Alternatives in Packing and Logistics Outsourcing Towards an Effective Delivery Process
Case Company: Helsieni Oy
Dominik Kaller
Helsieni is a Helsinki based company specialized in cultivating mushrooms by using bio-waste as fertilizer.

The company runs a web shop and sends its goods to private customers, who are mainly based in Finland. There has been an increase in requests from Estonia and therefore considerations are underway to enter the Estonian market. Helsieni has asked the author to examine logistics providers for transporting its main product, the “mushroom growing starter kit” to Estonia.

Current solutions are considered as rather pricey and in terms of service there is still room to design it more effectively. As there are no capacities available to perform this service in-house, outsourcing transportation is of main importance for Helsieni’s trading.

In addition, Helsieni uses a packing for its product, that is not economical enough and therefore a transition to a more space-saving model is in consideration. This thesis also examines possible effects, that a changeover might entail.

The main goal is to provide the case company a study of how alternatives in packing and logistics outsourcing effects its delivery process.

The research started by sending a survey to the case company in order to find out the status quo and related challenges of current delivery process. The next step was to collect secondary data in order to understand the concepts and theories concerning logistics outsourcing and packing. The final step of the research was to collect and to analyze quotations from third-party logistics providers, in order to compare the offerings, based on price and service.

The findings of this research show that the current logistics partner is the most competitive option for the case company. In addition to that, this thesis finds further use in providing the case company the knowledge to ensure the most efficient outsourcing process. Moreover, this thesis serves as a base to conduct further research in order to broaden the area of subject.

**Keywords**

logistics outsourcing, packing, third-party, quotation, evaluation
# Table of contents

1 Introduction .................................................................................................................. 1
   1.1 Background ......................................................................................................... 1
   1.2 Research question ............................................................................................ 1
   1.3 Demarkation ..................................................................................................... 2
   1.4 International aspect ........................................................................................ 3
   1.5 Benefits ............................................................................................................. 4
   1.6 Risk analysis .................................................................................................... 4
   1.7 Key concepts ................................................................................................... 4

2 An effective delivery process ...................................................................................... 7
   2.1 Parcel delivery .................................................................................................. 8
   2.2 Packing ............................................................................................................ 10
   2.3 Outsourcing .................................................................................................... 11
   2.4 Comparing ....................................................................................................... 12

3 Research methods ...................................................................................................... 17
   3.1 Qualitative analysis ......................................................................................... 17
   3.2 Secondary data ............................................................................................... 18
   3.3 Analyzing offers ............................................................................................. 18
   3.4 Research process ............................................................................................ 19

4 Case company ............................................................................................................ 20

5 Findings ....................................................................................................................... 21
   5.1 Current state .................................................................................................. 21
   5.2 Request for quotation ..................................................................................... 22
   5.3 Evaluation ....................................................................................................... 23
   5.4 Results Post .................................................................................................... 24
   5.5 Results 24express .......................................................................................... 25
   5.6 Results PostNord ............................................................................................ 27
   5.7 Comparison ..................................................................................................... 28

6 Discussion .................................................................................................................... 30
   6.1 Importance for the case company .................................................................. 30
   6.2 Recommendation ............................................................................................. 30
   6.3 Further research ............................................................................................. 31
   6.4 Personal learning ............................................................................................. 32
   6.5 Validity and reliability .................................................................................... 32

References ....................................................................................................................... 34

Appendices ...................................................................................................................... 38

Appendix 1. Interview with Helsieni ........................................................................... 38
1 Introduction

The first chapter features the basic information about this thesis. It first concentrates on introducing the commissioning company as well as the topic, which will be researched. Further, it points out the scope of the thesis, possible risks and the benefits for all stakeholders involved.

1.1 Background

Helsieni provides biowaste - such as used ground coffee - a second life by using it as a fertilizer to cultivate mushrooms (Helsieni 2016.). The business of the commissioning company is split in three areas:

First, Helsieni operates a mushroom growing farm in Vantaa, which serves local restaurants. Second, Helsieni sells mushroom growing starter kits and other related products via its web shop, for the customers to grow their own mushrooms at home. The third area are workshops organized by Helsieni, where people are taught how to grow mushrooms. (Helsieni 2016.)

For distribution of its web shop products Helsieni is currently using the services of Finnish Posti, whose services are considered rather expensive. Therefore, Helsieni would like to investigate other third-party logistics providers for deliveries of its mushroom growing starter kit from Finland to Estonia. (Holtslag 17. April 2018.)

In addition, the company wants to update its packing from a stable but too big sized cardboard box to a slimmer and smaller envelope. The newer packing has the benefits of using space efficiently and ensures a door to door delivery as the envelope fits into people’s postbox slits. (Holtslag 17. April 2018.)

1.2 Research question

This is a research type of a thesis, more specifically a distribution research. This thesis aims to find and recommend suitable logistics providers to the case company for its plans to serve the Estonian market. In addition, possible effects on changing the postal packing are pointed out. (Burns et al 2017, 39-40.)

Therefore, the research question is:
How does a new logistics partner and new packing for a mushroom growing starter kit affect Helsieni’s delivery process from Finland to Estonia?
IQ1: What is the current state of Helsieni’s delivery process?
IQ2: What are the main challenges of the delivery process?
IQ3: What does a logistics provider selection process consist of?
IQ4: How changing the packing and logistics provider can improve Helsieni’s delivery process and customer satisfaction?

In the below Overlay matrix (Table 1), investigative questions and their relationship with the theoretical framework are shown. Further, in column number three methods of data acquisition for each of the four IQs are presented. “Results” indicates the chapter, in which the outcome of each investigative question is presented.

Table 1. Overlay matrix

<table>
<thead>
<tr>
<th>Investigative questions (IQs)</th>
<th>A cost-effective delivery process</th>
<th>Methods</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>IQ1. Current state of delivery process</td>
<td>Packing, Product, Parcel Shipment, Market, Outsourcing</td>
<td>Online survey</td>
<td>4, 5</td>
</tr>
<tr>
<td>IQ2. Challenges and positiveness in current delivery process</td>
<td>Packing, Product, Parcel Shipment, Market, Outsourcing</td>
<td>Online survey</td>
<td>4, 5</td>
</tr>
<tr>
<td>IQ3. Logistics provider selection process</td>
<td>Parcel Shipment, Comparison, Outsourcing</td>
<td>Investigate how to create an efficient selection process</td>
<td>5, 6</td>
</tr>
<tr>
<td>IQ4. Improving delivery service through new packing and logistics provider</td>
<td>Parcel Shipment, Comparison, Outsourcing</td>
<td>Research about packing and outsourced delivery. Sending out RFQs to third party logistics providers and analyze received offers.</td>
<td>5, 6</td>
</tr>
</tbody>
</table>

1.3 Demarkation

The research is based on Helsieni’s web shop product the “mushroom growing starter kit” and not any other product in the company’s portfolio.
This thesis researches the impacts of a new logistics partner and new delivery packing for the “mushroom starter kit”. Therefore, any other supply chain related processes for that certain product and the products own package remain undiscussed.

Two different options of delivery packing are researched. The cardboard box, which is currently in use and the cardboard envelope, which Helsieni is considering using in the future. No other packing option is introduced and/or researched in this thesis. Excluded from the research are also calculations on the purchasing cost of the different packing options. Searching for suppliers for packing material is also not part of this topic.

Posti and other logistics providers were compared regarding numerous aspects, but only for a shipping route from Helsinki to Estonia. In this regard, all other countries are excluded from the research. Only logistics providers, which are based in Finland and/or Estonia and which have enough information available online in English language were investigated.

An RFI or RFP is not included due to small size and yearly shipping quantity of the product as well as the related risk of non-response from logistics providers.

In case a criterion is not answered by the involved companies, it is not treated in this comparison as the actual values remain unknown.

This research does not cover the risk assessment of any third-party logistics provider mentioned in this document. This thesis does not treat negotiations and contracts between Helsieni and any third-party logistics provider. The possible selection or non-selection of any mentioned logistics provider remains the sole responsibility of the target company.

1.4 International aspect

The international aspect of this thesis is evidently given as the author is an Austrian citizen and the commissioning company is based in Finland. Helsieni’s founder and co-founder are French and Dutch citizens.

This thesis concentrates on evaluating logistics providers for conducting deliveries from Finland to Estonia. These logistics providers are either Finnish, Estonian or companies from a third country. With the presented systematic evaluation process, Helsieni will be in the future able to assess third party logistics providers for any other country of its need.
1.5 Benefits

For Helsieni the main benefits are the provided options and recommendations for setting up a reliable and cost-effective distribution channel to Estonia. Based on the recommended alternatives, Helsieni is free to choose its most favoured option.

Furthermore, this thesis provides the target company the knowhow to systematically carry out a logistics outsourcing process. This can be of great use in case of a further market entry or the shipment of another product.

Future customers in Estonia would benefit indirectly from this thesis in case a more effective logistics provider is found and finally chosen by the company.

The benefit for the author is to work with a young start-up company, whose concept and products he can identify with. Last, he deepens and widens his knowledge in the field of outbound logistics, packing methods and delivery routes. Those topics may surround him throughout his future career.

1.6 Risk analysis

Data from third-party logistics providers such as prices and delivery times might be relatively easy to collect. In contrast to that, information concerning sustainability aspects, reliability or contract details might be harder to obtain.

The author of the thesis is currently not fluent in Finnish and has no language skills in Estonian. Therefore, any prospective third-party logistics providers, who are not having an online presence in English, can not be considered and this reduces the offering.

1.7 Key concepts

**CEP** is an abbreviation of courier-, express and parcel deliveries. (Accenture 2015.)

**Dedicated service** means that a logistics provider is dedicating its service for one customer only. (Rushton et al. 2010, 524.)

**Express deliveries** is a delivery service type, which has its focus on speed. (Rushton et al. 2010, 528.)

**General haulage** is a delivery type used commonly for pallet shipments. (Rushton et al. 2010, 258.)
**Global integration** is defined by the Cambridge University Press (2014a) as a process, in which a company is designing its services in such a way, that it can be carried out the same way around the world.

**Groupage deliveries** ensures small orders at a low-price, by combining shipments from other senders. (Rushton et al. 2010, 258.)

**Last mile** is the final stage of a delivery process. Usually this term refers to the last steps taken, to ensure the delivery of a good at the end-consumers home. (Cambridge University Press 2014b.)

**Multi-user** distribution is a delivery type, in which a logistics provider is dedicating its logistics operation to more than one client. (Rushton et al. 2010, 252.)

**Mushroom growing starter Kit** is a package, containing spore less oyster mushroom spawn, breathing tape and instructions (Holvi Payment Services Ltd. 2018.). With this product, Helsieni’s customers can start growing their own mushrooms in their private homes.

**Outsourcing** means to receive service against payment from an external supplier. (Oxford University Press 2018b.)

**Packing** refers to the material used to wrap a certain good to make it fit for delivery. Among others, this means the cushioning, marking and sealing of the certain good. (Cambridge University Press 2014c.)

**RFI** stands for request for information. This paper, sent to a possible business partner, should prove whether a general interest in doing business together is given or not. (Rushton & Walker 2007, 275.)

**RFQ** is an abbreviation of request for quotation. This document is sent to a possible business partner and will be returned with an offer for a specific service. (Rushton & Walker 2007, 277.)

**Third-party logistics** means the outsourcing of logistics services to external providers. Such a third-party logistics provider is a private company, which arranges logistics services based on a signed contract. This provider does not own the products, but
links together the owner and the buyer of the product. Therefore, it is considered a third party. (Vijayvargiya, A. et al. 2010. 403-418.)

**Web shop** or e-shop is a website on the internet, in which a company is selling goods or services. (Oxford University Press 2018a.)
2 An effective delivery process

This chapter discusses different key concepts and theories, which relates to the research objectives.

The figure below represents the theoretical framework of this thesis.

![Theoretical Framework Diagram]

**Figure 1. Theoretical Framework**

The central key concept is parcel delivery. Since the focus of this thesis concentrates on package shipment, a discussion about the basics presents this concept to the reader. After that, this concept is brought more into the context of this research. Meaning, the importance of package delivery for the commissioning company is described.

To transport the product, it needs to be covered in an export packing. This chapter also provides an overview of the different packing options and the importance of packing for international deliveries.

As Helsieni needs to outsource parcel shipment services, this concept is discussed from the basic definition, of what is outsourcing to more practice. The need of the case company to use outsourced logistics services and related considerations is treated as well.
This chapter features a manual of the selection process of third-party logistics providers. This will help Helsieni to select a suitable partner for its delivery plans to Estonia.

### 2.1 Parcel delivery

According to Cambridge dictionary (2018d) a parcel is a wrapped object, which is ready for shipment.

Accenture (2015) describes package delivery as a logistics service, provided by CEP companies, that takes place on an agreed day - in some cases even at a specified time - and generally door-to-door. The weight is usually limited to 31.5 kg.

The CEP industry has recently undergone a major transformation. Shifting from pure supply activities, to more transparent, digital and versatile services. (Accenture 2015.)

According to Apex Insight (2018), the global parcel delivery market grew from 310 billion USD in 2016 to 350 billion USD in 2017. The main global market is Asia-Pacific with a market share of 40%. North America and Europe combined account for about half of the total market.

The United States of America remains the largest country market considered value, but in terms of volume China has overtaken the North Americans in the meantime. In 2017 the UK was the market with the biggest growth in Europe, while the largest European market is Germany. (Apex Insight 2018.)

According to the Fraunhofer Center for Applied Research on Supply Chain Services SCS (2018) in 2014 the European logistics market accounted for 960 billion EUR. Goods of 18.6 billion tons were transported. These deliveries are composed as follows: 78% via road deliveries, 8% via sea deliveries and 7% via rail. The remaining percentages account for pipelines, inland waterways and air shipments.

Apex Insight (2018) explains, that the main cause of the worldwide growing package delivery market is online retail, which has steadily grown in both emerging and first world countries. A continuing growth is expected during the coming 5 years as well.

GS1 Germany (2015) explains this trend with increased cross-border deliveries. This brings also many challenges within the industry. Most of them are the increased expectations of customers in terms of new service offers, quality, reliability and competition within the industry.
Rushton & Walker (2007, 136) add, that customers are seeking solutions, which are getting more and more complex as larger and larger supply chains are involved. The trend shows that mostly the big players in the business are receiving requests to provide solutions, while the smaller companies remain rather overlooked.

Future trends within the industry promise progress in last mile solutions. For example, robots and drones will be used for this purpose. Also, same day delivery will be offered increasingly. CEP providers are expected to play an even more central role as the internationalization of SCM will continue to progress. This will put even more emphasis on just-in-time deliveries. (Apex Insight 2018.)

While globalisation is a driver, which can only hardly be influenced by the logistics providers, the Fraunhofer Center for Applied Research on Supply Chain Services SCS (2018) is pointing out that another type of drivers, which are shaping the european logistics market can be utilized by companies to do business effectively and efficiently. Those drivers are among others: professionality, focus on core competencies and service orientation.

According to Apex Insight (2018) the global parcel delivery market is dominated by three groups:

- The national post
- Global integrators and
- Smaller courier companies

The biggest global players are UPS, FedEx and DHL. (Apex Insight 2018.)

Transport services can be divided into categories to distinguish them from one another. The first one, "dedication" refers to whether the logistics service is dedicated to a single customer or if it is shared with others. "Speed" means options such as same day delivery, next day delivery or as required by the customer. "Size of consignment" is defined in weight, cubic volume or numbers of items. "Contractual basis" differentiates service options between spot hire or a contract. (Rushton et al. 2010, 527-528.)

Rushton et al. (2010, 528) define the main service types as:

- Express deliveries
- Groupage
- General haulage
- Multi-user
- Dedicated services
Package delivery is of high importance for Helsieni as its web shop products are supplied via home delivery service to its customers. A pick-up option ex works is not an option for the target company as its customers are scattered across Europe.

Due to the nature of the product, being considerably small, light and handy, express delivery with shared service is the most suitable option for the case company (Table 2.).

### 2.2 Packing

A product, which will be shipped, is usually covered in a packing. That’s because it must be marked with postal information and stamps and it needs to be protected from damages. In terms of export this plays an even bigger role due to multiple handling. (Freight Media Limited 2017.)

There are numerous options of packing materials available including wood, metal, plastic and paper/cardboard. Some countries have even strict regulations and may require for instance disinfection certificates of woods or containers. (Invest Northern Ireland 2018.)

So how to find the right packing option for a product among countless possibilities? To find the right type of packing, first the sender needs to consider that the sent good must arrive to the customers address in the same condition as it has left the company. Further, it should ease the handling, minimize the risks in transit and protect the product from access through unauthorized persons. Last, the sender should be aware, that over-packing can lead to unnecessary waste and higher shipping costs. (Invest Northern Ireland 2018.)

<table>
<thead>
<tr>
<th>Delivery type</th>
<th>Dedication</th>
<th>Speed</th>
<th>Consignment</th>
<th>Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Express</td>
<td>Shared</td>
<td>Same or next day</td>
<td>Small parcel</td>
<td>Transaction</td>
</tr>
<tr>
<td>Groupage</td>
<td>Shared</td>
<td>Slower than express</td>
<td>Pallet size</td>
<td>Transaction</td>
</tr>
<tr>
<td>General</td>
<td>Shared</td>
<td>Slower than express</td>
<td>Any size</td>
<td>Transaction or contract</td>
</tr>
<tr>
<td>haulage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-user</td>
<td>Shared</td>
<td>Slower as dedicated</td>
<td>As required</td>
<td>Contract</td>
</tr>
<tr>
<td>Dedicated</td>
<td>Dedicated</td>
<td>As required</td>
<td>As required</td>
<td>Contract</td>
</tr>
</tbody>
</table>
Due to the proper package of the actual product - including plastic foil and cardboard – as well as its frugal characteristics, small size and light weight, a cardboard wrapping is the cost-friendliest, safest, easiest and therefore, most suitable packing solution for Helsieni to ship the good to its end-customers.

Helsieni currently uses a cardboard box, which is 235 mm long, 175 mm wide and 30 mm deep. The total weight, including the mushroom growing starter kit, is 44 grams.

Due to its big, heavy and inflexible design, Helsieni considers a change to a new, slimmer and more lightweight packing design in form of a cardboard envelope, once a suitable supplier is found. This new packing has following measures: 175 x 260 x 2 mm and its total weight, including the product, is 31 grams.

To make it easier for the reader to understand the dimensions of the different packing options as well as the product itself, below picture shows the current packing design (box) on the left side, the product in the middle and the new packing (envelope) on the right side.

Figure 2. Product and Packing alternatives

2.3 Outsourcing

Logistics outsourcing is possible in various ways such as transportation, warehousing, brokering, reverse logistics, information technology etc. (Grant 2007, 71.)
Usually, as described by Vijayvargiya et al (2010, 403-418), firms are spending the largest amount of money of their logistics budget on transportation.

There are numerous challenges ahead for a company, if it wants to transport its own goods. Among others, those challenges include an increase of fuel prices, regulations within the industry, finding the best delivery mode and selecting drivers and vehicles. Therefore, outsourced logistics services are becoming more and more popular for trading businesses. (Vijayvargiya et al. 2010, 403-418.)

In this context, the big benefit of outsourcing is, that it puts above mentioned challenges away from the company towards logistics companies. Those logistics companies have their core competencies in that field and can make use of their economy of scale in vehicle acquisition and fuel. This reflects in increased service for optimised costs. (Grant 2012, 71-74.)

For Aghazadeh (2003, 50) improving expertise, increase in flexibility, market knowledge and data access are further advantages of outsourced transportation. When a company decides to outsource transportation, Grant (2012,71-74) points out that it should be aware, that both parties involved know their role exactly. Information shall be shared in a two-way system and in case the cooperation does not work out as planned, an exit strategy should be in place.

For Aghazadeh (2003, 51) it is important that both parties share the same goals and practices to foster a common spirit. Also a reward system shall be created to keep the motivation high.

Outsourcing plays an integral part in Helsieni’s trading, because it does not pay-off economically for Helsieni to carry out deliveries with own vehicles. Therefore, the delivery of its product needs to be outsourced to a third-party logistics provider. Currently the company is outsourcing its transportation operations to Finnish Posti, while warehousing remains in-house.

2.4 Comparing

It is crucial for a smooth everyday operation and along going cost savings to find a provider that works. Businesses, which are searching for a third-party logistics provider, should be clear and honest, when addressing their expectations. With this profile a research should be conducted to find a provider, whose characteristics fit the most. Of
course also the logistics provider has requirements for the interested company, which needs to be discussed as well. (Aghazadeh 2003, 51.)

The selection process comprises of many stages, which must be followed carefully step-by-step.

Figure 3. Selection process (Rushton & Walker 2007, 269)

In the first stage the company needs to make sure, if there even is a need to outsource logistics operations to an external provider. In that aspect Rushton & Walker (2007, 269-274) recommend the company to verify first, if there is capacity and knowhow available to perform those services in-house before continuing the outsourcing process.

Adding to that, Rushton and Walker (2007, 269-274) explain that the main drivers for outsourcing logistics services need to be identified. Those can be for instance saving costs or improving customer service. If the main motivation is to save costs, then the company needs to be aware of the overall costs a third-party provider is offering for its services. If customer service is the main motive, then the company needs to evaluate, if an external provider brings added value to existing service.

Furthermore, the company needs to make sure, what services it wants to outsource, which should remain in-house and how the whole distribution structure should look like. (Rushton & Walker 2007, 269-274.)
In the second stage, explained by Aghazadeh (2003, 54-55), the company needs to identify the required characteristics of a future logistics partner. The following task includes a research of available services and its providers. This research should lead to a listing of ten logistics providers, which meet the company's desires the closest. (Aghazadeh 2003, 54-55.)

In the next stage, described by Aghazadeh (2003, 54-55), the company sends a request for information or a request for partnership to those listed logistics providers. This document should include the interest of a possible cooperation, information about the company, specification of the service needs and a request for providing a company profile and its capabilities.

This step aims to identify if the contacted logistics provider is interested in doing business together with the company and vice versa. Based on the response the company is receiving, the long list of contacted logistic providers should be narrowed down to about two or three providers. (Aghazadeh 2003, 54-55.)

Rushton & Walker (2007, 275) explain that the reasons for disinterest on side of the logistics provider could be that the scope of the outsourced services is too small or not supported at all. On side of the requestor, reasons for not considering a company to the short list could be that the provider is not covering the area adequately or there is lack of references.

In Helsieni’s case there is no need for a logistics provider, who is specialized in container shipments, but does not do parcel shipments. Also, there is no use for example for an expert specialized in the Pacific region, if he does not operate in the Baltics.

Rushton & Walker (2007, 275) are pointing out that besides primary information gathered via e-mail requests - helpful information on providers can also be obtained on company webpages, trade press or webpages specialized on 3PL.

An RFI/RFP is not performed in this research, because of the comparatively small scope of the needed outsourced services. The outsourcing process in literature described above concentrates on dimensions such as full truck loads or pallet shipments, while in Helsieni’s case the goods are packed in small cardboard boxes and/or envelopes. The CEO of the target company (8 October 2018) estimates the yearly shipping quantity to Estonia with maximum 500 pieces.
Robert A. Martinez (2016), who is an associate partner at Navigo Consulting Group and specialized in carrier contracts, describes RFP as a too time-consuming step. In this regard, many sales persons are rather unwilling to answer those letters.

For Todd Marcum (2018) co-founder and President of Access, a marketing and communication agency, the likeliness of non-responses to RFPs lies in financial aspects. An employee’s working hour is costly and therefore, time is spent on more lucrative tasks. Another reason might be that a logistics provider, who might have been an excellent candidate with competitive solutions, has simply no time to respond during hectic business times. Also, the length of an RFP might scare off its receiver, leaving a too broad formulated document not answered.

Martinez (2016) adds that sales persons see the chance for not being chosen as a future logistics partner much higher than the chance being picked. In case there is already a third-party logistics provider in charge, the service owner is statistically preferred over other companies – except its service is overall considered as unsatisfying. This is because its performance is well known and companies have already built a close relationship with each other.

Within the industry RFPs are considered as tasks, which are handed over to new staff members or sales support team. Those documents, written in a hurry, might lack overall of quality and proof. (Martinez, 2016.)

With the assistance of the quotation tools on the webpages of many logistics providers (Figure 4), it is relatively fast and simple to find out if the route is supported and if so, the tool gives a preview on the possible delivery rate and delivery time. Collecting that information helps already to pre-select logistics providers, to whom a RFQ will be sent to.
The next stage, according to Aghazadeh (2003, 54-55), is to send a RFQ to those 2-3 selected providers. The RFQ should include: a company profile, an organisational chart, customer information, transportation requirements, project description, square footage, product flow, transactional information and computer systems information.

A scoring matrix consisting of different factors should be created, where all answers are entered. According to Rushton & Walker (2007, 283) those factors should be of quantitative nature, such as cost of transport and qualitative, such as environmental features and ease of use. Those factors added up will lead to a sum, which makes it visual and helpful to find out the most attractive option. (Rushton & Walker 2007, 286-287.)

Final recommended steps include a risk assessment in order to find out any problems and issues beforehand. A contract needs also to be set up, agreed and signed mutually. At last, the outsourced operation needs to be implemented and managed. (Rushton & Walker 2007, 268-269.)
3 Research methods

The research process is divided into three phases:

Figure 5. Research methods

3.1 Qualitative analysis

In the first phase, data from the case company was collected via a computer administered interview in form of an online survey. The questions were transmitted to the CEO of the company via e-mail. This has the big advantage of being fast, as there is no need to transmit data from handwritten notes or a recorded voice into the thesis report. Further, it gives a certain flexibility for the respondent as he can answer the questions whenever there is time. It is possible to make breaks between the questions and take as much time as needed. Considering an owner of a company with a full agenda, this way provides the client with the upmost convenience. (Burns et al. 2017, 189.)

Possible disadvantages, such as high set-up costs or missing knowledge are ruled out as the author has already gained necessary knowledge for conducting a computer administered interview and the set-up costs are minimal as a laptop and necessary software is already in use. In terms of possible unclarities on respondents’ side, an e-mail chat, phone call or a personal visit at client’s office was offered by the author of this thesis. (Burns et al. 2017, 189.)
The questionnaire was sent to Chris Holtslag, the CEO of Helsieni on 15 August 2018 and it was returned on 21 August 2018.

The sample was limited to the founder and CEO of Helsieni as other personnel is not involved in company’s management and does not have enough insight into the company’s logistics processes. Therefore, other employees of the target company can not provide additional quality to this research.

This research method was chosen, because only an employee of Helsieni Oy, who has a profound knowledge of its internal processes, can provide a proper overview of the status quo, challenges and positiveness of its logistics system.

3.2 Secondary data

The second phase (Figure 5) contained a desktop study with the aim to understand the concepts and theories concerning logistics outsourcing and packing.

This stage involved a research of secondary data, which is information that was already collected. It is of main importance that this data is available sufficiently and in a certain quality, upon which decisions can be made. Furthermore, it was necessary to filter out outdated or incomplete data. This kind of information can be generally obtained via research companies, libraries or from a company’s internal records. (Burns et al. 2017, 72.)

In this thesis, secondary data was collected from academic books and academic articles, internet researches and the case companies own webpage.

This research method is the most suitable, as access to a vast amount of literature on this topic is available through the Haaga-Helia library and online via HH Finna. The alternative of interviewing experts in that field was not considered, due to the high risk of not receiving proper feedback on time.

3.3 Analyzing offers

In the third and last phase (Figure 5) enquiries regarding shipping conditions - for the current packing as well as for the alternative packing option - were sent out to third party logistics providers. To get valid and accurate data, a customized offer was needed. Enquiries were created and sent out via e-mail with a three-week response deadline.
After this was done, incoming offers were collected and entered in an evaluation matrix. This method has the big advantage that it makes the conditions and performance level of the respective logistics provider visible and points out the differences between the offers in a clear way.

Following step was to analyse the findings upon which a conclusion was drawn and recommendation from the author on how Helsieni should proceed is featured in chapter 6.

3.4 Research process

In 2018 from week 32 to week 37 most literature in form of academic books, academic articles or qualitative online articles was read, summarized and brought together.

The survey for Helsieni was created throughout Haaga-Helia’s course “Thesis Planning” during spring 2018 and it was finalized after the first thesis advising session in week 33. Within the same calendar week, the survey was sent via e-mail to Chris Holtslag and it was returned the following week.

A research of third-party logistics providers was conducted during week 38 via online research. The research included a study of the services offered, geographical coverage and a query of the online quotation (if offered). This was necessary in order to pre-select the ten most promising companies, which were contacted in the next step.

After the second thesis advising session in week 39 the logistics companies were contacted with a request for quotation. The deadline was given until the end of the calendar week 42. In the meantime, further literature was read to complete chapters 2 and 3 of this thesis.

Received offers from the third-party logistics providers were collected and described in detail during week 42. During the following week, the findings were analysed and a conclusion was drawn.

After all this was done, the author of this thesis did a proof reading and concluded the chapters.

After it has been submitted for assessment, this thesis will be handed over to Helsieni
4 Case company

Helsieni Oy was founded in 2016 by Stéphane Poirié and Chris Holtslag. Both shared the idea of providing biowaste - such as used ground coffee - a second life, by using it as a fertilizer for cultivating mushrooms. (Helsieni 2016a.)

Thus Helsieni operates a mushroom farm in Vantaa, which products are serving local restaurants, Helsienis core idea is that its customers should cultivate mushrooms at home by themselves. (Helsieni 2016b.)

In order to do so, Helsieni offers workshops and sells its products such as the mushroom growing start kit, mushroom dowels and dried mushrooms internationally via its web shop. (Helsieni 2016c.)

Chris Holtslag (8 October 2018) explains, that Helsieni has currently about 1.000 customers all over Finland. The company generates a yearly turnover of about EUR 20.000.-. The company ships its products mainly to finnish destinations, but occasional deliveries to Sweden, Germany, France and Estonia are carried out (Holtslag 21 August 2018.).

Despite the expansion plans to Finlands southern neighbor and carried out paneuropean shipments, Helsieni is seeing its position in serving the regional market, where the company should grow organically. (Holtslag 8 October 2018.)

Currently, so Chris Holtslag (8 October 2018), the case company does not have a customer base in Estonia at this point, but Helsieni has ambitions to enter this market very soon. For that reason, no statistics are available that could indicate the buying habits or the location of potential customers in Estonia.

The reason why Helsieni considers entering the Estonian market is that the target company receives more and more expressions of interest from people in Estonia in its products as well as in its business idea. (Holtslag 8 October 2018.)
5 Findings

This chapter treats first the result of the online survey, which was filled out by the CEO of the case company. The answers in the questionnaire help to understand the current state of the target company’s delivery process. Furthermore, positive and negative aspects of current logistics outsourcing as well as characteristics of a desired logistics partner are emphasized.

A detailed overview of the companies, to which an RFQ was sent, is also featured in this chapter. The answers of the returned quotations were entered in assessment matrices and their results are discussed in detail.

5.1 Current state

According to Chris Holtslag, CEO of Helsieni (21 August 2018) Postis international shipment rate for the current packing option is 4.60 EUR per unit, while the slimmer envelope design is 3.00 EUR. Helsieni sees room for improvement especially in the shipment rates for both packing options, which are seen to be extremely high.

The current delivery process involves an employee of Helsieni to bring the package to the next Posti drop-off point. After the consignment has arrived at Posti, it takes about 2-3 days until the parcel reaches the customer in Estonia. (Holtslag 21 August 2018.) Chris Holtslag (21 August 2018) evaluates the reliability of his company’s current logistics partner as good, while the delivery time is considered to be average.

The main positive aspect of current logistics process is, that the target company is in control of its warehouse and customer relations. Challenges are the relatively high shipment rates, and missing tracking possibilities for the envelope shipments. Ironically the delivery to the post outlet will become more demanding for the case company, the more the sales volume goes up. (Holtslag 21 August 2018.)

Chris Holtslag (21 August 2018) pointed out, that the old packing design has two main advantages, as it is robust and can fit two starter kits. On the other hand, it is heavy and does not meet international letter category, which results in a higher delivery price. The bigger outside measures result also in bigger use of space and clogs mailboxes quite easily.

The new packing design, on the other hand, can fit only one starter kit, but it is lighter and therefore shipment rates should be generally lower. The disadvantages lies in its inflexible
design, which does not make it stackable or combineable with other products. (Holtslag 21 August 2018.)

Helsieni sees a competitive delivery price, reliability, customer service and the ease of use as the main attributes in a logistics partner. (Holtslag 21 August 2018.)

5.2 Request for quotation

Between 29 September 2018 and 2 October 2018, following 3rd party logistics providers were contacted either via e-mail, phone call or submitted online masks on webpages for providing an RFQ:

Table 3. Overview of contacted Logistics providers

<table>
<thead>
<tr>
<th>Logistics provider</th>
<th>Contacted on</th>
<th>via</th>
<th>Answer received by 19 October 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHL</td>
<td>29.9.18</td>
<td>Online mask/E-Mail</td>
<td>Yes</td>
</tr>
<tr>
<td>Postnord</td>
<td>29.9.18</td>
<td>E-Mail/Phone call</td>
<td>Yes</td>
</tr>
<tr>
<td>Cargobus</td>
<td>29.9.18</td>
<td>E-Mail</td>
<td>No</td>
</tr>
<tr>
<td>MavaCom</td>
<td>29.9.18</td>
<td>E-Mail</td>
<td>No</td>
</tr>
<tr>
<td>FedEx</td>
<td>29.9.18</td>
<td>Online mask</td>
<td>No</td>
</tr>
<tr>
<td>24express</td>
<td>29.9.18</td>
<td>E-Mail</td>
<td>Yes</td>
</tr>
<tr>
<td>Kuller</td>
<td>29.9.18</td>
<td>E-Mail</td>
<td>No</td>
</tr>
<tr>
<td>UPS</td>
<td>29.9.18</td>
<td>Online mask</td>
<td>No</td>
</tr>
<tr>
<td>DB Schenker</td>
<td>02.10.18</td>
<td>E-Mail</td>
<td>Yes</td>
</tr>
</tbody>
</table>

By 19 October 2018, the given deadline for receiving quotations from the contacted logistics providers, answers from DHL, Postnord, 24express and DB Schenker were received.

According to Maija Kaarlejärvi (4 October 2018), Sales Coordinator at DB Schenker, the company does not carry out many parcel shipments and therefore it will not submit an offer. Although the German logistics provider offers with DB SCHENKER parcel, a parcel shipment service for packages under 30kg across Europe. (DB Schenker, 2018.)

Miiro Vidlund, Sales Lead Qualifier at DHL (15 October 2018) responded via e-mail, that DHL express does not support any perishable goods in its network. Due to that reason, no quotation will be prepared based on the treated product.
From the following contacted third-party logistics companies, no answers were received per 19 October 2018: Cargobus, Mavacom, FedEx, Kuller and UPS.

In addition to that, Helsienis current logistics partner Posti was contacted to provide the same information as the other contacted logistics companies. According to Tiina Smolander (2 October 2018) from the customer service department, Posti does not provide any contract details and/or any information concerning Helsieni to any third-party. Fortunately, Helsieni could organize and provide missing information, which are necessary for the comparison.

Offers from PostNord and 24express were received in an extent, which is qualified enough to be treated further. Therefore, both companies were selected to be evaluated and compared with Helsienis logistics partner Posti.

5.3 Evaluation

The evaluation matrix, which can be found in the following subchapter is divided into 5 columns. According to Rushton & Walker (2007, 287) an evaluation matrix consist of different selection criteria. Those criteria were taken straight from the answered survey (Appendix 1) and are also key elements in the RFQ.

In case a criterion is not answered by all involved companies, it is not treated within in this comparison as the actual values remain unknown. However, in case a respected service is not offered by a company, this criterion is used for the comparison. It result in a lower rating compared to another competitor who, offers this particular service.

A weighting of each criteria is a crucial element of this tool as it highlights each criteria importance. The weighing was set by the author and was provided to the target company to either adjust or confirm. Chris Holtslag confirmed the weighting by e-mail on 18 October 2018.

The following step to be considered when creating the matrix, is to enter the respective score from the quotation into the score box. The score can be for instance values from 1 to 5 points. (Rushton & Walker 2007, 287.) In this thesis, a scoring system from 1 to 3 points is used. One represents the lowest score among the three competitors. Two means, that one competitor has provided a better offer and one competitor has provided a less competitive offer, compared with the respective company. Three points are given for the logistics provider, which has submitted the best offer. In case the offers from two or
three providers are equal to each other's, the same number of points are given or each of the respective parties.

The next step is to calculate the totals, which means taking the respective score times the respective weight. After this step is completed, a final inspection reveals any mistakes, that can still be corrected. (Rushton & Walker 2007, 287.)

The value in the last row of the final column represents the final score. The company with the highest total score has submitted the most competitive offer.

5.4 Results Posti

Below evaluation matrix represents the current conditions from Posti for the cardboard box packing:

Table 4. Evaluation Posti, Box

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Score</th>
<th>Weight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>Transport Cost</td>
<td>3</td>
<td>55 %</td>
<td>1,65</td>
</tr>
<tr>
<td></td>
<td>Insurance</td>
<td>0</td>
<td>5 %</td>
<td>0,00</td>
</tr>
<tr>
<td></td>
<td>Total Costs</td>
<td></td>
<td>60 %</td>
<td>1,65</td>
</tr>
<tr>
<td>Service</td>
<td>Delivery Time</td>
<td>2</td>
<td>20 %</td>
<td>0,40</td>
</tr>
<tr>
<td></td>
<td>Collection Time</td>
<td>3</td>
<td>5 %</td>
<td>0,15</td>
</tr>
<tr>
<td></td>
<td>Service Booking</td>
<td>1</td>
<td>5 %</td>
<td>0,05</td>
</tr>
<tr>
<td></td>
<td>Tracking Option</td>
<td>1</td>
<td>5 %</td>
<td>0,05</td>
</tr>
<tr>
<td></td>
<td>Contract Benefits</td>
<td>2</td>
<td>5 %</td>
<td>0,10</td>
</tr>
<tr>
<td></td>
<td>Total Services</td>
<td></td>
<td>40 %</td>
<td>0,75</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>100 %</td>
<td>2,40</td>
</tr>
</tbody>
</table>
The current conditions from Posti regarding shipments of the cardboard envelope can be found in below table:

Table 5. Evaluation Posti, Envelope

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Score</th>
<th>Weight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Costs</strong></td>
<td>Transport Cost</td>
<td>3</td>
<td>55 %</td>
<td>1,65</td>
</tr>
<tr>
<td></td>
<td>Insurance</td>
<td>0</td>
<td>5 %</td>
<td>0,00</td>
</tr>
<tr>
<td></td>
<td>Total Costs</td>
<td></td>
<td>60 %</td>
<td>1,65</td>
</tr>
<tr>
<td><strong>Service</strong></td>
<td>Delivery Time</td>
<td>2</td>
<td>20 %</td>
<td>0,40</td>
</tr>
<tr>
<td></td>
<td>Collection Time</td>
<td>3</td>
<td>5 %</td>
<td>0,15</td>
</tr>
<tr>
<td></td>
<td>Service Booking</td>
<td>1</td>
<td>5 %</td>
<td>0,05</td>
</tr>
<tr>
<td></td>
<td>Tracking Option</td>
<td>3</td>
<td>5 %</td>
<td>0,15</td>
</tr>
<tr>
<td></td>
<td>Contract Benefits</td>
<td>2</td>
<td>5 %</td>
<td>0,10</td>
</tr>
<tr>
<td></td>
<td>Total Services</td>
<td></td>
<td>40 %</td>
<td>0,85</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>100 %</td>
<td>2,50</td>
</tr>
</tbody>
</table>

Posti charges EUR 4,60 for the shipment from Finland to Estonia for the cardboard box and EUR 3,00 for the cardboard envelope. Both prices are counted per piece and are including VAT. The delivery time is 2-3 days after goods were handed over at the drop-off point until 17:00. Posti is offering its tracking service for parcel shipments, but not for letters. (Holtslag 21 August 2018.)

For becoming a contracted customer, Helsieni needed to explain first its requirements to Posti. Then the Finnish Post offered a contract to the case company, whose terms have been agreed by Helsieni. Being a contracted customer at Posti, Helsieni receives benefits such as a slightly smaller price for sending the cardboard boxes. Posti provides for instance online services to create and print out labels, which is considered helpful for Helsieni. Last, the company receives a collective bill and does not need to pay for each order separately. (Holtslag 18 October 2018.)

5.5 Results 24express

Below table represents the conditions for box and envelope shipments from 24express. The use of one table, combining the offers for the box and envelope option, results in the same pricing and same provided services for both packing alternatives.
According to the quotation, provided by client manager Tatjana Soboleva (2 October 2018) the Estonian based logistics provider 24express offers a delivery service for both packing options for 16 EUR, incl. VAT. In case Helseni should decide to have its deliveries insured, the delivery price increases by one euro and amounts to a total of 17 EUR.

The delivery time is one day after picking up the good at Helseni’s premises. Condition is, that the order is made via 24express’ online service before 10 o’clock. Tracking possibilities are provided for both packing options and no additional costs are charged for that service. (Soboleva 2 October 2018.)

According to Tatjana Soboleva (2 October 2018) the collection can be easily booked via internet service at http://www.24express.ee. Collection time is weekdays between 9 and 16 o’clock.

In order to commission a delivery, the 24express only needs a detailed description of the pick-up location, the place of delivery and the respective contact person(s). (Soboleva 2 October 2018.)

To become a contracted customer, a registration in 24express’ online platform is needed. As a benefit, a registered customer receives a fast and easy service via the logistics providers online platform. (Soboleva 2 October 2018.)

Table 6. Evaluation 24express, Box & Envelope

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Score</th>
<th>Weight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>Transport Cost</td>
<td>1</td>
<td>55 %</td>
<td>0,55</td>
</tr>
<tr>
<td></td>
<td>Insurance</td>
<td>3</td>
<td>5 %</td>
<td>0,15</td>
</tr>
<tr>
<td></td>
<td>Total Costs</td>
<td></td>
<td>60 %</td>
<td>0,70</td>
</tr>
<tr>
<td>Service</td>
<td>Delivery Time</td>
<td>3</td>
<td>20 %</td>
<td>0,60</td>
</tr>
<tr>
<td></td>
<td>Collection Time</td>
<td>1</td>
<td>5 %</td>
<td>0,05</td>
</tr>
<tr>
<td></td>
<td>Service Booking</td>
<td>3</td>
<td>5 %</td>
<td>0,15</td>
</tr>
<tr>
<td></td>
<td>Tracking Option</td>
<td>3</td>
<td>5 %</td>
<td>0,15</td>
</tr>
<tr>
<td></td>
<td>Contract Benefits</td>
<td>2</td>
<td>5 %</td>
<td>0,10</td>
</tr>
<tr>
<td></td>
<td>Total Services</td>
<td></td>
<td>40 %</td>
<td>1,05</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>100 %</td>
<td>1,75</td>
</tr>
</tbody>
</table>
5.6 Results PostNord

The following matrix shows the results of the quotation, provided by PostNord. Also, here box and envelope shipments were combined into one matrix, since the service performance is the same for both packing options and offered prices are in both cases the least competitive.

Table 7. Evaluation Postnord Box & Envelope

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Score</th>
<th>Weight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>Transport Cost</td>
<td>1</td>
<td>55 %</td>
<td>0,55</td>
</tr>
<tr>
<td></td>
<td>Insurance</td>
<td>0</td>
<td>5 %</td>
<td>0,00</td>
</tr>
<tr>
<td></td>
<td>Total Costs</td>
<td></td>
<td>60 %</td>
<td>0,55</td>
</tr>
<tr>
<td>Service</td>
<td>Delivery Time</td>
<td>2</td>
<td>20 %</td>
<td>0,20</td>
</tr>
<tr>
<td></td>
<td>Collection Time</td>
<td>2</td>
<td>5 %</td>
<td>0,10</td>
</tr>
<tr>
<td></td>
<td>Service Booking</td>
<td>3</td>
<td>5 %</td>
<td>0,15</td>
</tr>
<tr>
<td></td>
<td>Tracking Option</td>
<td>3</td>
<td>5 %</td>
<td>0,15</td>
</tr>
<tr>
<td></td>
<td>Contract Benefits</td>
<td>2</td>
<td>5 %</td>
<td>0,10</td>
</tr>
<tr>
<td></td>
<td>Total Services</td>
<td></td>
<td>40 %</td>
<td>0,70</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>100 %</td>
<td>1,45</td>
</tr>
</tbody>
</table>

PostNord Oy offers its express letter service from Helsinki Vantaa Airport to Estonia for the cardboard envelope (31g) for EUR 5,28 and for the carton box for EUR 6,94. Both prices are per piece and including VAT. (Yliruusi 17 October 2018.)

It must be mentioned at this point, that the pick up service accounts for additional EUR 10,90 per parcel. This price includes the domestic freight, from Helsinki's premises to the "Post Production" terminal at the Helsinki-Vantaa Airport. (Yliruusi 17 October 2018.)

Krista Yliruusi, (17 October 2018) team leader in PostNords telesales department, explains, that due to the used domestic and international delivery, the consignment needs to be packed twice. The outer packing needs to refer to the inland shipment and must contain the packing with the international postal label. The outer packing will be removed at the airport and the consignment with the international postal label will be sent to Estonia via air freight.

Other than 24express, PostNord is not providing any insurances. (Yliruusi 17 October 2018)
Krista Yliruusi (17 October 2018) estimated the delivery time to any Estonian destination with 2 to 4 working days. PostNord is offering tracking services for both parcels and letters.

The collection can be booked via its Pacsoft online account. In order for the consignment to be picked up, it is important to print out the labels from the online account and to frank the envelope or the box with it. PostNord offers a pick-up service from 8 to 16 o’clock. To ensure a same day pick-up, the service needs to be ordered until 14 o’clock. (Yliruusi 17 October 2018.)

Helsieni can become a contracted customer, once they sign and return the contract, which Krista Yliruusi has sent as an attachment to her quotation. This contract will be sent to Helsieni along with the finnished thesis.

The advantage of a contracted customer, is that he gains access to PostNords Pacsoft software, which allows the customer to print out labels and it eases the booking of collections.

5.7 Comparison

Posti offers the lowest shipment rates for both packing alternatives. Finnish Post requests EUR 4,60 for delivering the product in the cardboard box packing to Estonia, which is about four times cheaper than the offer from 24express (EUR 16,00) and PostNord (EUR 17,84).

Also Postis shipment rate for envelopes is cheaper, than the other providers conditions in this research. Postis service costs EUR 3,00 while 24express requests EUR 16,00. PostNord offers the delivery to Estonia for EUR 16,18.

Due to the relatively large gap in the results between Finnish Post and the other competitors and due to the similarity of the prices from 24express and PostNord, Posti was given three points, while both other providers scored one point each.

24express is the only logistics company in this research, which offers an insurance for the delivered goods.

The delivery time of 2-3 days, offered by Posti, is in the same range of PostNords service (2-4 days). However, 24express scores three points, by offering a next-day delivery.
24express offers a collection time between 9:00 and 16:00 weekdays. In order to ensure a pick-up on the same day, the service needs to be booked until 10:00. PostNords collection time is between 8:00 and 16:00. The booking needs to be completed before 14:00, in case a collection on the same day is desired. Posti collects consignments until 17:00, before they are sent. Since Helsieni needs to bring the package to the nearest Posti outlet, there is no need to book a collection. Posti offers the longest time span to receive the goods for a same-day shipment, followed by PostNord and 24express.

While 24express and PostNord offer a pick-up at Helsienis premises at rather competitive prices, Chris Holtslag (18 October 2018) explained that Postis collection service at Helsienis office cost EUR 80.−, which is a multiple of the actual product price and therefore it is not reasonable to book it.

The alternative is to handover of the consignment at the next Post drop-off point. But this is also not satisfactory for the case company as goods needs to be carried there independently. This is not only unpleasant, but also time consuming. In case the sales volume increases also the effort increases for Helsieni.

24express and PostNord are providing free tracking possibilities for both packing options. Therefore, both providers score three points in this category. Posti is offering this service exclusively for parcel shipments, therefore three points are given for Postis parcel service and one point is provided for its letter service.

Benefits for contract customers are provided by all three providers. However, the author can not see any big differences in quality among those offers. Subjectively, they all appear equally valuable. There are helpful services here, small cost savings there, but since a contracted customer does not stand out from one-off customer, the three candidates are rated with two points in this category. A customer is always wishing for more benefits.
6 Discussion

The final chapter of this thesis illustrates the importance of this thesis for Helsieni. This is followed by the author’s recommendation, on how Helsieni can ensure an effective delivery process to Estonia, by using the most practical packing option and by using at the same time the services of the most suitable logistics provider. Suggestions for further research will provide different ideas and perspectives to broaden the area of subject. The author gives a personal insight into his learning, by explaining how he has improved while writing this thesis. This chapter closes by proving the validity and reliability of this project.

6.1 Importance for the case company

This work has the mission to present alternatives in logistics outsourcing and packing options and to show their effect on the efficiency of the case company’s logistics processes. First Helsieni’s current state of logistics outsourcing was analyzed. This investigation has the goal to reflect on questions like: Which part of current transportation procedure is satisfactory? Which part is unsatisfactory? And what are the most sensitive and important parts?

The findings of this research can be used freely by Helsieni to decide to either stay with the current partner or to nominate a new company as a future logistics partner for serving the Estonian market. Nevertheless, the outcome of this thesis can help backing up the appreciation of the current partner or, when recruiting a new partner, to make logistics outsourcing more effective.

If Helsieni wants to expand the business to further countries, the knowhow provided in this thesis can be used to ensure the most effective outsourcing procedure. In any case, the author of this thesis suggests further studies to look at this topic from different angles.

6.2 Recommendation

In case Helsieni continues the partnership with current logistics partner Posti, it is recommended to use the envelope packing, in case only one unit of the mushroom growing starter kit is needed to be shipped to a customer. It ensures a customer friendly door-to-door service and it is cost-saving compared to the current box option. By choosing one of the other introduced logistics providers, the argument of cost-saving can not be applied anymore as the shipment rates for both packing options are very similar to each other and comparatively on a high level. Nevertheless, this recommendation is conditional as purchasing cost differences between both packing options are not taken into account.
In case a delivery to a customer contains two units of the "mushroom growing starter kit" the cardboard box is to be favored. It is more cost-effective to pack two goods into one box, than using two envelopes for one shipment.

Posti comes out of the comparison as the most competitive logistics provider for Helsieni's current catalogue of requirements. Therefore it is recommended to continue the relationship with the Finnish Post. Posti offers by far the most competitive shipment rates for both packing options. Nevertheless, in terms of service this research has revealed, that there is still a lot of potential upwards, taking into consideration the competitive service offers of the competitors.

In case the performance level of current partner decreases, compared to the status quo and if carrying the parcels to the post outlet becomes unbearable (for instance, due to an increase of the sales volume), the author recommends to conduct a new research, which may offer solutions.

6.3 Further research

It is recommended to continue with further examinations to treat all involved areas of this topic and consider different viewpoints.

This thesis has not examined logistics outsourcing from the customers perspective. A market research in Estonia could be conducted to verify the customers’ needs and priorities. Thus, more customized aspects can be used for a comparison and this might influence the ranking.

No third-party logistics provider with an online presence other than in English language was considered in this research. Therefore, if knowledge in Finnish and Estonian language is available in-house, companies, which were not considered for this reason could be included in a future research.

As demarcated, this thesis does not treat the research to source packing material. Therefore, a future investigation may show the opportunities to source packing more cost-effective or to source an even more suitable wrapping to save logistics costs.

Last, effects on mixed deliveries could be studied. This may help Helsieni to understand the effects of transportation prices, when either more than one mushroom starter kit is
shipped at once or if other products in the company’s portfolio are sent with bespoken product in the same shipment.

6.4 Personal learning

Writing this paper requires discipline, ambition, flexibility, creativity and a well-prepared plan. The Haaga-Helia course “Introduction to Thesis” has prepared the author well in the beginning of this project. Especially the initial questions: “where do I start?”, “which step will I treat next?” and “is the topic broad and suitable enough for a bachelor’s thesis?” could all be answered.

The acquired knowledge of the systematics behind a research helped the author to look at a topic from several perspectives. Once he will be involved in a similar project again, the author will make use of that knowhow.

The meetings with the academic advisor are tight in time, therefore it was important to communicate as clear as possible and to get to the point quickly and precisely.

During the research process, the author gained deeper insight into this topic and he is now more familiar with the whole extent of outsourcing, the importance for a company who needs to outsource services, as well as from the viewpoint of the third-party logistics company. Although the author was worried at times of the thesis due to the limited scope of this research, he became safer the more information he could collect for the subject.

It was a challenge to address two issues at the same time. Namely the packing options and the evaluation of the logistics providers. But the author is confident that he could find a method, where these subjects could be brought to the reader in a clear and understandable way. Also, that form should allow those topics to smoothly merge into each other.

Writing this thesis was a great opportunity for the author to grind his academic writing skills.

6.5 Validity and reliability

Crucial elements in a thesis are validity and reliability. Validity shows, to which degree the researcher measures, what needs to be measured (Hozack 2015b). Validity is given for example, when the effect on changing the packing shall be measured and the outcome is the conclusion whether there is an effect given or not. Validity is low, when the outcome of above-mentioned example would be a listing of different packing options.
Validity in this research is given as the companies needs of alternatives in packing and logistics outsourcing were discussed clearly throughout the company interviews and was signed in the thesis contract by the target company and the author of this thesis. This thesis is backed by academic sources, whose theory was studied, understood and applied throughout the entire research process.

According to Prof Hozack (2015a), reliability in a measurement is given, when constantly the same outcome is reproduced. Unreliability in this context is for instance, when the respondent would mention one day, that he is not satisfied with the current logistics provider and he would want to search for alternatives. On the next day however, the respondent would claim, that he is pleased with his current logistics partner and would not want to consider a change of their logistics relationship.

Reliability in this thesis is given because all the involved parties - the target company as well as the third-party logistics providers - are profiting from the outcome of the research. Helsieni benefits, as either a more effective delivery process for its product to Estonia can be found or the case company receives the insight that the performance level of its current partner is the highest, compared to the available options. The profit of the third-party logistics provider lies in the chance to win a new customer. Therefore, no reason is given to spread wrong information.

Further, all data the author needed from the target companies’ side to conduct the research was offered and provided by Chris Holtslug. There were no confidentiality issues throughout the research. Therefore, no data needed to be hidden, which could have had an influence on reliability.
References


Fraunhofer Center for Applied Research on Supply Chain Services SCS. 2018. Top 100 EU 2015 Executive Summary. URL:


Hozack, N. 2015a. Improving measurement reliability. URL: https://www.youtube.com/watch?v=_1tLkRmQbuU&list=PLo9NtuLfooEFZu362AR1Oe80Z99XaOb27&index=1 Accessed 23 August 2018.


Appendices

Appendix 1. Interview with Helsieni

Name: Chris Holtslag
Position: CEO
Date: 21.08.2018

How many customers does Helsieni have in Estonia?
We currently have none but we hope to enter the Estonian market soon

To which Estonian destinations are you sending your product, the mushroom growing starter kit?
n.a.

How often do you ship to Estonia per week/per month?
n.a.

What are the shipment costs of the mushroom growing starter kit by using the old and new packing?
DOMESTIC:
Old packaging, 2,80. New packaging 2,20
INTERNATIONAL
Old packaging, 4,60. New packaging 3,00

What is the current lead time for the delivery of a.m. product?
About 2-3 working days

How does the delivery process from your side looks like?
We bring the parcels to the Posti drop-off point

How would you rate current state of delivery in terms of price: Extremely high
reliability: good
delivery time: average
tracking possibilities:
We currently only have tracking possibilities for the parcels, however our customers do not receive an automatic code.

What are the positive sides of the current delivery process?
We are currently in control of our warehouse and customer relations

What are the pros and cons of the old packing design?
+ Sturdy, fits 2 starter kits
- slightly heavy and not fitting through international letter category. Clogs mailbox quite easily

What are the pros and cons of the new packing design?
+ fits exactly one product, lighter therefore cheaper to ship.
- Cannot combine with other products. not stackable,

What are the pros and cons of the whole delivery process?
+ Less volume is more comfort.
- Bulky packaging needs more space to transport. no tracking.

What are the main challenges and benefits of your delivery process set up as a whole?
If the sales volume goes up the delivery to the post office might have to change.

Where do you see room for improvement?
Lower prices

What are in your opinion the main qualities of a logistics provider?
Price, reliability, customer service. ease of use
Appendix 2. Example of RFQ

Dear Sir and/or Madam,

My name is Dominik Kaller and I am a last-semester student at the Haaga-Helia University of Applied Sciences in Helsinki, specialized in Supply Chain Management. I am currently writing my bachelor’s thesis.

For my client company Helsieni Oy, I am working on a research for creating an effective outsourced delivery process (B2C) for their product, the “mushroom growing starter kit”.

The aim is to find and recommend suitable logistics providers to Helsieni Oy in order for them to freely choose a partner who is shipping their product effectively from Finland to Estonia.

For shipment, the company is using currently a cardboard box (Packing #1) and is considering a change to a smaller and slimmer cardboard envelope (Packing #2).

For that reason, I am kindly asking you for a quotation based on:

Packing #1: 235 x 175 x 30 mm – 44 grams
Packing #2: 175 x 260 x 2 mm – 31 grams

Collection point: 00150 Helsinki, Finland
Delivery address: Tallinn, Pärnu & Tartu, Estonia

Amount to be insured: 10.- EUR/piece

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<tr>
<th>Destination</th>
<th>Packing #1</th>
<th>Packing #2</th>
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<td>Transportation cost per 1 piece (in EUR, incl VAT)</td>
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<td><strong>Total shipping cost</strong></td>
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Appendix 3. Thesis activities timeline as a Gantt chart