Certified by any partners
20	Any certification relating quality achievement
0	No certification

1.3 Sample complaint rate 20 %

Explanation The complaint rate is calculated by the percentage of number of quality notification of sample orders against the number of sample deliveries. For example, company X orders four samples of buttons to supplier named A. When these four samples are delivered, there is one button sample having an error of color or size for instance, the supplier will be requested to send again that sample. In this case, the sample complaint rate is 25%, and the point is 50.

Point	Sample complaint rate
100	0
80	10 %
60	20 %
40	30 %
20	40 %
0	< 40%

2. Price and financial issue

2.1 Price level
2.2 Price trend
2.3 Proposal for cost reduction
2.4 Accuracy level of invoice
2.5 Responsiveness to descrepancies

2.1 Price level 50 %

Explanation Price level is the comparison of the price offered by the supplier for its major materials/products in the report period with market price.

Market rate calculation In general and in estimation approach, the market rate is the average rate from various suppliers for the same products offered.

Deviation calculation The deviation is the difference between the supplier's price with the market rate. The minus mark "-" show how much the price from supplier is lower than market rate.

Points	Deviation %
100	-12 %
95	-9 %
90	-6 %
85	-3 %
80	0 %
75	1 %
70	2 %
65	3 %
60	3,5 %
55	5 %
50	7 %
45	9 %
40	11 %
35	13 %
30	15 %
20	17 %
15	19 %
10	21 %
5	23 %
1	25 and more

2.2 Price trend

30 %

Explanation Price trend or also price development is the comparison between price trend offered by supplier and the rate of market price trend.

Deviation calculation Average market price decreases 10% from 100$/unit to 90$, while the evaluated supplier increases the price by 2% from 110$/unit to 112,2$. The deviation between supplier's price (112,2$) with average market rate (90$) is +24%.

Points	Deviation %
100	-6 %
95	-5 %
90	-4 %
85	-3 %
80	-2 %
75	-1 %
70	0 %
65	1 %
60	2 %
55	3 %
50	4 %
45	5 %
40	6 %
35	7 %
30	8 %
20	9 %
15	10 %
10	11 %
5	12 %
1	13 and more

2.4 Invoice accuracy

10 %

Points	Accuracy level of invoice
100	Completely accurate
80	Several minor mistakes (example: date, bank, order information, etc)
50	Some financial mistakes (example: payment term, amount of payment, payment period, etc)
20	Considerable number of mistakes
0	Serious poorly invoice

2.5 Responsiveness to discrepancies 10 %

Points	Responsiveness to descrepancies
100	(1) Not discrepancies in invoicing or (2) Immediate and effective without any rework and impacts on delivery
80	Acceptable delay without any rework and impacts on delivery
60	Delay plus rework without any impacts on delivery
30	Rework and/or causing delay in delivery
10	Causing serious financial impact on company X's activities like delay in manufacturing and so on
0	Not responding

3. Logistics

3.1 On-time delivery
3.2 Quantity reliability
3.3 Ordering
Prompt ordering process
Lead time
Flexibility
3.4 Packaging
Protectiveness
Unpackaging easiness
3.5Adequate delivery documentation

3.1 On-time delivery

40 %

Explanation The score is given based on the deviation from the delivery due date and actual date. There are points for both late and early incoming goods. The minus mark "-" means the number of days for goods coming earlier than the agreed date. The delivery is not considered as arriving in Vietnam due to the involvement of third-party logistics, but the agreed place where third party will receive the goods

Point	Deviation in days late	Deviation in days early
100	0	0
90	1	-3
80	3	-7
70	5	-10
60	7	-14
50	10	-17
40	14	-21
30	18	-24
20	21	-28
1	25 and more	-32 and more

3.2 Quantity reliability

30 %

Explanation This metric evaluates the ability to ensure the right quantity in delivery as agreed in the contract by supplier. The quantity is checked as recevied by company X.

Deviation calculation Deviation from actual quantity and agreed amount received is used to give the score

Points	Percentage deviation of excess quantity	Percentage deviation of reduced quantity
100	0	0
90	2,5	-2
80	5	-4
70	7,5	-6
60	10	-8
50	12,5	-10
40	15	-12
30	17,5	-15
20	20	-20
10	22,5	-25
1	25 and more	-30 and less

3.3 Ordering 15 %

Explanation Considering the procedures and characteristics of ordering process, including: lead-time compared to average lead time from other suppliers in market (30%), flexibility (like short-time notice, making changes) (30%), and prompt ordering process (40%)

Points	Prompt ordering process (40%)
100	Excellent performance without any delay, high responsiveness and smart process design
80	Good performance and good responsiveness
60	Average performance and responsiveness
40	Below-average performance and responsiveness with some delay
20	Poor performance and responsiveness
0	Very poor performance and responsiveness

Points	Lead-time (30%)
100	Significantly shorter
80	Fairly shorter
60	Equal
40	Fairly but conderable higher
20	-
0	Stringkingly higher

Points	Flexibility (30%)
100	Excellent flexibility and cooperation
80	Good flexibility and cooperation
60	Average flexibility and cooperation
40	Below-average flexibility and cooperation
20	Poor flexibility and cooperation
0	Very poor flexibility and cooperation

3.4 Packaging 10 %

Explanation Evaluating the level of packaging in two aspects: protectiveness (70%) and easiness to unpack it (30%)

Poitns	Protectiveness (70%)
100	Thorough and protective packaging with no defects
80	Well packaged with minor defects
60	Packaged but having some defects
20	Poorly packaged, causing defects for goods
0	Cursorily packaged; goods are defectively affected

Poitns	Unpacking easiness (30%)
100	Smart packaging design, easy to unpack and storing
80	Easy to unpack and storing in patch
60	Comparatively easy to unpack
20	Difficult to unpack
0	Difficult to unpack which causes defects for goods

3.5 Adequate delivery documentation 5 %

Points	Evaluation basis
100	Adequate and correct delivery documentation
70	Some minor inadequate and/or incorrect delivery documentation causing no delay
30	Inadequate and/or incorrect delivery documentation causing delays
0	Very poorly inadequate and/or incorrect delivery documentation causing financial impact

4. Customer relationship

4.1 Responsiveness
4.2 Complaint handling
4.3 Sharing information
4.4 Management

4.1 Responsiveness

35 %

Explanation Responsiveness is the response time and effectiveness of the supplier, how fast and sufficient the supplier responds to company X's for questions, requests and problems.

Points	Evaluation basis
100	Excellent response time, effectiveness and receptivity
80	Good response time, effectiveness and receptivity
60	Average response time, effectiveness and receptivity
40	Below-average response time, effectiveness and receptivity
20	Poor response time, effectiveness and receptivity
0	Very poor response time, effectiveness and receptivity

4.2 Complaint handling

30 %

Explanation Checking how open and objective the supplier is in receiving complaint, effective in problem solving and taking experience for next business deal

Points	Evaluation basis
100	Excellent complaint handling process
80	Good complaint handling process
60	Average complaint handling process
40	Below-average complaint handling process
20	Poor complaint handling process
0	Very poor complaint handling process

4.3 Sharing information

25 %

Explanation This metric examines the level of information communicated between supplier and company X: Whether it is only basic data for buying and selling or strategic information for a strategic partner? How smooth is the process? Strategic partners are usually open and willing to share information for further cooperation.

Points	Evaluation basis
100	Excellent information sharing
80	Good information sharing
60	Average information sharing
40	Below-average information sharing
20	Poor complaint information sharing
0	Very poor information sharing

4.4 Management 15 %

Explanation This indicator takes into consideration the cooperation, flexibility and policies from supplier to the company X. How the supplier consider "win-win" perspective for seller-buyer relationship

Points	Evaluation basis
100	Excellent performance
80	Good performance
60	Average performance
40	Below-average performance
20	Poor complaint performance
0	Very poor performance

5 Continuous improvement

5.1 Society focusing
5.2 Environment
5.3 Product/ service improving
5.4 Proactively innovation

5.1 Society focusing- Certification for CSR 30 %

Explanation This metric concern about suppliers' efforts in social issue. Two initiatives certifications are SA8000 (Social Accountability International) and BSCI (Business Social Compliance Initiative). It also relates to the improvement in employee's support and social activities.

Points	Evaluation basis
100	SA 8000 and/or BSCI
70	Other registration
40	None certification, but public information (like articles)
20	Non-public but internal information
0	None avalaible information

5.2 Environment 30 %

Explanation This metric aims to raise suppliers' awareness of environmental issue, which is not paid enough attention in this geographic areas.

Points	Evaluation basis
100	Environmetal certification available
50	Compliance with legislation, product status without certification
0	No identifiable environemental awareness

5.3 Product/ service improving 20 %

Explanation This indicator relates to frequency that supplier improves their products/ service in quality, variety, features and their ability to adapt and lead the market in perspective of trend awareness. The evaluation can base on variety of product offers, increasing number of features and choices. The time frame is annually and based on the market trend.

Points	Evaluation basis
100	Excellent improvement and trend awareness
80	Good improvement and trend awareness
60	Average improvement and trend awareness
40	Below-average improvement and trend awareness
20	Poor improvement and trend awareness
0	Very poor improvement and trend awareness

5.4 Proactively innovation 20 %

Explanation Innovation in technology is the most concerned besides manufacturing capacity and innovation in management and operation and other aspects.

Points	Evaluation basis
100	Excellent innovation, invest and acquiring new technology, seize manufacturing capacity
60	Maintaining good technology and operation
0	No information available