EVALUATION OF WAREHOUSE OUTSOURCING PROCESS

Case Safeplast Oy

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ABSTRACT

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Evaluation of warehouse outsourcing process: Case Safeplast Oy

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This final thesis is partly based on a study conducted within practical training and summer job placements at Safeplast Oy. The thesis was created for Safeplast Oy that specializes in producing plastic spirals and textile products to protect all types of hoses and cables. The study comprises the process of establishing warehouse and in more detail evaluates the outsourcing process of a warehouse to be established in Central Europe. The focus of the thesis is to find out how the establishing of outsourced warehouse in Czech Republic would impact on freight costs, delivery times and what would be the effects in terms of expenses. In addition to show by case study what to take into account of when planning warehouse in general.

The research was done using mixed methods combining quantitative and qualitative research approaches. Theoretical basis for this research lies in background research on literature and articles in logistics and supply chain management in general and in more details of fundamentals of warehousing and outsourcing. Furthermore interviews within the company, correspondence with external parties, method of comparison and analysis were used.

Based on findings in the case study the volume of activity is not large enough yet that the outsourcing of warehousing would increase Safeplast Oy's operational flexibility in terms of great improvement in fast respond to customer requirements. The delivery times would not become shorter significantly and the freight costs would remain the same to current market area. The outsourced warehouse would cause extra expenditure that would lead to price increase without significant improvement in the customer service level.

Due to Safeplast Oy being fast growing firm the outsourcing and redesign of their supply chain will become timely. This final thesis offers a guideline to plan the process to ensure all important elements are considered, the objectives are clear and the process is adequately resourced to avoid disappointment in expected reduction in costs, business benefits and customer service levels that is expected to be achieved by outsourcing.

Based on the Safeplast Oy's will and confidentiality agreement, parts of the final thesis are excluded from the published version on the commissioner's request.

Key words: outsourcing, evaluation, logistics, warehouse, supply chain, third party logistics

CONTENTS

ABBREVIATIONS

DC	Distribution Centre
3PL	Third-Party Logistics
2PL	Second-Party Logistics
RFI	Request for Information
RFP	Request for Proposal
KPI	Key Performance Indicator
JIT	Just-In-Time
FTL	Full Truck Load
IPREG	Innovative Policy Research for Entrepreneurship and Growth
SME	Small and Medium Sized Enterprises

1 INTRODUCTION

In certain stage most firms are bound to modify their business operations in order to continue to quickly respond customer and market demands in their customary manner. One of the solutions for firms is to redesign their supply chain management which basically involve re-configuration of their logistics activities. These include transportation, warehousing, freight forwarding and value added services.

Warehousing is important part in most logistic systems and a link in supply chain between the supplier and the customers and can be involved in various stages before the goods end up to the end-customer. In terms of cost and service the warehouse is one of the most crucial elements in the supply chain and that is why the effective management is important. To ensure the cost –efficient service outsourcing the warehouse functions to be contracted out to a third party has been one of the most popular logistics decisions.

This final thesis is based on a study conducted for Safeplast Oy. Safeplast Oy is a fast growing Finnish company specialized in producing and distributing hose protectors for all kinds of hoses and purposes. Their vision is to become a global supplier in hydraulic industry. The geographical location of Finland, customer's reductions of inventories and requirements for short lead times in addition to growing number of customers and expanding product line have raised the need to look for an option to enlarge its supply chain in order to remain responsive to customer and market demands.

1.1 Objectives and purpose of the thesis

Main Objective of the thesis is to evaluate the outsourcing process of a warehouse that can be used as basis under consideration. Warehouse costs and competition has caused businesses to reduce inventories but the need for short lead time has not disappeared. The geographical location of Finland being apart from the rest of the Europe leads to longer delivery times and more expensive freight costs.

The purpose is to formulate a clear plan and evaluation what to take into consideration in establishing contract warehouse in Check Republic for Safeplast Oy. The goal of the thesis is to explain the purpose of effective planning establishing warehouse and put in action establishing outsourced warehouse by using Safeplast Oy as an example. In addition to show by case study what to take into account of when planning warehouse in general. Purpose is to find out if establishing the contract warehouse in Check Republic would impact to freight costs, delivery times and what would be the effects in terms of expenses.

Objectives and goals:

- Main objective is to come up with plan that can be used as a basis when establishing warehouse

- Evaluate the outsourcing process of contract warehouse to Czech Republic in Safeplast Oy and the warehouse's impact in terms of expenses and customer service level

1.2 Research problems

The increasing popularity of just-in-time (JIT) deliveries with short lead-times, wide product range and limited space in the warehouse are major promoting factors in outsourcing for Safeplast Oy. Also in the future Safeplast wants to continue to quickly respond to customer and market demands in their customary manner. Also smaller orders are consuming a lot of time of more than one person in comparison to its rather small financial profit and Safeplast Oy is hoping that the time saved because of outsourcing could be used in more profitable areas. Additionally because of the geographical location of Finland the freight delivery times are relatively long.

1.3 Research process and methods

To draw up the theoretical framework research on correspondent literature and articles will be studied. Practical issues are based on observations within practical training placement and summer job in Safeplast Oy, interviews within the employees in the company and external parties. Method of comparison, analysis and evaluation will be used.

The study uses both qualitative and quantitative research methods. Qualitative study refers to in-depth examination of the phenomenon how outsourcing process will be practiced in Safeplast Oy. On the other hand quantitative studies point out existing relationships between different variables under investigation.

2 THEORETICAL FRAMEWORK

This part of the thesis explains important concepts that are considered important to understand and clarify in order to ease to conduct the actual study of evaluation of establishing of contract warehouse in Czech Republic. The chapter is divided into three parts: logistics in general, fundamentals of warehousing and outsourcing. The first part shortly defines logistics and the meaning of the term. The second part treats warehousing. Warehousing plays essential part in logistics. The thesis studies establishing contract warehouse in Czech Republic in terms of costs and delivery times and it is meaningful to understand the issues concerning warehousing. The last part of this chapter deals with outsourcing and describes the step by step selection process in outsourcing and introduces different pricing structures.

2.1 Logistics and Supply Chain Management

Logistics can be explained by the management of resources that can refer either to goods or services from the point of origin (supply) to the point of consumption in desired condition in a most cost effective way by making greatest contribution to the firm and achieving a target level of customer service. (Rushton, Croucher, Baker, 2006, 4-7.)

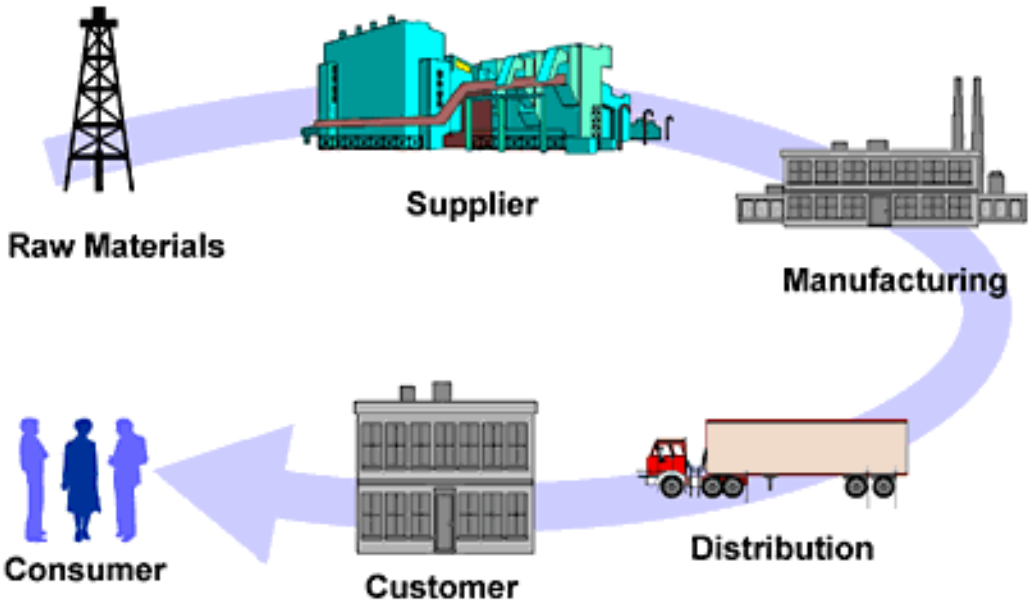

Figure 1: Supply Chain

Logistics combines the different functions of the organization considering capital, material, service and information flow into a together functioning process and enables the organization to combine different components into a logistics management. The logistics management can be described as a value chain and by effective management and efficient combining of different logistic activities, shown in the Figure 2; it creates the logistics service mix that becomes proprietary asset of the organization and competitive advantage among other organizations in the same market. Logistics cause great expenditures for businesses and the goal of the organization should be to reduce the total cost of logistics activities rather than focusing in each of them separately. (Grant, Lambert, Stock, Ellram, 2006, 3-11.)

Supply chain is an efficient integration and management of relationship concerning all stakeholders in order to improve operating efficiency. It logically and logistically links a firm and its distributive and supplier network to customers. In practice logistics is the work required in detailed coordination of complex operations involving people, facilities and supplies to continuously move through supply chain. (Bowersox, Closs, Cooper, 2007, 4-6.)

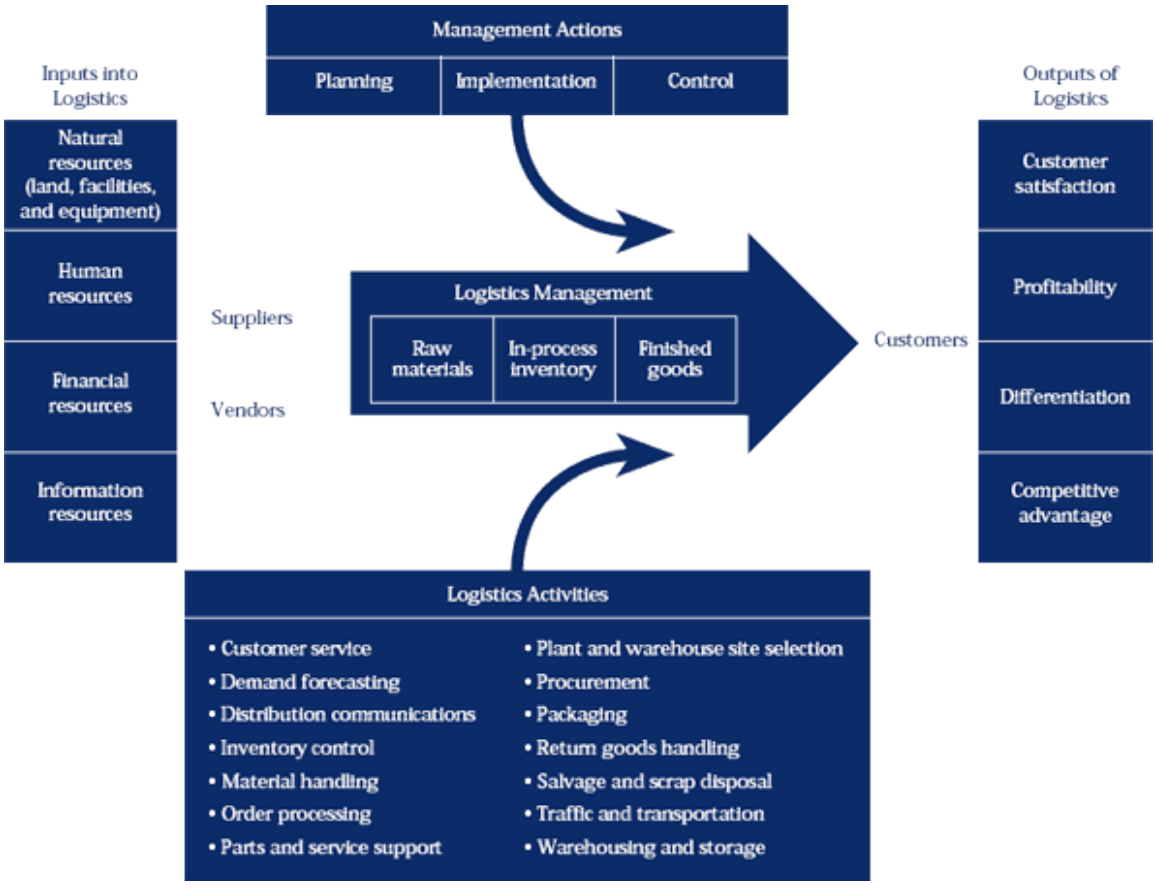

Figure 2: Components of Logistics Management (Grant, Lambert, Stock, Ellram, 4)

2.2 Warehouse

Warehouse is only a part but one very quintessence in most logistics systems. Warehouse is the place where manufactured and purchased items are stored until they are used, needed or sold. Warehousing can be considered important link in supply chain between the supplier and the consumer even though warehousing can be involved in various stages before the goods end up to the end-customer. Warehouses are also one of the most crucial elements in terms of costs and service and that is why effective management is very important. Even though improvements in technology and increased competition have led companies to reduced inventories the focus have moved towards rapid and efficient fulfilling of orders and have not removed the requirement of warehouses. (Grant, Lambert, Stock, Ellram 2006, 229)

2.2.1 Reasons for warehousing

The integral aim of businesses to hold warehouses is to ease the movement of goods through the supply chain to the end customer and to enable a rapid reaction on the demand changes and to reduce lead time. Proper selection in stock increases the sales and customer satisfaction because it makes it easier to the firm to match supply to variations and seasonal fluctuations in demand and to respond to unexpected customer demands. Other meaning of warehouse is to support manufacturing. Material or component shortage can lead to delay in production, added cost and shortage in finished goods. Inventory can also cover for planned or breakdown production shutdown for example in case there are a need for maintenance. In addition reasons for holding inventory can be savings in acquisition cost because of price and quantity discounts in large purchases together with hedge against the price increases. (Rushton, Croucher, Baker, 2006, 255-257)

2.2.2 Warehouse alternatives

When choosing the best alternative for the warehousing it is important to consider factors such as company's capability and willingness to capital investment, storage space criteria, operating criteria in terms of customer service and level of control in other words categories covering cost, service, organizational and physical factors.

Private warehouse

Private warehouse involves substantial corporate fixed investment in land, building and materials handling equipment as well as hiring suitable personnel. Private warehouses are operated by the company who owns the product that is stored in the warehouse. It does not necessarily mean that the company has to own the building but owns the product that comes in and goes out and therefore the company has the total control of all aspects of the operation. From inventory control, optimum space utilization, maintenance and equipment, internal material flow, handling routines, supervision, and associated cost control, the firm has a direct control and clear visibility for the product until the customer takes possession or delivery. All in all private warehouse can provide better familiarity of the firm's product, customers and market. There are depreciation allowances on buildings and equipment reduces tax payable if the company owns its warehouses. On the other hand in some countries firm can have advantage if it does not own property in foreign country because ownership can result in national taxes. Private warehouse can be less expensive over the long term but the downside is that it can end up very costly because of its fixed size costs. There is also the risk if company cannot adapt to rapid changes such as the volume of business, location or changes in technology that can lead to a loss of valuable business opportunity or make the facility obsolete. When a firm distributes its products through a private warehouse communication is effective, it gives the customer a sense of permanence and continuity of business operations. The customer perceives the company as a stable, dependable, and lasting supplier of products but in the end it is the on-time deliveries and level of customer service that will count and can provided regardless of the ownership. (Grant, Lambert, Stock, Ellram 2006, 239-242)

Public Warehousing

In public warehousing the distinct advantage is that no capital investment is needed. There is no investment required neither in land, building or materials handling equipment nor starting up the operation and hiring training personnel. In addition from the accounting perspective the fixed costs of can be turned into variable costs. Another major advantage is the flexibility. Company does not have to make long term commitments. It can be very beneficial for companies in terms of expanding because it provides economical and practical means to reach out to new markets and enables to switch to another facility of time which may have lower costs in a short period. Because the storage costs vary directly with volume, it enables the company to adjust for seasonality and peak requirements. In general public warehouses can operate as a warehouse for multiple customers' product at a same time and the space is available for hire on variable terms. More often the warehouse is specialized to deal with specific items or functions. Public warehousing is often the most expensive, making the ownership more attractive. Because public warehouses handle the requirements of a number of firms, their volumes are bigger and permits freight to move lower rates and allows them to pay consolidated freight rates. (Grant, Lambert, Stock, Ellram 2006, 239-242)

Contract warehousing

Contract warehousing is a variation of public warehousing but the significant difference is that the company have committed to the service provider typically for longer term outlined in the agreement instead of month-by-month basis. It is a contract between two parties: the user and the provider of the warehousing service and they share the risk associated with the operation. Warehouse is owned and operated by a third-party logistics (3PL) service provider that offer a number of specialized services and equipment that can be tailor-made to suit the needs of the client and that's why require more significant commitment from the user compared to public warehousing. The long-term commitment results in competitive total cost compared to public warehouse. The rate is commensurate of the number and specialty of services required from the provider and the focus is more on productivity, service and efficiency rather than in the fee and rate structure itself. (Grant, Lambert, Stock, Ellram 2006, 234)

Distribution centre (DC)

Distribution centre is sometimes used as equal to warehouse but the terms are not identical. A warehouse is a place to store inventory and handle most products in four cycles including receiving, storing, shipping and picking whereas DCs holds minimum inventories and predominantly high demand items handling them mostly in two cycles: receiving and shipping. In contrast DC also performs high percentage of value adding activity compared to warehouse. (Grant, Lambert, Stock, Ellram 2006, 229)

Cross-docking

Cross-docking refers to an activity whereby the goods arrive to the warehouse or DC and are dispatch within 24 hours without putting them into stock. The idea in cross-docking is that the goods arriving already have a customer assigned. The benefits gained from cross-docking are cost reduction in inventory- holding functions including the skipping of put away and retrieval picking. Furthermore affecting to labour costs reduction in the rime from production to the customer which helps improve customer satisfaction and in the need for warehouse space requirements. (Rushton, Croucher, Baker, 2006, 321)

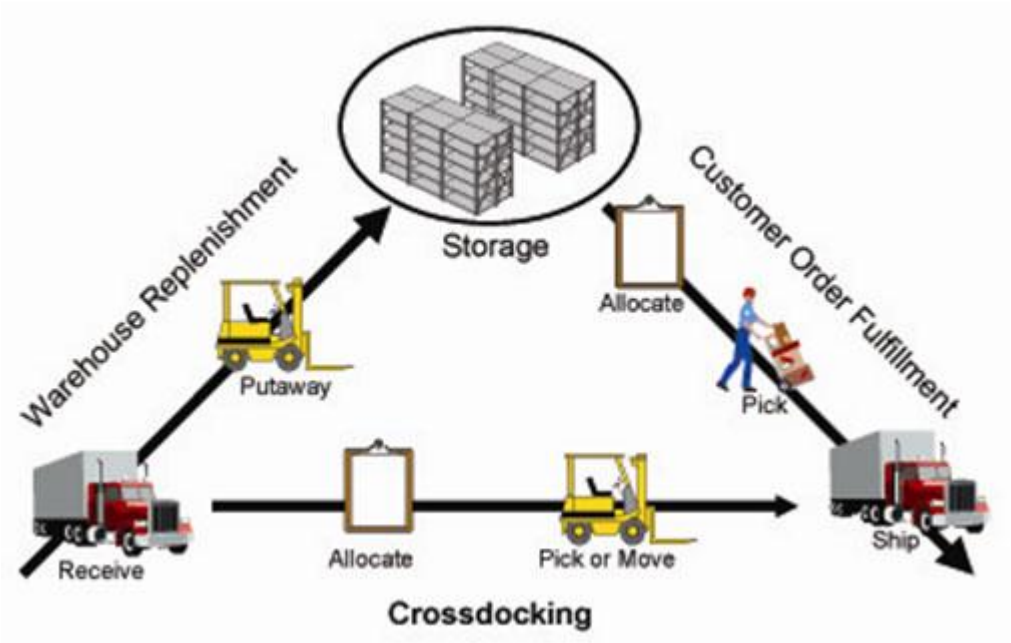

Figure 3: Cross-Docking

2.2.3 Warehouse location

The location of the warehouse should be based on company's need and follow corporate strategy that recognizes trade-offs such as land supply and prices, labour costs, transport density and congestion together with site-selection decision. In addition the firm should take into consideration the existence of many non-quantitative and political factors and requirements before determination. The site-selection decision can be approached from macro and micro perspective whereas macro perspective addresses the issue of where to locate warehouse geographically within a general area to improve service and/or reduce costs considering sourcing of materials and the firm's market offering and micro perspective addresses to factors that stand for a specific locations within the large geographic areas. (Grant, Lambert, Stock, Ellram 2006, 247-249)

Macro approaches

Identification based on American location theorist Edgar M. Hoover there are three types of location strategy. When the factors that influence the placement of warehouse near the market area served include transportation cost, order cycle time, the sensitivity of the product, order size, local transportation availability and levels of customer service offered the issue at stake is **market-positioned strategy**. In practice the warehouse is located nearest to the final customer to maximize customer service level and to enable utilisation of transportation economies. Whereas in **production-positioned strategy** the key issue is to locate the warehouse in close proximity to sources of supply or production facilities with a cost of customer service level. The third option **intermediately positioned strategy** combines the two previously mentioned strategies and locates the warehouse at a midpoint location between the final customer and the producer. Customer service level is an important factor and the achieved service level is somewhere between the production-positioned and market-positioned facilities. Also many other macro theories exist and include factors such as distance, cost considerations, minimization of transportation expenditures, demand and profitability that should be considered due to determination of the warehouse location. (Grant, Lambert, Stock, Ellram 2006, 247-249)

Micro Approaches

In micro perspective approach the site-selection factors are examined more specific within the large geographic areas. There are different factors to be considered depending on the firm's choice of warehouse alternative:

Private warehousing:

- quality and variety of transportation carriers serving the site
- quality and quantity of available labour, labour rates
- cost and quality of industrial land, construction
- potential for expansion
- tax structure and regulations
- building recommendations

Public warehousing:

- facility characteristics
- warehouse services
- availability and proximity to motor carrier terminals
- availability of local haulage
- other companies using the facility
- availability of computer services and communications
- type and frequency of inventory reports
  (Grant, Lambert, Stock, Ellram 2006, 247-249)

2.2.4 Warehouse size

Maximizing efficiency and productivity should be the main drivers when defining the size and layout of a warehouse and requires projection of expected total volume to move through the warehouse during a given period. A failure in consideration of utilization rates can lead to unsuccessful estimation of warehouse size requirements. It is essential that all available space is utilized as fully and efficiently because overbuilding has the impact on the cost level. Nevertheless it is beneficial to allow certain rational additional space to account if service level increase and requires higher levels of inventory due to increase in market, volume, new products and business opportunities. (Bowersox, Closs,Cooper, 2007, 229)

The size of warehouse can be defined in terms of square meters or cubic space. Because square meters ignore the capability to store goods vertically, cubic space is much more realistic size estimate because it takes into account the total volume of usable space within the warehouse. The optimal design and size of warehouse will vary by the type of product being stored, the company's financial resources, the competitive environment and the needs customers. Some of the important factors affecting the size of warehouse:

- customer service levels
- size of market(s) served
- size and number of products
- material handling systems used
- throughput rate
- production lead-time
- economies of scale stock layout
- space requirements
- office area in warehouse
- types of racks and shelves
- level of pattern of demand

  (Grant, Lambert, Stock, Ellram 2006, 243-244, 249-250)

2.2.5 Product mix consideration

It is essential to conduct an analysis of products that will be distributed through the warehouse. The product mix should be based on annual sales forecast and demand but each product and average order to be processed through warehouse should also be analysed in terms of weight, packaging and dimensions in order to determine the warehouse space and other warehouse related issues. (Bowersox, Closs,Cooper, 2007, 227)

2.2.6 Warehousing costs

Decisions discussed in above concerning the type, location and location of the warehouse affect to the warehousing costs. The warehouse should provide right stocks at right times and the space in the warehouse should be utilized efficiently and according to the predictable customer demand. On the other hand overstocks increase costs and can reduce the profitability.

Depending on the warehouse alternative warehousing costs are paid in the form of rates charged by an outside firm offering the service (public warehousing) or through internal costs generated from the particular operational activity system adopted in the company controlled warehouse (private warehousing). The costs incurred are proportional to service and material handling facilities provided in the warehouse. Warehousing costs can be divided into fixed or variable costs. Variable costs often but not always increase and decrease in correlation with the sales revenue of the firm. Variable cost include labour, material, packing, utilities, transportation and those operating expenses that enables the business to run. Fixed costs are the expenses that remain constant regardless of activity or production volume. Capability of separating fixed and variable cost is essential for the company to be able to compare the costs and savings in the warehouse alternatives. (Kapoor, Kansal, 2005, 172-174)

In case company uses a public warehouse it receives a bill each month and knows the exact storage and handling cost that eases the forecasting of costs in different level of activity. In comparison to company operating private warehouse it is more difficult to determine the fixed and variable costs of warehousing. According to article Understanding Warehouse Costs and Risks by Ph.D. Thomas W. Speh published in Warehouse Forum (2009) all companies with warehouses incur the same elements of cost but compile them differently depending on if the firm is whether buying or selling warehouse services or a firm providing warehouse service for its own organization. The article presents a model that enables to isolate and analyse costs of warehousing and to compare price to actual value of the services rendered with another or one company to others regardless of being about wholesale distributor or logistics service provider. Some warehousing costs tend to be ignored or misallocated if not recognized where they belong. (Grant, Lambert, Stock, Ellram 2006, 239; Speh, 2009, 1-2)

The conveyed costing system presented in the article divides warehouse costs to four categories: handling, storage, operations administration and general administrative expenses.

1. **Handling** includes all expenses associated with moving product in or out of the warehouse, largest component being labour used to handle the product that moves through the distribution including such as receiving, put-away, order selection and loading not forgetting costs associated with equipment used to handle product in the warehouse.
2. **Storage** expenses are costs associated with "goods at rest" and are incurred whether any product ever moves. Storage is normally expressed as a monthly cost because storage expenses are related to the cost of occupying the facility.
3. **Operations administration** are the expenses of the supporting the operation of warehouse such as supervision, clerical effort, information technology, insurance and taxes.
4. **General administrative** expenses includes the expenses that cannot be specified to anywhere else including general management, non-operating staff and general office expenses as an examples.

In addition the warehouse operator should make a realistic estimate of risk costs that can be expressed as a percentage of total warehousing cost and can be based on past experience. The article leaves the allocation of overhead costs and administrative costs to a matter of individual judgements because no specific formula will be correct for everyone. (Speh, 2009, 1-2)

2.3 Outsourcing

Increased competitiveness to provide effectively efficient customer-focused services among organizations lead organizations to seek alternative ways and to activity to hire an outside organization, a third-party, to perform activities that were previously provided in-house is known as outsourcing. In general outsourcing means buying the service from an outside organization that is specialist in the performance of required specific functions in order to achieve a target level of customer service at the lowest possible total cost. In logistics outsourcing the two traditional logistics service providers involves third-party warehousing providers and use of transportation carriers that offer many distribution and distribution related services. (Grant, Lambert, Stock, Ellram 2006, 27)

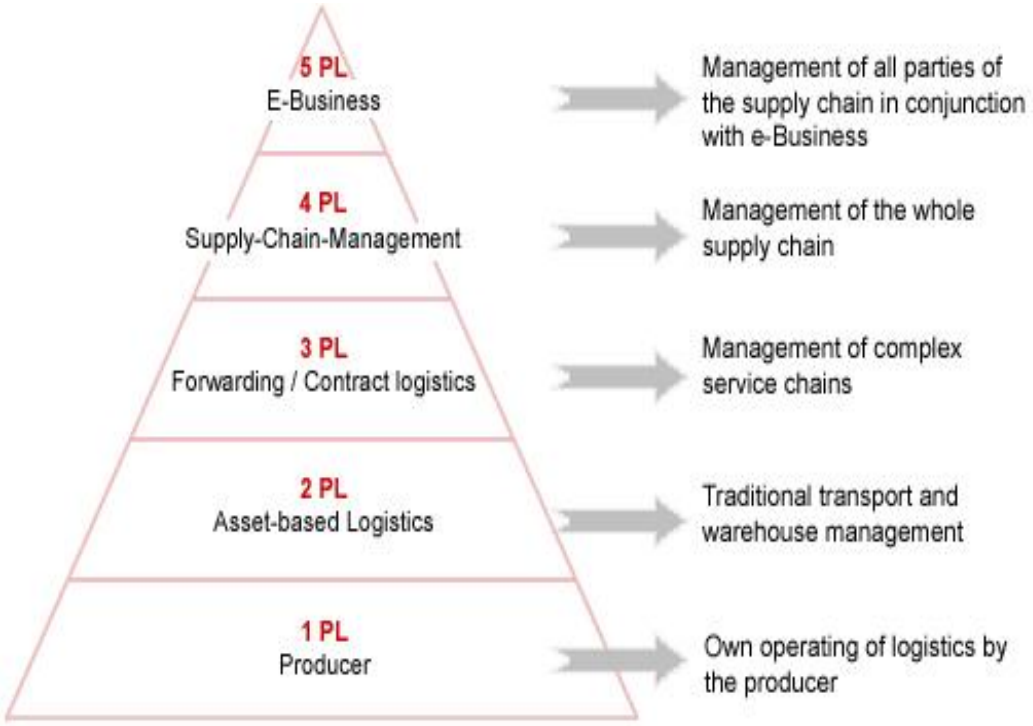

Figure 4: Different levels of outsourcing in logistics

2.3.1 Third party logistics

The figure 4 introduces the different parties (levels) in outsourcing in logistics. Organizations operating in physical distribution have to make the decision whether to use a third-party distribution or logistics services (3 PL) or whether to run an in house distribution operation. Numerous different types of third-party distribution operation provider are available depending on organizations willingness to outsource complete or certain parts of distribution operation and whether to apply to all of its product/service and customer types or a part of them. The figure 5 demonstrates the different opportunities that are available across the whole scope of outsourcing. Because a wide range of basic and value added services are available to cover such as inbound freight, freight consolidation, warehousing, distribution, order fulfilment and outbound freight it is important to understand the breadth of available services and to select those that are most appropriate for a user organization. Value added services are the services that add a lot of additional value to the product being distributed.

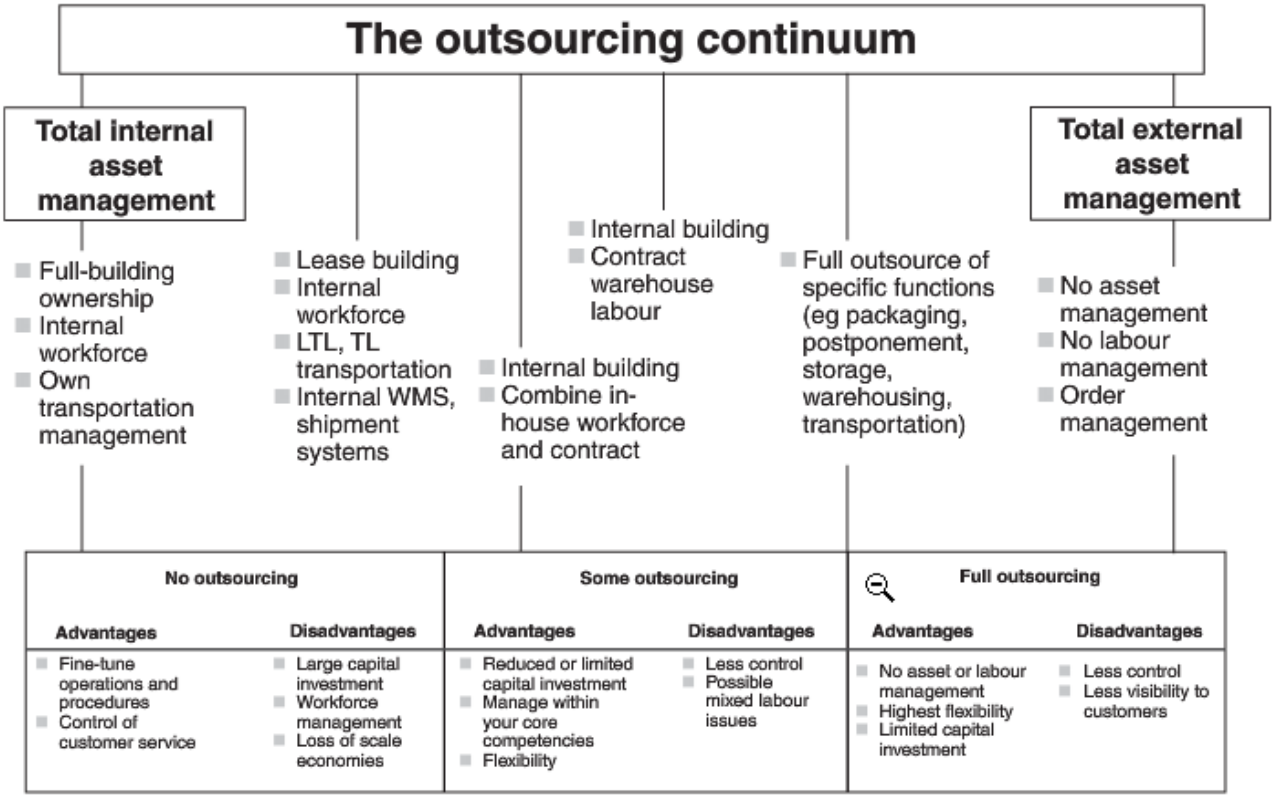

Figure 5: Range of possible functions and services to be outsourced (Rushton, Croucher, Baker, 544)

One of the main reasons in outsourcing logistics to third-party distribution provider is the opportunity for users to focus on their core business. The other broad categories cover cost, service, organizational and physical factors that have been dealt in the part 2.2.2. Warehouse alternatives. Public and contract warehouse referring for and against to use of third party and private warehousing referring for and against to keeping the operations in-house (2 PL). Mainly it is a question of trade-off between cost and service but also other aspects need to be considered. (Rushton, Croucher, Baker, 2006, 66–77)

2.3.2 Selection process in outsourcing

To avoid disappointment in expected reduction in costs, business benefits and customer service levels that is expected to be achieved by outsourcing, it is important to make careful selection and management of service providers. The selection process should be clearly defined and planned to ensure that all important elements are considered, the objectives are clear and the process is adequately resourced. Figure 6 introduces laid-out process for contractor selection and will be described in detail. In practice the outlined selection process should only be used as a guideline and to be modified based on

considerations to avoid resulting formal contract that can prevent both parties to work together to develop new ideas and to make co-operative arrangements to improve service and reduce cost.

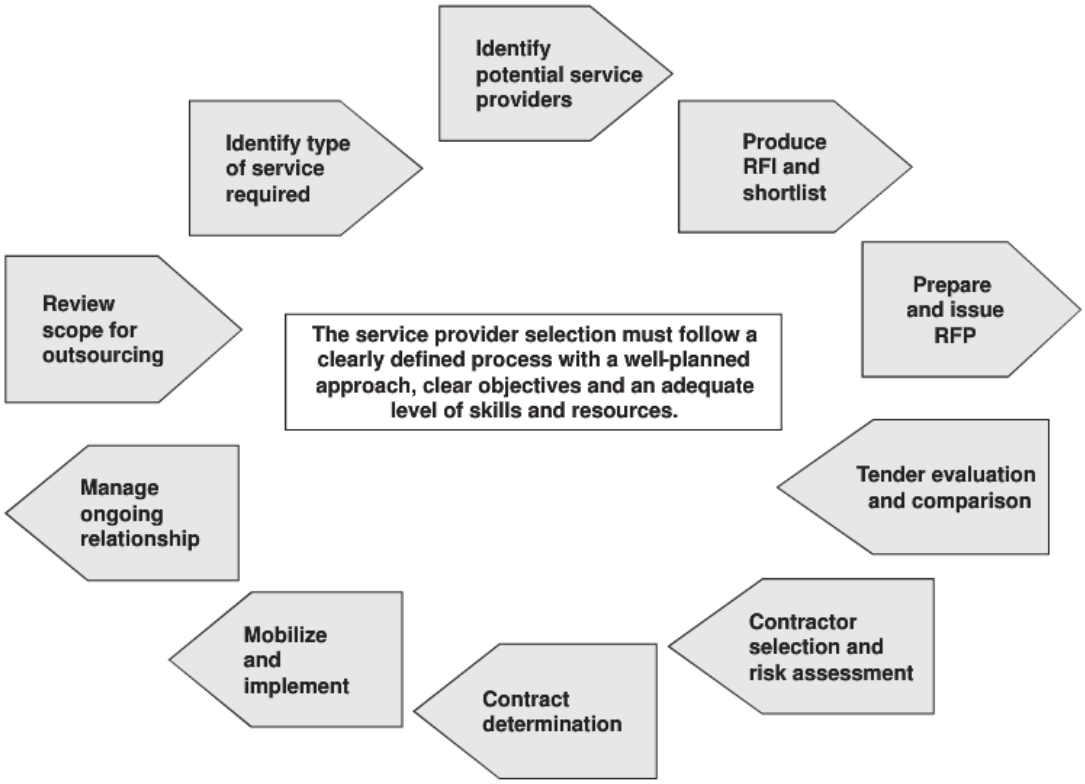

Figure 6: Key steps of the contractor selection process (Rushton, Croucher, Baker, 543)

Key steps of the selection process:

1. **Review scope for outsourcing**

   Organization needs:

   - To clarify why it is making the decision to outsource to be able to come up with clear identifiable objectives that can be used as decision criteria during the selection process.
   - To clearly define the extent of the outsourcing. What operations should be outsourced and what should be kept in-house? Figure 5 shows a summary of possible functions and services to be outsourced.
   - To compose a broad strategic review of the likely expected distribution structure

2. **Identify type or service required**
    - Determination which of the many services offered by third-party providers are likely to be required
    - Choice of dedicated operation or multi-user operation (resources are shared with other user companies)
3. **Identify potential service providers**
    - Identification of preferably a long list of potential contractors to be contacted with a brief description of the likely requirements (RFI)
4. **Produce RFI**
    - RFI, request for information is a concise document consisting key information such as:
        - introduction and confidentiality clause
        - description of the company –operation and product overview
        - description of opportunity:
            -overview of strategy and likely requirements
            -contractual relationship
        - the selection process
            -procurement process
            -key selection criteria
        - content of response
        - format of response

    - Identification against selection criteria the ones from contacted that are most capable to provide cost-effective and service proficient solutions
5. **Prepare and issue RFP**
    - RFP stand for request for proposal and its main objective is: 1) to provide a specification of business requirements to selected vendors in a standard format to facilitate objective comparison of proposals and 2) to maintain equitable flow of information across all tendering companies and establish confidentiality rules
    - The data provided in RFP should be a sufficient level of detail to allow the contractor to undertake adequate analysis to calculate the resources required to run the operation and to identify all the associated costs. Precise content will vary according to the company and contract requirements.

6. **Tender evaluation and comparison**
    - Comparison between the different submissions assessing relative costs of the different solutions (costs of storage, delivery transport, information systems, administration, overheads management..etc.) and consideration of all relevant non-quantifiable aspects (the ones that are seen important).
    - useful approach is to adopt a structured assessment where each major factor and can be listed and given appropriate weighting that reflects its importance to the company and can be then scored against all different factors
7. **Contractor selection and risk assessment**
    - identification few preferred service providers
    - negotiation phase to ensure detailed elements
    - negotiations with preferred vendor on all functional aspects and gain agreement on pricing
    - risk assessment relating to the provision of services; to the operating company's business requirements; to external changes that might affect the contractor's business
    - contract arrangements
    - final selection process and finalized contract is carried out by the ones who have the relevant negotiating skills
8. **Contract determination**
    - contract includes detailed information and requirements including comprehensive specification of the services that are to be provided, the associated tariffs and obligations of the parties considering initial contract, cost-related structure, service-related, administrative and other issues depending on the breadth of the operational coverage and the type of contractual arrangement
    - the very important parts are agreement of service level, cost structure and cost of additional activities that are to be included as exceptional payments, costs that are beyond the contractor (fuel price increases, inflation etc.) and any productivity targets
9. **Mobilize and implement**
    - Identification and agreement of project plan to ensure that responsibilities are clear and the timetable is feasible for implementation

10. Manage on-going relationship

- continuity to control and monitor the contractor to ensure that overall business and operational objectives are achieved
- regular reviews of cost and service performances, operational difficulties and to identify opportunities for the continuous improvement of the operation

The ideal is to develop a useful strategic partnership rather than a strict contract-driven arrangement but a well detailed agreement is needed so that the parties do not have totally different set of expectations and understanding of the arrangement. (Rushton, Croucher, Baker, 2006, 542-559)

2.3.3 Pricing structure in outsourcing

Several different types of pricing or charging structure can be adopted.

- **Unit price or fixed price agreements.** An agreed unit price is paid for the service provided is a traditional method of third party payment and common for low volume business.
- **Hybrid unit price agreements** are based on a unit price but also include guarantees for specified volume throughput. It allows reducing unit price by degrees as throughput increases. (seasonal effects)
- **Cost-plus arrangements.** A pre-set profit margin added to agreed fee that covers used facilities and provided services.
- **Open book contracts.** The client company pays for the entire operation plus management fee to the contractor and can be used only in completely dedicated operations and is monitored against a budget agreed between both parties.
- **Evergreen contacts.** A fixed price structure and specific performance requirements are agreed for 12 month period and performance is monitored against agreed key performance indicators (KPIs) (Rushton, Croucher, Baker, 2006, 548-550)

2.3.4 To avoid risks in outsourcing

Outsourcing will be successful and both parties will benefit of it if the deal is based on reciprocal trust. The user and the contractor should aim to create a more positive and co-operative alliance and try to develop more of a partnership approach. The relationship cannot be created only according to strict contract-driven arrangements. Because in outsourcing the company relies on someone else to run certain business functions it can bring significant risks. The risks in outsourcing should be recognized and managed properly because otherwise the outsourcing can have negative affect on company's operations and customers and can cause extra costs.

The safest way to ensure success is to follow a clearly defined and planned process (see figure 6, p. 22) to make sure that all the important aspects have been covered. Responsibilities and liabilities for damage should be agreed in the contract in case of risks appear and the partners should be able to negotiate openly and share also confidential information to each other. (Jalanka, Salmenkari, Winqvist, 2003, 11-13)

An article *Bringing Together Strategic Outsourcing and Corporate Strategy: Outsourcing Motivates and Risks* by Quélin B. and Duhamel F. published in 2003 identifies five outsourcing risks that have negative outcome as:

- Dependence on the supplier
- Hidden costs
- Loss of know-how
- Service provider's lack of necessary capabilities
- Social risk

3 COMPANY DESCRIPTION

Confidential. Not published part starts.

3.1 Safeplast Oy

Confidential. Not published.

3.1.1 Product line

Confidential. Not published.

3.1.2 Sales

Confidential. Not published.

3.1.3 Supply chain

Confidential. Not published.

4 WAREHOUSE EVALUATION PROCESS

4.1 Warehouse evaluation criteria

Confidential. Not published.

4.1.1 Scope for outsourcing

Confidential. Not published.

4.1.2 Warehouse alternative

Confidential. Not published.

4.1.3 Warehouse location

Confidential. Not published.

4.1.4 Product-mix consideration

Confidential. Not published.

4.1.5 Warehouse size

Confidential. Not published.

4.2 Cost analysis

Confidential. Not published.

4.2.1 Warehousing costs

Confidential. Not published.

4.2.2 Freight costs

Confidential. Not published.

5 ANALYSIS AND FINDINGS

Confidential. Not published.

6 CONCLUSIONS

Confidential. Not published.

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Figure 1: Supply Chain
Read 20.11.2013
http://organizations.weber.edu/sascm/

Figure 2: Components Logistics Management (Grant, Lambert, Stock, Ellram, 2006)
Read 18.9.2013
http://www.santova.co.uk/services_1.asp

Figure 3: Cross-docking
Read 22.11.2013
http://www.brainsins.com/es/blog/crossdocking/103537

Figure 4: Different levels of outsourcing in logistics
Read 2.10.2013
http://www.lomag-man.org/3pl_supplychainsystems/3pl_mecanisme_modeles.php

Figure 5: Range of possible functions and services to be outsourced
Read 2.10.2013
http://en.calameo.com/read/00082521455df14f62039

Figure 6: Key steps of the contractor selection process
Read 2.10.2013
http://en.calameo.com/read/00082521455df14f62039

Figure 7: Structure of the group company SNT-Group Oy
SNT-Group Oy.

Figure 8: Net sales of Safeplast Oy according to product group
Conducted by author of the thesis

Figure 9: Net sales of Safeplast Oy according to sales areas
Conducted by author of the thesis

Figure 10: Basic model of Safeplast Oy supply chain

Conducted by author of the thesis

Figure 11: Sales forecast according total number of 25 meter safe-spiral coils in European market, 2013-2015
Conducted by author of the thesis

Figure 12: Forecasted sales, stock level and delivery practices
Conducted by author of the thesis based on sales forecasts

Figure 13: 1 year budget estimation for contract warehousing in Prague
Conducted by author of the thesis

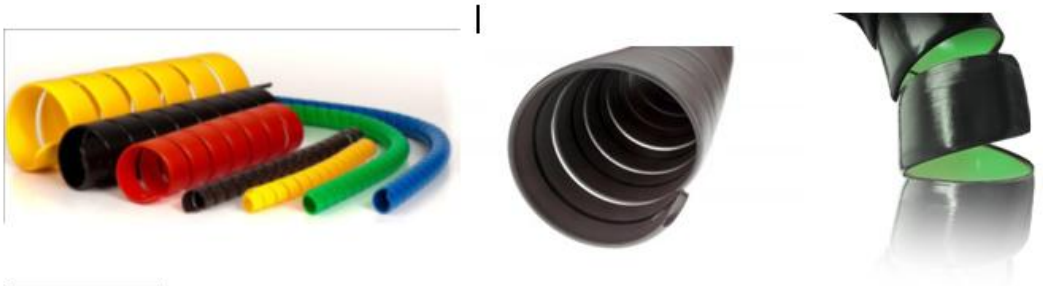
Figure 14: 1 year budget estimation for contract warehousing in Ceske Budejovice
Conducted by author of the thesis

APPENDICES

Appendix 1. Samples of Safeplast products

Source: www.snt-group.fi/safeplast

Safe-Spirals



Safe-Sleeves

Safe-Wraps

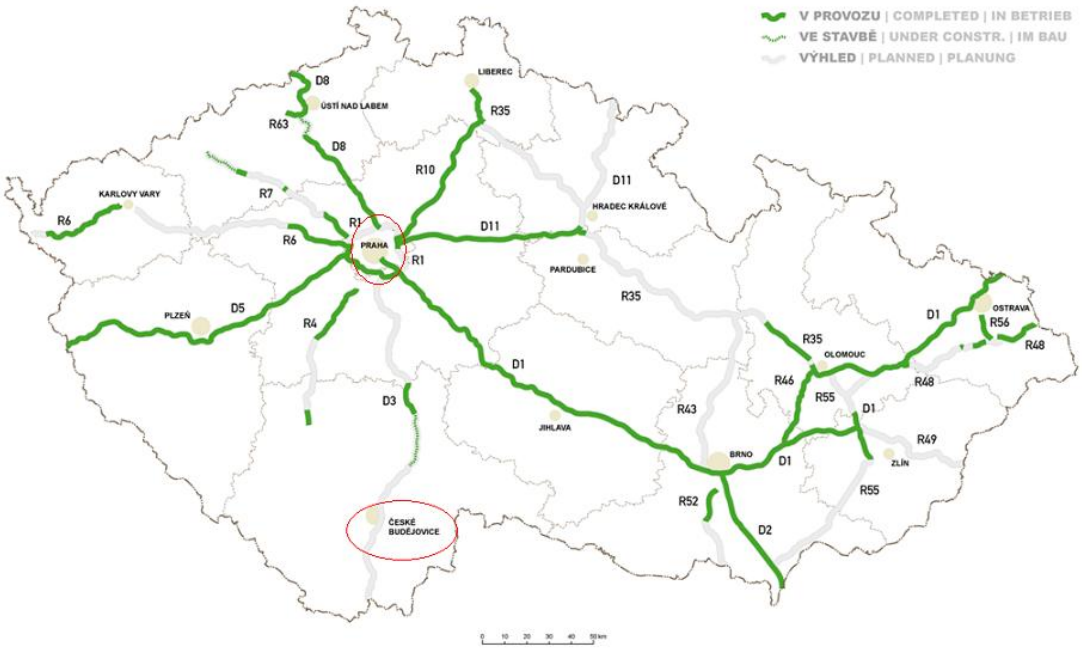
Safe Installation tool

Safe-Strips

Appendix 2. Customer Locations in Europe

Confidential. Not published.

Appendix 3. Map of the Czech motorway network



Source: ceskedalnice.cz

http://www.motorway.cz/

Appendix 4. Sales forecast by product category in Europe, 2013-2015

Confidential. Not published.

Appendix 5. Packaging of coils

Confidential. Not published.

Appendix 6. Comparison of freight prices and delivery times

Confidential. Not published.

Appendix 7. Price offer from Ahola Transport Oy Ab 25.10.2013

Confidential. Not published.