

**Enhancing sustainability awareness through green packaging
and QR code. Case company 360amigo Oü**

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<p>Title of report Enhancing sustainability awareness through green packaging and QR code. Case company 360amigo Oü.</p>	<p>Number of report pages and attachment pages 53+8</p>
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<p>The goal of the thesis is to obtain a physical product, green packaging, for the case company 360amigo. This is accomplished by two separate purchasing processes, the purchasing of the product and the IT services. The objective of the outcome is to enhance the environmental sustainability awareness of a selected target market - the United States.</p> <p>The theoretical part of the thesis is carried out using a zipper thesis structure. Thus, the theory is applied together with the project's content and data simultaneously. The theoretical part includes two various aspects of supply chain management, environmental sustainability and purchasing management aspects. The first part of the theory concerns the green packaging and QR code technology, the second part discusses the purchasing process of the product and services.</p> <p>Both primary and secondary data are used to collect necessary information for completing the project tasks. The Internet serves as a secondary source of collecting data for obtaining various information related to sustainability concerns, as well as for obtaining data on the potential suppliers. Internal documents, such as Request for Information and Request for Quotations, serve as primary data sources in this thesis.</p> <p>The outcome of this thesis is green packaging with QR code implemented on it. This brings benefits to various stakeholders including customers, the case company and its supplier. Changing the operations of the case company into more sustainable brings a significant competitive advantage in the software industry.</p>	
<p>Keywords Green packaging, environmental sustainability, purchasing process, supplier selection and evaluation.</p>	

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1 Introduction

Supply Chain Management is a rather diverse field that touches management practices in companies from various angles. The topic of the thesis itself is related to the sustainability issues and covers the aspects of supplier relationship for a successful implementation of green packaging in a software company *360amigo Oii*. The commissioning company decided to implement green packaging due to the latest sustainability awareness on the market in general. A new product offering would compete in a software industry as well as add value to the customers. To create such packaging, it is necessary to find potential partners to supply it. A technology, QR code, is also going to be implemented on the packaging. This technology provides customers with paperless instructions on a software manual, as well as instructions on how to recycle or re-use the packaging. Therefore, the objective is to find a service provider of QR code, too.

1.1 Background

The core business of *360amigo* is to provide software for users worldwide. However, the company decided to differentiate itself from their competitors on the market of software optimization tools. In addition to competing on computer speed-up software, *360amigo* wants to offer and increase the sustainability awareness among its customers by offering green packaging. This decision was prompted by the increased awareness among consumers towards sustainability in general.

By introducing a new strategy, the commissioning company would challenge its competitors on a particular market where the new packaging would be sold. In order to implement green packaging, a new supplier is needed. Therefore, my role is to manage a purchasing process that includes evaluation and selection of suppliers. The project plan was created and approved together with the CEO of *360amigo*, who is my contact person and he is a representative of *360amigo* for the whole of thesis project.

1.2 Introduction of the commissioning company - 360 Amigo Oü

The commissioning company, *360amigo*, is a computer software firm that has been established in May 2010 and was headquartered in Finland. Later, in November 2012, the company moved its headquarters to Tallinn, Estonia. Besides Tallinn, it has its branch office also in Nanjing, China. *360amigo* is a small private company run by two co-founders and currently it employs five people. Two employees are dedicated to software development; two other are responsible for sales and one person is assigned to technical support. Payment services and accounting are outsourced. The payment provider is a global e-commerce company, Share-it. Accounting services are outsourced to a small accounting firm in Finland. (Representative of 360amigo 2012a.)

360amigo's mission is to serve the users and the community by developing competent and state-of-the-art computer cleaner and optimizer software that ensures a better computer and Internet experience. The company's main competitors are TuneUp Utilities, Iobit and CCleaner, which have a significant market share and have databases of millions of users. (Representative of 360amigo 2012a.)

360amigo positions itself as the supplier of the most unique and comprehensive PC utility suite, offering freeware tools a PC needs to run like new. The company offers two basic products. A free version of their speed-up software product can be downloaded from their website or any other software forums. The second product is a commercial version of the 360amigo product, speed up Pro. The company sells directly to home users via its website and through retailers. On demand, the company can dispatch to customers the CD version of its product. The highest demand for the software packages are in United States, United Kingdom and Germany. The biggest consumer markets of the company are United States, United Kingdom, Germany, Brazil and Italy. (Representative of 360amigo 2012a.)

1.3 Project objective and project tasks

The company's goal is to develop green packaging for the software that is used worldwide. Current packaging of the CD software is not very sustainable; it is designed mostly for the visual appeal to customers. Therefore, the idea of the thesis topic is to:

1. Find and select the potential suppliers of sustainable packaging and a QR code application
2. Enhance the sustainability awareness and add value for those customers who appreciate environmentally friendly products
3. Ease the use of the product having a QR code implemented on the package

Accordingly, the thesis project is designed to reach the following objective:

- To find a potential supplier of green packaging with a QR code for the software in order to contribute to environmental sustainability and to add value for the customers

In order to accomplish this project, it is necessary to break down the process into planning tasks. A Gantt chart (attachment 2) is introduced that highlights the process, project tasks and days in which the each task is accomplished. The project is divided into task categories, which are further divided into subtasks. The project tasks are described below and the timeline of the project together with subtasks can be seen clearly in the attachment 2.

Project tasks:

1. Green Supply Chain Management
2. Purchasing process of the supplier of the packaging
3. Purchasing process of the service provider
4. Product sample release
5. Negotiation and contracting

As seen in an attachment 1, there are three parties involved in the project – the representative of *360amigo* (CEO), third parties, such as possible suppliers, and myself. Third

parties play a substantial role in this project, acting in a collaborative way during negotiations about the product. The CEO of the case company has responsibilities primarily in the beginning of the project when communicating the main objectives of the thesis work, as well as in the purchasing stage when identifying product specifications and concluding contracts. As part of *360amigo*'s team, I am personally responsible for all stages throughout the project, including the definition of the objectives and product requirements together with the CEO. The communication with the CEO is continuous for the duration of the project and it takes place regularly at every stage of the project when decisions have to be implemented. I am also responsible for all the decisions and actions implemented in the project, including negotiations and final decisions about the new suppliers for *360amigo*. This is fully supported by the CEO of the commissioning company with the help of documents and other internal resources of *360amigo*.

1.4 Benefits to stakeholders

Three main stakeholders would benefit from the outcome of the project: the commissioning company - *360amigo*, potential suppliers and the end customers. Creating a new business model, a product offering, would initiate an innovation factor in company's business operations. Financial gains are important in this project, but do not constitute the main goal. The main purpose of the project is to emphasise the aspect of environmental sustainability in the company's operations and to obtain a new innovative product for the software. This way the end customers are likely both to appreciate the new packaging that is environmentally friendly while at the same time to benefit from the new technological features that allow accessing the product information in a more comfortable and faster way. The advantage is that customers are not charged extra for the packaging or for the information that is accessible by scanning the QR code. Naturally, the chosen key supplier for the packaging would benefit from the potentially stable partnership with the commissioning company. *360amigo* does not outsource much of its operations; therefore, trust and commitment would be one of the main advantages for the key supplier.

1.5 Demarcation

The idea for the topic of the thesis came from the commissioning company. The scope and the decisions were defined mainly by the author of the thesis; subject to a specific knowledge in the area of the specialization studies. The aim of the thesis is to obtain green packaging for the CD format of the software product that would be made of sustainable materials. The purpose of creating green packaging is to increase the awareness of the impact on the environment of the current packaging, a plastic jewel case and a shipping cartoon box. Furthermore, the goal is to create a QR code on the packaging that would give additional value to customers. The purpose of the QR code is to provide consumers with useful information, such as a software manual, further instructions regarding the packaging, i.e. instructions on recycling or re-using the packaging.

It is important to highlight that the focus in this thesis stays on the actual process of obtaining a new supplier, therefore, delivering the end product to the commissioning company. Any details about the materials and specific knowledge and expertise about sustainability issues are out of the scope of this study. The green supply chain management serves here as a background study of a green packaging. The end product, the green packaging, is going to be sold, as a pilot project, exclusively on the American market. Therefore, the American market is the target of the environmental sustainability analysis. Accordingly, when taking supply chain management as a large field into consideration, the thesis concentrates on the areas of purchasing and green supply chain.

1.6 Methods of gathered data

I find it important at this point to discuss the methods I used to gather the data for the thesis project. This project work requires collecting certain data to produce a final product for the commissioning company, in this case, the green packaging.

Generally, data collecting is divided into primary and secondary data collecting. Secondary data is the data that have been gathered previously for some purpose. It does

not require an access to any respondents. By using secondary data, it is easier to designate the relationship between two or more variables; however, the process can be sometimes complicated. (Zikmund, Babin, Carr, & Griffin 2010, 161.) According to Webb (2002, 22), primary data are the data collected solely to serve the researcher needs.

Data can be analysed through qualitative or quantitative research. This thesis focuses specifically on the qualitative research method. Bryman and Bell (2003, 280-282) define the qualitative research as focusing on the analysis of words through interviews, focus groups or the analysis of texts and documents. In the qualitative research, there are various methods to collect data. One of them is analysing documentary sources or obtaining data using websites. Both methods are discussed below.

There are different documents that can be analysed, such as personal documents, public documents, official documents, mass media and virtual outputs. Personal documents are used as primary sources of data and consist of diaries, letters or any other documents that are not usually available to public. These documents could be also produced explicitly just for the purpose of a research. One of the challenges of analysing the personal documents is the difficulty to access such documents. Credibility and correct information provided by personal documents are one of their advantages. (Bryman & Bell 2003, 403-407.)

The Internet as a source of data collection can be used in both qualitative and quantitative research. Data can be collected either using the web pages, conducting online personal interviews, online surveys, focus groups or collecting data using web communications, such as emails or video conferences. Bryman and Bell (2003, 496-498) continue that the disadvantage of using the Internet for data collection is the need to process large amount of data available, hence finding a valid source of information may be challenging. However, the advantages are the fact that it is easy to reach people since physical distances are not an obstacle, as well as the possibility to collect data quickly.

In this project, both the primary and the secondary data collection methods are used. Figure 1 displays an overview of data collection methods for this thesis. To find new suppliers, it is necessary to obtain information about potential suppliers and their data according to set criteria. To capture required and relevant data related to the search of suppliers, it is essential to do a research. In this case, I find relevant to do a qualitative desktop research by collecting secondary data. Primary data is collected from suppliers via email.

First, I use secondary data to collect information and perceptions about sustainability matters in the United States. Then, I gather external secondary data by researching information on potential suppliers on the Internet using search engines. Primary data refers to internal information and personal documents related to specific product and these are obtained by sending out via email a request for information (RFI) and request for quotation (RFQ).

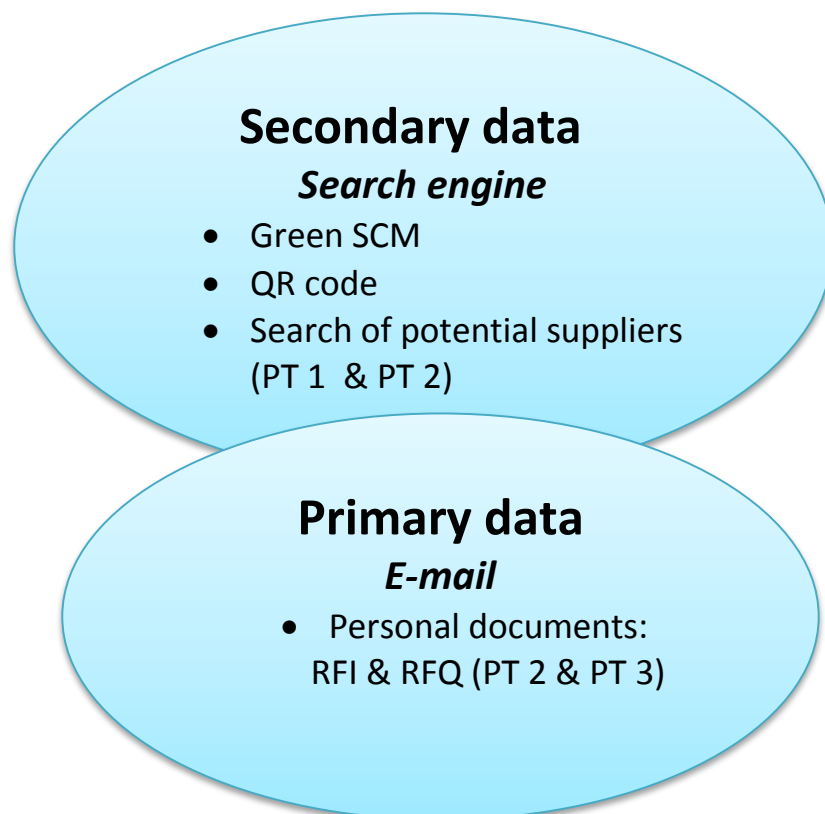


Figure 1. Data collection methods

1.7 Key concepts

The topic of the thesis covers two main approaches within the supply chain management, sustainability and the aspect of supplier relationship. These two issues are broken down into two aspects each, green packaging and a QR code, and supplier selection and evaluation respectively. Following are the theoretical key concepts applied for developing green packaging for the software, therefore, for searching and evaluating a new supplier. The key concepts support the theoretical framework that is built using zipper method. This means that the theory is applied simultaneously with implementing the project tasks in the following chapters.

Green supply chain management.

Green supply chain management can be defined as the 'alignment and integration of environmental management within supply chain management'. Companies applying green principles to their internal operations naturally wish to ensure that their purchases of goods and services come from suppliers that also meet certain minimum environmental standards. (McKinnon, Cullinane, Browne & Whiteing 2010, 16.)

Green packaging. According to The European Organization for Packaging and the Environment, sustainable or green packaging should be designed entirely with the product in order to upgrade environmental performance. It is required to be made from responsibly sourced materials, as well as meet market standards for cost and performance. (EUROPEN 2009.)

QR code. QR code is a matrix code, a web URL that can contains any data or a link of the website. Users can scan it using their mobile phones' cameras to catch a picture which then returns the data adhered back to the mobile phone. (BeQRious Tracker a.)

Purchasing process. Prior to selection and evaluation of suppliers, organizations should have an idea of what the purchasing process involves. Generic purchasing process includes number of steps, such as needs identification, description, supplier selection and contracting, and so on. (Bozarth & Handfield 2008, 346.)

Supplier selection and evaluation. Selection and evaluation of a supplier concerns various activities that are necessary to accomplish to select best possible supplier. These activities mainly consist of concluding subcontracting methods, preliminary qualifications of suppliers based on documents such as “request for quotation” and selection of the supplier. (Weele 2010, 29.)

2 PT 1 - Green supply chain management

This chapter explains various aspects related to environmental sustainability in supply chain management and project task 1 is applied here through collecting secondary data. The first section explains the relation of e-commerce, the field of business of *360amigo*, and its environmental impact that underlines the choice of a direction towards green practises. The company's reasoning to focus on the US market explains the facts indicating this decision. The type of the green packaging the commissioning company wants to implement together with the description of the features of the old and new packaging show the way the company wants to be more sustainable. Besides being more eco-friendly, the company communicates technological means of delivering value to the consumers.

2.1 Green supply chain management of e-commerce

To understand the environmental impact on *360amigo*'s operations, it is important to discern the field of its business, i.e. the software industry. Considering the fact that *360amigo* sells their software exclusively online, via their website, their type of business can be associated with an e-commerce.

E-commerce is the use of the Internet and the Web to conduct business. In other words, e-commerce covers digitally enabled commercial transactions between organizations. Digitally enabled transactions are all transactions that occur on Internet. It is important to mention that any commerce must also include commercial transactions. These transactions are associated with the exchange of value, for example, transfer of money across companies within all stakeholders in return for products and services. (Laudon & Traver, 2010, 1-8.)

From the green supply chain point of view, there are two perspectives on e-commerce and its environmental impact. Most of the people agree that online retailers promote environmental benefits of purchasing goods online, which reduces the need for consumers to travel. Nevertheless, several negative impacts of e-commerce can be highlighted:

- More frequent movement of smaller quantities of goods
- Increased fuel consumption which results in environmental pollution
- The need of additional packaging
- If there is no home delivery, consumers have to make additional trips. (McKinnon et al. 2010, 330-333.)

Additionally, according to Malk Sustainability Partners, there is a growing awareness of environmental issues among companies in software industry. Generally, there are three drivers of sustainability initiatives in software companies: Meeting growing customer and shareholder expectations, Capturing new market opportunities and Realizing cost savings through facilities energy efficiency. Although software companies have not paid great attention towards these matters, there is a growing demand to provide an infrastructure or products that lead towards smarter and more sustainable actions. (Malk Sustainability Partners.)

360amigo, as other retailers, to an extent contribute to such adverse impacts on the environment. The great benefit of their operations from the environmental perspective is in selling software licenses to customers online. However, if requested, a CD version of a software package is dispatched to the customer via post. Shipping packages to the customer results in polluting the environment, contributing to the greenhouse effect, hence has a negative impact on the environment. Not only transportation damage plays its role in burdening the environment, but also the packaging of the products. The packaging plays a significant role in the sustainability issue in this thesis project. The current packaging is made of plastic that is not fully recyclable. Therefore, *360amigo*'s focus is on minimizing the negative impact on the environment by introducing green packaging for the CD software version of their software product and therefore contributing to generate new market opportunities and deliver value in software industry. The results will not reduce the impact on the environment caused by transportation; however, it will improve the green supply chain management within the operations of *360amigo*.

2.2 Why market in the U.S.?

The company decided to implement green packaging for its software only on the US market. This is because the largest share of the revenue from the sales of the software packages comes from the United States. Furthermore, the US is one of the few countries where the CD versions are sold in physical stores. One of its re-sellers is among the biggest sellers of hardware and software on the American market. Therefore, the CEO of *360amigo* assumes that this market is the right choice to start a trial of the new package by selling it as an innovative sustainable packaging along with the software. The success of this launch on the US market will determine whether the green packaging will be sold also on other markets. (Representative of 360amigo 2012c.)

2.3 Green packaging

This subchapter discusses reasoning to sell the green packaging on the American market through customers' perception on sustainable packaging. Moreover, the subchapter describes packaging in general, types of packaging and their functions. I decided to define the term "sustainable packaging" because it refers to the packaging that can be recyclable or made of recycled materials. The packaging for *360amigo*, as an outcome of this project, will be one of the above options; therefore, the definition of sustainable packaging is more accurate in this case. Lastly, the attributes of current packaging and description of new packaging concludes the chapter.

2.3.1 Perceptions of consumers on environmentally friendly packaging

There is a growing awareness of the general environmental sustainability in companies. Many companies are trying to market themselves and their products as more environmentally aware by using more environmentally friendly packaging to bring these initiatives to the attention of the customers and to create a good corporate image. Besides building a positive image, the aims of many firms is to have a good impact on the environment. Yet, some consumers might see it as green-washing.

Organizations are said to be practising green-washing when they make environmentally aware claims in order to sell their products or services. Thus, firms are honest with consumers about their environmental practices; they increase their profitability instead

of implementing the green practises into their business operations. (Greenwashingindex.)

360amigo aims not only at altering its image by utilizing the sustainable packaging, but also genuinely wants to have a good impact on the environment. The company's goal is to show to their consumers their real practices and concerns with environmental sustainability, as well as to increase the awareness of sustainable matters among consumers. To proceed further, the perceptions of the consumers in regards green packaging are analysed next.

In 2008, the President of Perception Research Services (PRS), Scott Young, conducted a research about the attitudes of consumers towards sustainable packaging worldwide. The research was conducted among consumers from the US, the UK, Germany and China. Scott Young was trying to find out the perceptions of sustainable packaging by the consumers and how such packaging influences their purchasing decisions. At the same time, he was testing the knowledge of consumers about green packaging. (Young 2008.)

The results of this international research showed that the term "sustainable packaging" or "green packaging" was not very clear to the consumers in the US. Less than twenty per cent of the respondents affirmed a confusion and misunderstanding of the term. On the other hand, consumers were asked if they were willing to pay a little extra, on average five to ten cents, for environmentally friendly packaging. Surprisingly, sixty-seven per cent of the shoppers in the United States, the highest share among the countries involved in the research, were prepared to spend a little extra on packaging. Nevertheless, when comparing the importance of environmentally friendly packaging and the functional characteristics of the packaging, only twenty-six per cent of the respondents chose green packaging as their major consideration, as opposed to forty per cent of those who were more concerned with the functionality of the packaging, such as ease of use and ease of opening. To conclude the findings of this global research, it could be noted that there is an increasing awareness of sustainable packaging among consumers, yet, there is still a need to educate them more about it, for better under-

standing. Likewise, leading customers towards better recycling practices is also an important issue. (Young 2008.)

The above secondary research clearly showed that *360amigo* has a potential to sell its new product line, green packaging for the CD version of its software on the American market. It will also contribute to educating the customers by being more aware of environmental issues and recycling the green packaging.

2.3.2 Packaging and its functions

Packaging in general refers to a coordinated system of preparing goods for transport, warehousing, logistics, sale and use. The main function of the packaging is to protect the goods from damage and transport, carry and distribute the goods. (Hanlon, Kelsey, & Forcinio 1998, 11.) Transported goods may suffer from physical damage through improper handling; therefore, good packaging of product plays an important role. In addition to protecting products, the purpose of packaging is to keep the products together and to identify the products. Packaging has to be designed in a way that makes it easy and safe to stack and store products. Information that is useful and important for consumers is printed on the packaging; hence, good design of a print is essential. Apparently, the purpose of product packaging is not only to meet the needs of logistics, but also to promote the product. (Ryan 2004-2011.)

In general, there are three basic types of packaging: primary, secondary and tertiary packaging. Primary, or sometimes referred to as a consumer packaging, is the type of packaging to which consumers of the product have access. It can be a box, a bag or a can. Its purpose is to appeal to the consumers with an attractive design of the packaging. Secondary packaging, also known as a grouped packaging, is used to bundle the quantities of the goods together for easier handling. Tertiary packaging refers to the packaging used by shipping companies to transport the goods from wholesaler to retail shops. (Judge 2009.)

360amigo uses all the three types of packaging. Secondary packaging is used when an external partner responsible for dispatching the software packages sends it to the end

customers. It usually is in the form of an ordinary cartoon box. Tertiary packaging is used when the shipping company sends the product directly to the retailers. However, when the software packages are requested by individual end customers, tertiary packaging is excluded. Primary packaging is a plastic jewel case that protects the CD. Primary and secondary packaging is also used in retail shops where the software package is displayed on shelves.

The main idea of future packaging is to have primary and secondary packaging made of sustainable materials. Such packaging is intended for shipping the products to end customers. However, the resellers may use the packaging in retail shops. Secondary packaging will be designed ready for direct shipping to end customers or indirect sales via resellers. Future suppliers of both packaging are responsible for manufacturing them in a way that the packaging is of a good quality and designed to protect the product from any damage whilst on the way from the manufacturer to the retailer.

2.3.3 What is green packaging?

The following subchapter discusses the definitions of sustainable or green packaging. I decided to define the term “sustainable packaging”, because it refers to the packaging that can be recyclable or made of recycled materials. In recent years, an issue of sustainability has received a lot of attention in companies and communities. In addition to protecting the environment from pollution, the recycling and waste management have been important issues in corporate daily operations.

In 1980s the EU directives introduced measures on the management of packaging waste. On the national scale, the European Commission introduced legislation on packaging adopting Directive 94/62/EC in 1992. The goal of the Directive is to harmonise national measures in order to reduce the impact of packaging and its waste on the environment. It assumes a plan on the prevention of packaging waste; on the re-use and the recovery of packaging. (European Commission Environment 2010.)

360amigo is aware of the importance of protecting the environment and wants to contribute to the improvement of these issues.

The European Organization for Packaging and the Environment characterizes sustainable packaging as follows:

- Designed to be effective throughout its life-cycle
- Made from responsibly sourced materials
- Be recovered conveniently after use
- Packaging should be designed in a way to minimise the negative environmental impact
- Made from recyclable and sustainably renewable materials and resources
- Produced and processed using sustainable energy sources. (EUROPEN 2009.)

There are several types of sustainable materials used for packaging: reusable, recyclable and biodegradable. Among most common recyclable packaging are returnable glass and plastic bottles, fibre-based packaging, corrugated cartons, cards and paper. Reusable packaging can be cleaned and used again, for example, some bottles may be re-used. Biodegradable packaging is used for bio waste; such packaging disintegrates in the soil or in the atmosphere. (BBC Bitesize.)

Companies focus not only on environmental matters, but also on the economic and social objectives of the business. Triple-bottom line that consists of three aspects – People, Planet and Profit highlights drivers of the packaging requirements. (McKinnon et al. 2010, 3-4.) Nowadays, the lifestyle of people is changing and companies are compelled to adapt to the trends. The design of packaging, its convenient and handy size and ease of use become the attributes of new trends. Furthermore, people are becoming more aware of environmental sustainability. They are paying more attention to recyclable packaging and, therefore, to sparing the environment.

Reduced costs because of lighter and smaller packaging are an economic driver. When designing packaging in a sustainable way, the optimization of the costs plays an important role. (Stora Enso 26 August 2011.)

The above facts and trends are the reasons why *360amigo* is willing to adopt the sustainability approach. In addition, *360amigo* is aware of the importance to protect the environment and wants to contribute to improving these issues. Furthermore, the

company aims to gain a competitive advantage by incorporating green packaging into its operations. The next subchapter discusses the current state of packaging and the expectations towards new packaging.

2.3.4 Attributes of current and future packaging in 360amigo

As previously mentioned, the current primary packaging of the *360amigo* software product is a plastic DVD jewel case that is sourced from a company x. According to the CEO of *360amigo*, the company x is not very transparent about the materials that are used to manufacture the plastic jewel case. This is a regular wholesale distributor of media packaging to retailers. (Representative of 360amigo 2012d.)

An ordinary jewel case is made of flexible polypropylene, a type of plastic that belongs to the classified type number 5. This type of plastic is recycled; it is strong and heat-resistant. It is used to manufacture plastic tableware, food packaging, bottles, DVD and CD cases, etc. (PlasticsEurope 2008.) The advantage of this plastic material is that it provides durable packaging. On the other hand, manufacturing plastics builds large amount of chemical pollutants and these affect some health risks to people during the life cycle. In addition, recycling of plastics is rather difficult and costly. (Lenntech.)

However, a better and a more sustainable option would be having packaging made of sustainable materials. Paperboard Packaging Council in 2011 announced that paperboard has the highest recycling statistics than any other packaging material. Additionally, recycling the paperboard is easier and more environmentally friendly than plastics. This study was conducted by American Forest & Paper Association (AF & PA) reporting a record in paper recovery – nearly 67%. (Paperboard Packaging Council b.)

The above facts suggest that the recyclable paperboard packaging is a more sustainable option for *360amigo* than the plastic jewel case. *360amigo* is considering switching to more recycled or recyclable packaging. More specifically, the commissioning company wants to switch to a paper CD wallet made of either biodegradable or recycled materials as their primary packaging. As secondary packaging, the certified box made of recyclable materials appears to be appropriate.

There are several reasons why the commissioning company wants to stop the use of jewel cases for their software:

- The primary packaging is recyclable but it is not obvious to the end customer
- Most of the consumers do not know whether plastic materials are recyclable
- The secondary package is not certified as a recyclable package; it is an ordinary carton box
- As Young (2008) states in the research about the attitudes of the consumers towards sustainable packaging, most of the Americans lacked general knowledge on sustainable practises
- The assumption is that consumers are more aware of recycled paper packaging than plastic packaging
- *360amigo* does not know the origin and types of materials used for manufacturing their current packaging, both primary and secondary
- Introducing a recycled or a biodegradable CD wallet and a recyclable box reduces packaging and the packaging is also lighter

Apart from the environmental issues discussed above, the design of packaging must consider other aspects of it, such as size of packaging and its design. The size of the packaging is discussed in details in the subsection of the product specification. Other than that, the packaging is designed to have product blueprint on both packaging. The designer is an internal software designer of the commissioning company. Once the supplier of packaging is selected, the print design is sent to this particular supplier and implemented on the packages.

2.4 The QR code technology

This subchapter deliberates about the definition of QR code and its use as it is an important part of a green packaging. Hence, it explains why *360amigo* decided to implement this feature on its new packaging. Technology is an integral part of our lives nowadays. In modern living innovation is very rapid. First, a barcode label became a must and a standard for most industries. The barcode is a component in an alphanumeric data entry system that allows data to be transmitted with a decoding scanning tool (Polylabel.com).

However, nowadays the QR code technology is becoming more popular because of the additional features it provides and because of its adaptability to the modern world of consumers. It is one of the marketing and branding tools. The QR code is defined as:

A QR Code is a matrix code (or two-dimensional bar code) created by Japanese corporation Denso-Wave and is the most popular open 2D-Code for Mobile Tagging. The “QR” stands for “Quick Response”, as the creator intended the code to allow its contents to be decoded at high speed.” (BeQRious Tracker a.)

The purpose of QR code is to provide information about a product or a feature. QR code is a link, i.e. a web URL and reading it requires a mobile phone, such as an Android or an I-phone with the QR code-scanning feature implemented in it, or downloaded from the Internet. It works so that, e.g., a buyer in a store can use a mobile phone to scan a QR picture on a product packaging, such as DVD, thus accessing the information on a video of the movie. This new technology is changing the lifestyle of people and a growing number of consumers are interested in using these innovative features. (BeQRious Tracker b.)

360amigo wants to implement this feature to make the access to software information and to the manual easier for customers. In addition, further instructions concerning the packaging would be also provided, e.g. how to recycle the packaging. Implementing such information in QR code would bring value to end customers, where scanning a QR picture is a comfortable way of getting the required information. In addition, no software manual in paper format is needed, which in itself is also translates into a positive contribution for sparing the environment.

3 Implementation of the project

This chapter discusses the rest of the project tasks concerning the implementation of the project itself. Both secondary and primary data are used throughout these tasks. Project tasks include several stages explaining a selection of the packaging and a service provider. Prior to discussing concrete project tasks, the sourcing portfolio analysis is justified. The four project tasks are purchasing process of package supplier, purchasing process of service provider, product sample release and negotiation and contracting. These are further divided into subtasks. The steps of the project are illustrated in a sequence of project timeline (attachment 1 and attachment 2). A detailed supplier selection and assessment process is defined together with the implementation of findings and gathered data. These findings are presented graphically and evaluated according to the criteria specified.

3.1 Sourcing portfolio analysis

To know what type of purchasing process and sourcing strategy to choose when obtaining a new supplier for the green packaging, it is very useful to analyse a sourcing portfolio. The sourcing portfolio analysis (figure 2) helps to clarify whether to opt for a simplified or a more complex purchasing process. The analysis is based on the complexity and the impact of risk for a company when selecting potential suppliers. Companies can choose certain strategies, tactics and actions depending on various factors that might influence their buying decisions, whether it is a bottleneck, routine, leverage, or a critical complexity for company's operations.

Companies are recommended to ensure continuous supply by focusing on developing new supplier relations when they have organizational complexities. On the other hand, companies that have less complexities and many alternative products available are recommended to aim at reducing their buying efforts. Furthermore, when the operations of organizations are critical to their profitability, they should focus more on creating positive and stable supplier relationships. Companies with high expenditures and market-sensitive prices for their products should focus on active sourcing. (Bozarth & Handfield 2008, 324.)

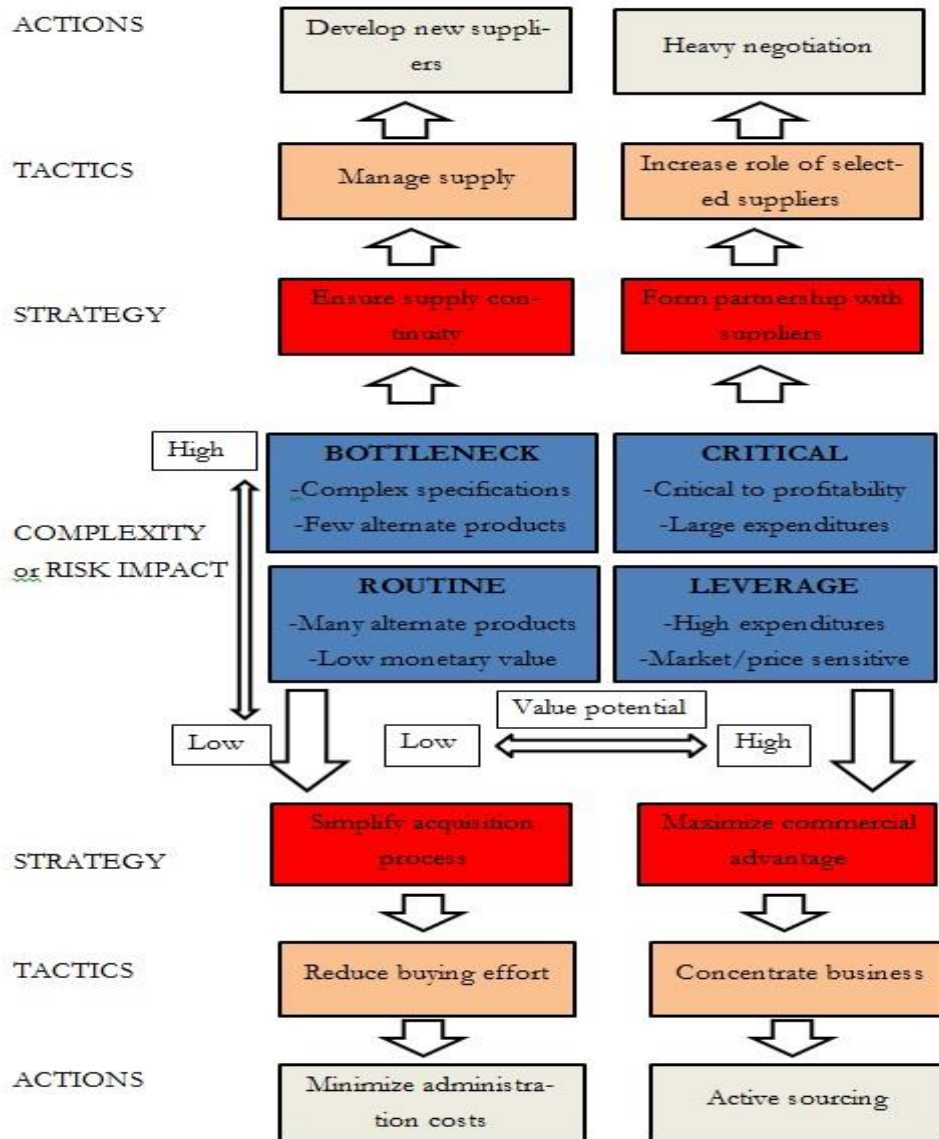


Figure 2. Portfolio analysis (modified from Bozarth & Handfield 2008, 324.)

I decided to include this portfolio because it clearly shows the reasoning for selecting the simplified purchasing process. This portfolio analysis by Bozarth and Handfield (2008, 324) is modified for the case of *360amigo*. In the case of the commissioning company, the complexity is very low and the core stays in the routine quadrant. This is due to the low monetary and volume orders of the packaging, as well as many alternative products or suppliers available on the market. Therefore, the purchasing process should be simplified. Likewise, the purchasing effort would be minimized, which also helps decrease the administration costs. The opposite case would be when companies have complex product specification and their business is critical to profitability; in this

case, firms should aim to strengthen their relationship with suppliers and concentrate on active sourcing.

3.2 PT 2 - Purchasing process of packaging supplier

The objective of the project is to find a new supplier for the commissioning company that would provide green packaging for the CD version of its software; therefore, the purchasing process needs to be considered next. Purchasing activities involve a complex process, however in this project, the focus stays only on selecting a single supplier from a pool of suppliers and on contracting formalities. Prior to the purchasing process, the company considers the reasoning and identifies basic needs for purchasing new green packaging. The needs simply arise from the perspective of changing the plastic packaging to recyclable paperboard packaging. Thereby, the company needs to find a new potential supplier of the new packaging.

The actual purchasing process (table 1) consists of the following steps: description of a new product specification, supplier selection and evaluation, and contracting. The steps of the process are modified according to Weele (2010, 29). Each of the steps in purchasing process (table 1) has its purpose, elements and examples of documents implemented in the process. The purpose of a product specification is to define the product criteria of the company. An essential feature, defining a functional specification, may serve as an element in the product specification. Example of a document necessary in this step is a purchase order specification. Assuring a proper supplier selection and evaluation is an intention of a second step in the purchasing process. In this case, the qualification of a supplier selection and evaluation serves as an example where a document, such as Request for Information, is necessary. The last step, contracting, is about finalizing a negotiation between the company and a supplier by signing a contract. (Weele 2010, 29.)

Table 1. Steps of the purchasing process (modified from Weele 2010, 29.)

	Product specification	Supplier selection & evaluation	Contracting
Purpose	Specify detailed product	Assure adequate supplier selection	Prepare a contract

	criteria	and evaluation based on set criteria	
Elements	Define functional specification	Qualification of supplier and selection	Negotiating the terms
Documents	Purchase order specification	Request for Quotation (RFQ)	Contract

The table above specifically relates to the case of the commissioning company. The steps are modified to serve the needs of the purchasing process for finding suppliers of the new packaging. I, personally, thought to exclude expediting, inspection and maintenance present in the original source as bearing no relevance to the project. The purchase order is not significant in volume or value; therefore, there is no need to build an expediting routine for follow-up or tracking of a supplier during the production phase of the packaging. This is derived from the sourcing portfolio analysis (sub-chapter 3.1.). Furthermore, the original source separates two distributed steps, i.e. selecting supplier and evaluation. However, I decided to combine them because they are overlapping. Additionally, there are two types of selection and evaluation of suppliers for two separated processes – the purchasing process for the supplier of packaging and for a service provider.

3.2.1 Product specification

Before selecting potential suppliers, it is necessary to specify the requirements towards the packaging itself. The supplier criteria are set accordingly. This step has to be well specified and detailed in order to choose potential suppliers successfully. As a rule, organizations look at the price as the most important criterion; however, there are other factors such as quality, delivery, flexibility and others that are crucial to the selection of a supplier.

The normal practice is to consider the description by specification or purchase order specification that provides detailed information on product characteristics. Such specification includes characteristics of the raw materials used for the packaging, its origin or the measurements of the packaging. (Bozarth & Handfield 2008, 348.)

360amigo considers several criteria that are important when looking for a supplier of the new packaging. However, there is no need in very detailed description of the packaging requirements. Basic criteria are sufficient for obtaining a suitable supplier of packaging that would help enhance the sustainability issue of the company. The criteria were set with the help of my personal knowledge about the topic and then approved by the CEO of the commissioning company. The criteria of *360amigo* for a supplier selection (table 2) include the following: cost, quality, delivery, environmental sustainability and innovation. The table below details these criteria.

Table 2. Criteria for supplier selection

1. COST	Direct/Indirect costs	Fixed prices	Payment terms	
2. QUALITY	Quality Certification	Stability of package	Protection against damage	Reputation and reliability
3. DELIVERY	Lead time	Delivery terms	Location	
4. ENVIRONMENTAL SUSTAINABILITY	Raw materials of package	Eco-friendly ink	Other sustainable matters	
5. INNOVATION	New innovative features	Design of the package	Competitive packaging	Measurements of package

Cost

Naturally, cost is an important criterion for *360amigo*. The company has studied the market prices of green packaging with the interest to learn about the average pricing. The target price of the packaging was set during one of the meetings with the CEO in the beginning of the supplier research. The total cost of a single unit of packaging set by the company was not allowed to exceed € 1, 20. In this case, the total cost implies

all costs involved in the purchase of the packaging. Considering all the possible costs the supplier may impose, this could be a challenging task to accomplish.

Sellers usually show exclusively the final price, even though hidden costs might be involved. Companies purchasing goods that are more expensive prefer to consider all hidden costs so that to have an overview of total cost of ownership. The total cost of ownership concerns all costs associated in companies' supply chain. This way they may analyse costs based on their targets. It is also possible to see whether they can have gains or losses in the long run. (Cousins, Lamming, Lawson & Squire 2008, 165.) Companies can use these different types of analysis to define the choice of products. At this point, this is of little relevance to *360amigo*, as long as the hidden costs will not exceed the total price of the packaging. Since this project does not involve any costs of a significant magnitude, it might not be an issue at this point. For *360amigo*, it is crucial to see how much in total they are obliged to pay per packaging.

Quality

Quality certification is one of the standards that play an important role. Reliable suppliers should have certain quality assurance certificates, the most common of which are the ISO certificates. According to Protective Packaging Corporation, the ISO 9001 certificate ensures the high quality of the protective packaging products (Protective Packaging Corporation). Other aspects that have to be taken into consideration, as far as quality is concerned, are the stability of the packaging and its ability to protect the product it holds from damages. This is challenging to evaluate based on the pictures provided by sellers. The optimal assessment would be to see the real product. Therefore, it is recommended to obtain a product sample before signing any deal with a supplier. To make the decisions easier, the reputation and references are helpful when making decisions about the quality of the packaging. References are usually a reliable source that helps to clarify the product quality.

For setting a quality criterion, all the responsibility rests on me. The case company gives me a free hand in deciding on the criterion for measuring quality. Quality is challenging to measure for evaluation. There are certain attributes that may require a deep

knowledge of green packaging materials. However, as stated in the demarcation above, this project is not concentrating on the details of green packaging materials. The selection of the packaging is mainly based on the quality data provided by the sellers. This allows assuming that sellers comply with certain standards, hence are reliable.

Delivery

The key points in delivery criteria are lead time, delivery terms and location. Delivery terms should be all transparent and clearly stated in the contract. Details such as frequency of delivery, conditions and compensation in case of damage and failure from seller, etc. should be all stated in the contract. An optimal lead time delivery was set together with the CEO of the commissioning company. Most favourable delivery time would be within seven working days after placing an order. However, the delivery time is not that decisive at this point since this is the delivery of a small amount of goods of low value. Nevertheless, the commissioning company would still appreciate an agreed delivery time.

As such, demand forecasting is a challenging task; companies have to do demand forecasting in order to fulfil customer orders. As with the orders of the old packaging, *360amigo* is aware of their general demand for packaging. The company passed such demand information to an external party responsible for shipping the boxes to customers. As with the old packaging, the commissioning company decided on the same demand forecast figures with the new packaging.

The actual demand forecast figure is twenty thousand pieces of packaging twice a year. Though, this forecast may change in case of demand fluctuation. (Representative of *360amigo* 2012b.)

The location is not of much relevance if the lead time is followed accurately. Nevertheless, it would be convenient to have the supplier located as near to the company as possible. In this case, *360amigo* outsources the payments, financial services and shipping services to a company in the USA.

Environmental sustainability

A supplier is required to show some certification or proof that the packaging is made of responsibly sourced materials, i.e. recyclable or recycled materials. Companies selling green or recyclable packaging usually prove the source of materials by having FSC (Forest Stewardship Council) certification. Such certification assures that the products are manufactured from responsibly sourced materials that originate from well managed forests. Other similar certifications are from The Program for the Endorsement of Forest Certification schemes (PEFC Council) or Sustainable Forestry Initiative (SFI). (Paperboard Packaging Council a.) Another viable proof that a supplier sells sustainable packaging is a membership in an organization that is involved in environmental issues related to the packaging, such as, the European Organization for Packaging and the Environment (EUROPEN) that handles any topics related to packaging and environment. Members of this organization are usually the manufacturers and designers of packaging, users of packaging, etc. (EUROPEN 2009.)

As mentioned in chapter 2, the company intends to obtain two types of packaging, primary and secondary packaging. The primary packaging, a CD wallet, should be preferably made of recycled or compostable materials. If the decision would be in favour of recyclable materials, the supplier would need to have a certificate that informs about the source of materials for packaging; the issuer of such a certificate could be an organization such as the FSC (Paperboard Packaging Council a). The supplier of packaging made of biodegradable or compostable materials would need to be a holder of a Standard Specification for Compostable Packaging – DIN EN 13432 issued by German certification company Din Certco (Din Certco). The secondary packaging, shipping or retail boxes, should be optimally made of recyclable paperboard. The preference is given to the suppliers of packaging certified by FSC or any environmental association. The packaging must have a recyclable logo issued by an organization such as Paperboard Packaging Council.

Innovation

360amigo is looking for packaging with innovative features, such as innovative design features, e.g. the shape of the packaging, as well as new environmental concepts used for packaging and any other aspects that would give the company a competitive advantage on the market. As far as the dimensions of the packaging are concerned, the primary packaging does not necessarily need to be of a standard CD packaging format. The aspect of the primary packaging format can be approached creatively, as long as it requires minimum paper material and can fit into the secondary package. The initial intention was to have the secondary packaging of a standard CD or DVD format, so that it could fit on the retailer's shelves. However, the commissioning company decided not to set any particular requirements. Thus, any innovative size or features of the secondary packaging are acceptable.

3.2.2 Supplier selection

Once the criteria for the selection of packaging have been set, the next step would be to select a supplier by making a supplier assessment. According to Cousins et al. (2008, 60-61), the process of supplier selection has several stages, such as Initial supplier qualification, Agree measurement criteria, Obtain relevant information and Make selection. In this study, these stages were modified to suit the *360amigo* case. I decided to modify the stages of the process above to make it more simple and applicable to this project. Hence, after the modifications the process is reduced to only two stages: Initial supplier selection and Make selection. The Make selection stage is described in the Supplier assessment subchapter (3.2.3.).

Initial supplier selection and qualification

This stage is a combination of the first (Initial supplier qualification) and the third (Obtain relevant information) stages of the original process defined by Cousins et al. (2008, 60-61). These stages cover the search and selection of few potential suppliers. This process requires sending out the key documents, i.e. Request for Information (RFI) and Request for Quotation (RFQ). A supplier is selected by comparing the information obtained and the criteria that are set in advance. (Cousins et al. 2008, 60-61; 67-68.)

In this project, the first stage of the supplier selection process starts with the supplier research. According to product specifications described in a previous subchapter (3.2.1.), suppliers were searched using search engines. When searching potential suppliers, key words such as “green packaging manufacturer”, “sustainable media packaging” or “green package” were used. Afterwards, a group of suppliers was selected. The fourteen selected companies are located worldwide, as it is not a pre-requisite to have a supplier based in Finland or Estonia, where branch offices of *360amigo* are located. These potential suppliers are all producers of packaging that would suit the needs of the commissioning company. The table 3 lists the selected suppliers with their domiciles.

Table 3. The list of pre-selected suppliers

The company's name	Country
SF Global Sourcing	San Francisco, USA
Guided Products	Seattle, USA
Forssa Print	Tampere, Finland
Sp-paino	Helsinki, Finland
Stora Enso	Finland
Stump Town Printers	Portland, Oregon, USA
Groove House	California, USA
Emballage Technologies Tallin	Tallin, Estonia
Olenmedia	Helsinki, Finland
We Wow UK	Yorkshire, UK
Inner Workings	Chicago, USA
Breed Media	Sheffield, UK
CDVD Turnkey Company Limited	Fujian, China
Lihe	Hangzhou, China

Once the potential packaging suppliers were short-listed, the next step was to send a Request for Information (RFI) to these companies via email on behalf of *360amigo*. The RFI was customised to suit the needs of the commissioning company and includes the following information: buyer's and supplier's addresses, the description of buyer's

company - in this case *360amigo*, a statement of a need with a detailed description of the company's needs. An example of the RFI document can be seen in attachment 4. The purpose of this document is to clarify and confirm that the supplier can provide a product according to the company's requirements.

The process of contacting the suppliers and obtaining their responses took about three weeks. Some companies, mainly British and American, responded very quickly, but some companies took two to three weeks to reply. Eleven out of the fourteen companies replied with the RFI. Many of the replies were quite brief with questions on the information provided in the RFI. Some already had basic quotes or offers. After receiving the responses to the RFI, a Request for Quotation (RFQ) was sent to the same suppliers with a request to specify the exact offer from the suppliers. This document (attachment 5) holds information on item quantity, price per unit and the total price. Not all of the suppliers returned their RFQ with the required information straight away. Most of them requested additional information, such as packaging design, minimum quantity required, place of delivery, packaging measurements and other details. Therefore, several emails were exchanged with the suppliers before all the questions and concerns were cleared.

All communication took place via email and recorded in the email box. The communication was quite smooth and it took two to three weeks to obtain the final offers from all the fourteen suppliers. Throughout the communication process, I was enquiring whether a supplier would be willing to provide a packaging sample before closing the contract. It is important to see the product in its physical state before making the final decision on the supplier; a product might look different in the picture and be deceiving. The quality, design and overall image of packaging is better assessed once held in hands.

3.2.3 Supplier assessment

The last step of the project task 2 is to select a supplier. There are several decision-making models available for selecting a supplier. One of the models that appears more suitable when analysing RFQs is known as a categorical system. It is simple and allows

analysing the results based on the average function (NC State University 2011). However, the following example shows a multi-criteria decision-making model. Companies generally face the situation when they want to focus on several criteria prior to selecting the suppliers. The multi-criteria decision-making model (MCDM) applies analytic hierarchy process technique (AHP). AHP technique helps companies to weigh measures according to the importance of the decision and product criteria. An example of the model is shown in figure 3. (Cousins et al. 2008, 68-69.)

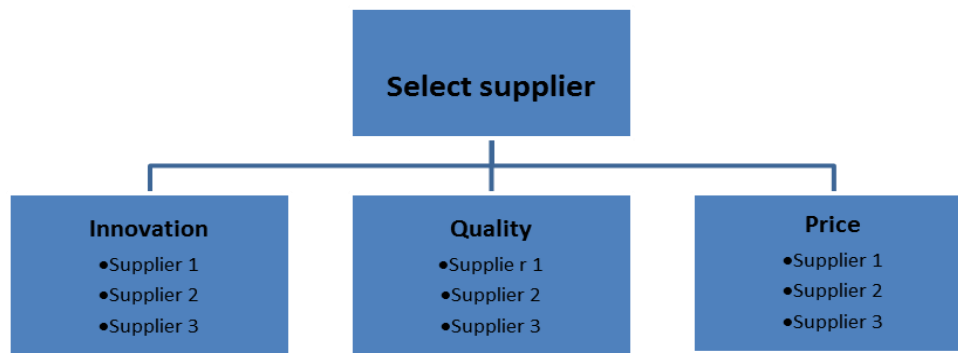


Figure 3. Analytical hierarchy selection (Cousins et al. 2008, 69.)

The author emphasizes that the model is mainly used when companies need to analyse and select suppliers based on large and complex data (Cousins et al. 2008, 69). This method, also known as the weighted point method, is considered reliable and it allows analysing both qualitative and quantitative data. It is also advantageous due to its subjectivity elimination.

The process of analysing goes as follows. First, the weight of each criterion is assigned to chosen categories. For example, forty per cent for Innovation criterion, twenty-five per cent for Quality, and thirty-five per cent for Price. Afterwards, the weight of each criterion is multiplied by its performance that can be arranged on a scale, for example, from 1 to 4, where 1 means satisfactory and 4 – unsatisfactory results. After assigning the performance for each criterion and multiplying it by the selected weight, the results show the final rating for each supplier. (Cousins et al. 2008, 70-73.)

The collected data were analysed using both methods; however, at the end both analysis were compared and it appeared that the weighted point method was more accurate. Moreover, I believe that using weighted point method makes it easier to decide which supplier to select based on the final scores without the influence of subjective opinions. According to the supplier criteria (table 2), all the data from the potential packaging suppliers were analysed, both from RFQs and the additional information obtained via email. The criteria were modified from table 2 and thus, eleven companies were analysed based on price, innovation, reputation, lead time and environmental sustainability. Each criterion was assigned a weight as follows: Price: 35, Innovation: 20, Reputation: 10, Lead time: 15, Environmental sustainability: 20. The evaluation scale was set within the bounds from 1 to 4, where 1 represented excellent, 2 - good, 3 - satisfactory and 4 - unsatisfactory. The whole structure of analysis with the ratios and results is shown in the attachment 6.

To conclude this subchapter, a final decision has to be made. A description of a chart below (figure 4) demonstrates the results of the selection of the packaging supplier. The weighted point model clearly shows which supplier meets best the criteria requirements of *360amigo*. Thus, a Helsinki-based supplier, *Olenmedia*, appears to be the best choice for the commissioning company with an outcome of 1, 4, which is within the range of excellent. As precise rating shows (attachment 6), this supplier's reputation, price and lead time have the highest score, although, environmental sustainability and innovation criteria have lower ranking, yet are within an attractive rate.

Olenmedia was also selected because of its direct feedback that *360amigo* obtained from one of their partners who had a partnership experience with *Olenmedia*. According to their feedback, *Olenmedia* seems to perform well, therefore, scored high in reputation category ranking. Hence, the results revealed that *Olenmedia* has the most positive ranking; the CEO of *360amigo* also agreed on choosing this company as the packaging supplier. Following *Olenmedia*, the American *Stump Town Printers* scored the second highest ranking of 2, 4 which is still a difference between *Olenmedia* and *Stump Town Printers*. Otherwise, the differences between other suppliers were not significant. Third came *Breed Media*, fourth - British *We Wow UK*, fifth and sixth - Chinese *CDVD Turnkey* and

Lihe, seventh - *SF Global Sourcing*, eight - *Guided Products*, and last three are *Sp-Paino*, *Groove House* and *Forssa Print*. This ranking is available in details in attachment 6.

The companies that ranked lowest in this analysis are Finnish company *Forssa Print* together with American company *Groove House*, both scoring 3, 25. Both offer high prices, have minimal environmental sustainability concerns, poor innovation features, moderate reputation, but very good lead time. Even though the weight of lead time was 15, aspects with higher weight, such as environmental sustainability, price and innovation appeared to be of low priority, therefore, marking *Forssa Print* and *Groove House* the least desirable potential packaging suppliers. The diagram below displays the overview of the final supplier assessment.

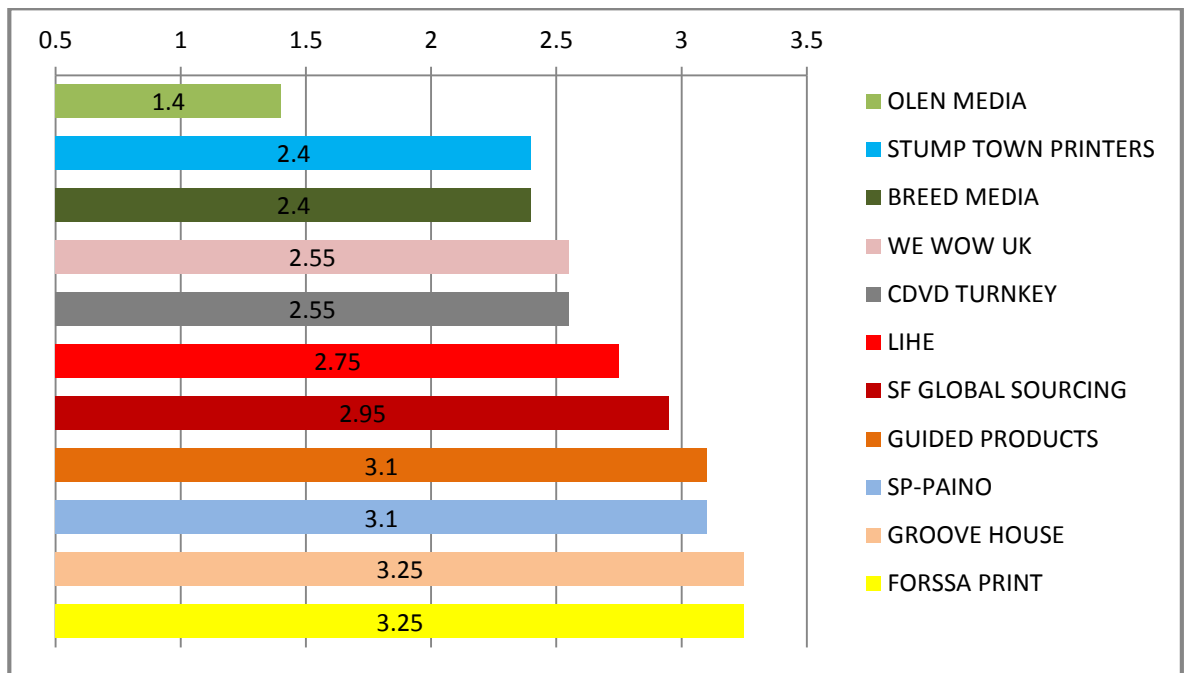


Figure 4. Supplier assessment: weighted point model

3.3 PT 3 - Purchasing process of service provider - QR code development

Task 3 constitutes the second part of the purchasing process, i.e. collaborating with a service provider to develop the QR code to be implemented on the packaging. Since the commissioning company is new to such project, it is necessary to identify the needs and requirements for this service, the so-called inputs and outputs. Lastly, the new service provider of QR code is assessed and selected.

3.3.1 Definition of a new buy service

Services are classified based on their physical characteristics. There are several types of services that can be offered, such as facility services, financial services, operational services, transportation and distribution services as well as information and communication technology services. The last group includes such services as help desk, call centre, or software development services. The characteristics of services are different; therefore, the processes usually differ too. Services are characterised by intangibility, perishability, heterogeneity and simultaneity. (Weele 2010, 93-94.) The new service for the commissioning company is part of the information technology services, more accurately, software or application development services.

Purchasing services usually differs from purchasing goods due to the differences in purchasing process as well as the differences between services and goods. Depending on the complexity of services, the process may be more complicated compared to buying goods. Services are more diverse than goods; therefore, buying services can create difficulties in setting the prices. It is ambiguous for companies because of the difficulty to get an overview and the differences in expectations and prices. (Weele 2010, 92-93.)

Despite the above differences, purchasing process of buying a technology service for the packaging is different. Obtaining a service provider for developing a QR code is not as complex as in usual cases when large companies need to follow up and evaluate regularly the performance of their service providers. This service will have a unique design with the same content for each package. In fact, this could be considered a one-time purchase. However, depending on any changes that may occur, there might be a need to update the content of a QR code regularly, for example, if the software instructions will change or in case of any other changes. Besides, the commissioning company is willing to switch to a new one its current IT service provider and website developer responsible for the maintenance of the website if the services of the new IT provider will meet the needs of *360amigo*.

3.3.2 Work inputs and outputs of a new-buy service

Prior to contracting a new service provider, it is necessary to state the scope of work for services. It is appropriate to make a service level agreement that would state the details of offered services. If there is a significant degree of uncertainty, it is usually recommended to make more detailed service specifications. (Weele 2010, 31.)

Weele (2010, 96) admits that before the supplier is selected it is usually problematic to state what tasks and work the service provider is supposed to fulfil. There are several ways to specify the scope of work. If the work is complex, it is better to specify the inputs, throughputs and outputs in the service level agreement. The inputs refer to the resources used by the service provider; the throughputs describe concrete activities performed by the service provider; the outputs define the results achieved and delivered to the company by its service provider.

360amigo finds itself in a new-task situation of investing into a new type of service provided by an unknown supplier. Despite the usefulness of the detailed description of the scope of work, the commissioning company does not find it appropriate to apply such complex process for this project. Instead, this lengthy specification is compressed into defining the inputs and outputs briefly, as shown in table 4.

Table 4. Specification of QR code service provider

Inputs	Outputs
Technical expertise about QR code	QR code application ready to be used on a package
Portfolio available	License key
Experience	Product information
Resources used to provide QR code	Recyclable package details
Future collaboration for an update	

The inputs are considered to be all the resources and capabilities that a service provider has to possess in order to deliver a service. Accordingly, the provider has to acquire technical expertise in order to develop a QR code application. The potential provider

should have its portfolio available, i.e. the projects it has already delivered together with gained experience. Naturally, the service provider should have all needed resources to develop the QR code, for example, different programming and developing tools. It is important to insure that the provider is available in the future for any updates that *360amigo* might need. The output is the actual results of the service, in this case, QR code applied on the package. It is necessary for the service provider to have ready the license key that is going to be implemented in the QR code. The license key is the same for all users, so that when a user scans the QR code, the product information appears as well as the information provided on the recyclability and reusability of the package. These inputs and outputs have to be clearly defined in the service contract. However, before the contract is signed with the service provider, these specifications also help finding the right provider.

3.3.3 Selection and assessment of a service provider

With the inputs and outputs defined, it is easier to start looking for a suitable company that could provide the required services. The search of the service provider is carried out through collecting secondary data using a search engine. The representative of the commissioning company set the budget to support accomplishing the task 3, the process of acquiring a service provider. The budget was set between € 200-300.

The process of finding the service provider was smooth and it took five days to get a sufficient amount of offers to make the final decision. Altogether, three companies were contacted with a request to submit an offer. The number of contacted companies appeared sufficient for obtaining relevant offers. The table 5 below presents the list of the companies and their offers. The *Quality IT solutions* company with its offer of € 300 seems to have a good reputation, which is reflected in their prices. Acceptable quotes came from two Indian based companies, *Contus* with the offer of € 245 and *Agriya* offering € 200.

Table 5. Offers from service providers

Bidding companies	Offer/€
Quality IT solutions	300
Contus	245
Agriya	200

Despite the usefulness of the service provider search, it was decided not to accept any of the above offers due to an unexpected proposal that came from *Olenmedia*, the selected supplier of the *360amigo*'s new packaging. During the decision-making and negotiation process with *Olenmedia*, the company learned about the service *360amigo* required, and therefore presented the offer to the commissioning company. The quote amounts to a fixed price of € 270 for the design and development of the landing page of the QR Code and € 20 for the QR code application; the offer does not include VAT. The commissioning company accepted this offer, as it is easier to have a single supplier, both for the service and the packaging. The two companies also made an additional IT services agreement for the *360amigo*'s website maintenance. This delivers benefits to the commissioning company of not having two separate providers for the IT services. The agreement is confidential.

3.4 PT 4 – Product sample release

The task 4 concerns the project outcome itself, the green packaging with the implemented QR code. This chapter describes the release of a product sample and the actual features of the packaging and the information provided on the QR code. Lastly, the comparison between the old and the new packaging helps grasp the difference between the two hence the benefit from the project.

3.4.1 Sample of the new product offering

Having the final decision about the new packaging and the service provider set, it is recommended to obtain a sample of the product, the green or sustainable packaging. Before signing the agreement with *Olenmedia*, it is important to see the physical product, assess the quality and usability of the packaging. Therefore, on behalf of the com-

missioning company, using internal monetary resources I requested a sample of the packaging together with the QR code. The printing design made by an internal designer in *360amigo* was sent to the supplier together with the request for a product sample.

Olenmedia managed to create a sample with QR code in two days and dispatched it to Tallinn the following day. In total, it took three days to receive the product sample. The commissioning company was very satisfied with the timing and the actual product sample displayed in figure 6. Despite the imperfections of the edges of the packaging, which are not that sharp as in the original packaging, the sample met the *360amigo*'s requirements and expectations. The following subchapter describes the features of the old and new packaging thus comparing the two.

3.4.2 The comparison of the old and the new packaging

As stated earlier, the old packaging was a jewel DVD case made of plastic material, polypropylene. The supplier of the old packaging does not specify the origin of the material used for the packaging, therefore, to assess it from the point of sustainability seems impossible. As seen in figure 5, it is a traditional packaging used mainly for DVDs; it is durable which makes it easy to store, transport and handle (PlasticsEurope 2008). The jewel case has standard DVD dimensions, 135 mm x 190 mm.

Even though retailers mainly sell software packages of the standard sizes, there is a room for innovative ideas for packaging, such as different sizes and designs, which was one of the reasons why *360amigo* wanted to design new packaging for its software. Moreover, to send the packages to end customers or retailers, it is necessary to use additional boxes, which does not result in delivering on the sustainability issues.



Figure 5. Old packaging of 360amigo

The new packaging consists of two parts: primary packaging – a CD wallet and secondary packaging – a shipping or a retail box (figure 6). The CD wallet is made of recyclable material, more specifically, 100% recycled paperboard. Its dimensions are 125 mm x 125 mm. The secondary packaging has dimensions 150 mm x 140 mm x 20 mm; it is made of 100% recyclable cardboard supplied from well-managed Swedish forests and its supplier is a member of Sustainable Forestry Initiative. (Olenmedia 2013.) This foundation ensures that its members comply with environmental requirements and regulations (Sustainable Forestry Initiative). Additionally, the ink of the printing on both packaging is vegetable oil-based making it more sustainable as compared to petroleum-based ink that commonly used on the packaging (Olenmedia 2013). The new packaging does not require any tertiary packaging, which is an improvement in terms of sustainability.

Additionally, the retail box has a QR code on its front size. As mentioned earlier, this QR code serves for consumer's convenience to access the information on the software license. The content of the QR code was created with the assistance of the representative of the commissioning company. Scanning the QR code displays the following information:

- **How to download 360amigo speed up?**

The link to download the product is provided here.

- **How to reuse the package?**

If you decided to reuse your package, congratulations! You're positively contributing to environment!

Thanks to its size, you can reuse our packaging for several purposes:

- Collect more CDs and keep them in our box
- Use it for storing your dry food – cereals, pasta, rice, lentils, seeds, etc.
- Fold it and use it as a protection inside of a box when moving to your new house
- Use it for documents, postcards, post-it notes or any small pieces of paper
- Reuse it for sending a package to your friends
- You can be creative and reuse our box to make gift boxes out of it
- Use the box with your children to make creative toys – e.g. paper stars, dolls, playhouses, etc.

- **How to recycle the package?**

If you don't wish to reuse our box or CD wallet, please recycle it! You will have a good feeling to act sustainably! Please read the following instructions:

- Find your nearest recycling place
- Flatten the box and bring it with your other boxes for recycling to the recycling centre



Figure 6. New packaging of 360amigo

3.5 PT 5 - Negotiation and contracting with the supplier

After the supplier is selected and the requirements and expectations for the commissioning company are fulfilled, it is time to negotiate the terms and conditions and sign the contract. Negotiation can be defined as following:

“Negotiation is the process of communicating back and forth for the purpose of reaching a joint agreement about differing needs or ideas.

“ (Handfield, Monczka, Giunipero & Patterson 2009, 462.)

Not every purchasing process requires negotiations; however, some necessitate a detailed negotiation process. Negotiations cover the following aspects:

- Prices, terms of delivery
- Terms of payment
- Expected product and service quality levels
- Penalty clauses and liability for loss and damage
- Special packaging and shipping requirements
- Contractual penalties, contract length and renewal (Handfield et al. 2009, 465-466.)

These have to be negotiated before signing a business agreement or a contract. Whereas contracts are legally binding agreement, agreements can be either verbal or written. Like negotiations, contract agreements have to cover numerous issues. The checklist below describes some of them:

- Definitions of the contract terms
- Detailed specification and scope of agreement
- Pricing and payment agreements
- Terms of payment clause
- Supply and delivery
- Quality specifications
- Liability
- Contractual penalties
- Compensation for damage
- Signature of both parties. (Handfield et al. 2009, 502-504.)

Negotiating parties can choose from various types of purchasing contracts to serve their needs in concluding an agreement. The two main contract categories are fixed-price and cost-based. Both categories have other altered types that differ depending on certain conditions. Fixed-price contracts are mainly based on prices that either are fixed or have some agreed incentives or determinants. These contracts constitute low risk for buyers, but high risk for suppliers. On the contrary, cost-based contracts increase risk for buyers, but reduce supplier risks. Cost-based contracts are commonly used for purchasing expensive and complex goods or services where suppliers want to have control over costs. (Handfield et al. 2009, 507-511.)

My decision was to separate negotiation and contracting from purchasing processes in previous tasks as I found it more logic and coherent. The above steps of partner contracting are similar for supplier contracting that is done in much simpler way, especially for contracting a service provider. *360amigo* and *Olenmedia* made one contract that incorporated both the service and the product.

3.5.1 Negotiation process with Olenmedia

To succeed with negotiations, it is important for both parties, in this case a buyer and a supplier, to know what they are trying to achieve and to act the way the other negotiating party would accept it. The buyer is advised to determine the goals and needs of the buying action. On the other hand, the needs of the other negotiating party cannot be disregarded. Hence, the buyer has to be aware of the supplier's preferences. (Handfield et al. 2009, 463-464.) To have a successful outcome from negotiations, it has to be a win-win situation, therefore, it is desirable to come up with a suitable proposal in a fair way.

To handle the negotiation process, it is recommended to follow five-phase negotiation process that describes several steps. First, a negotiator should foresee what is required to purchase. After evaluating the requirements, it is usually beneficial to decide whether the negotiation process is required. If it is required, companies prepare a plan for negotiations, defining and developing certain tactics and strategies. The action part of this process is the negotiation itself. At the end, both negotiating parties execute an official agreement. (Handfield et al. 2009, 464-469.) An overview of these steps is demonstrated below in figure 7.

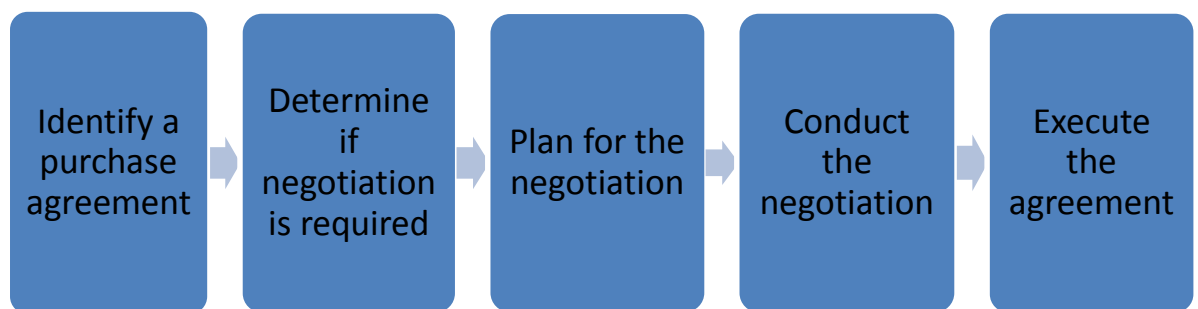


Figure 7. Five-Phase Negotiation Process (modified from Handfield et al. 2009, 465.)

Since *Olenmedia* was selected as a provider of both, packaging and QR code development, the negotiation process concerns specifically this single provider. First two steps of the negotiation process are excluded from the negotiation of the commissioning company with its supplier of packaging and QR code. These are specified earlier in the tasks 2 and 3. Regarding the plan for the negotiation, a simple preparation is required.

It is necessary to prepare the definition of the conditions of the partnership with *Olenmedia*. The negotiation process involves sending out the RFQ (attachment 5) that was discussed in the execution of the project task 2; however, this document is negotiated further with *Olenmedia*. The representative of the commissioning company communicated certain proposals, which served me as a basis for negotiations with the selected provider. These proposals are stated in the table below (table 6).

Table 6. The plan for negotiation's proposal

Subject of negotiation	Proposal
Price	Fixed price € 0,5 per set /when order is of 20 000 units Negotiate the price for: QR code application : range of € 20-50 Service: range of € 200-250
Discount	Arrange a discount if 20 000 units of packaging are ordered
Payment terms	Pay credit after delivery
Lead time	Negotiate a lead time between 3-5 working days
Shipping destination	Minnetonka, Minneapolis, USA
Frequency of order	Twice/year
Product sample	Obtain 1 or 3 samples before issuing the contract

Consequently, the proposal obtained from the representative of *360amigo* serves as support material in the actual negotiations. The communication process with *Olenmedia* is fully done via emails. It is less expensive, though, a lengthier process. Overall, it took about three days to conclude the negotiations between the commissioning company and *Olenmedia*. These particular negotiations were less formal and friendly, allowing both parties to feel relaxed and comfortable. The team of the future supplier turned out to be surprisingly flexible and friendly. In my opinion, it is easy for the commissioning company to build trustful relations with this supplier.

As mentioned earlier, the negotiation process involved two people: the sales person of *Olenmedia* and myself. During negotiation, above stated subjects (table 6) were pro-

posed to *Olenmedia*. The outcome of the negotiations turned out to be substantially positive. I successfully managed to negotiate prices, the shipping destination, lead time and frequency of order according to the wishes of the commissioning company. Discounts and terms of payment will be negotiable after the first formal order. The outcome of the negotiations is formally concluded in the contract, the aspects of which are discussed in the following subchapter.

3.5.2 Issuing the contract with Olenmedia

A contract is an outcome of a positive negotiation process; it should include the contract terms. The responsibility at this stage lies primarily on the representative of the commissioning company and *Olenmedia*, whereas my role is to act as an intermediary between these two parties. Both the commissioning company and the supplier expressed their wishes to keep the details of the contract confidential. However, the contract terms mentioned in this subchapter may remain public. These contract terms initially come from the official offer that was received by *Olenmedia*. The examples of both packaging and service offers documents can be seen in the attachments 7 and 8. The exact quotes of the offers are confidential.

The commissioning company signed a fixed-term contract with *Olenmedia* for one consecutive year. The reason for the fixed-term of the contract is the intention of *360 amigo* to launch new packaging in the United States for a trial period. In the end of the trial period, the commissioning company will decide whether to continue using the green packaging. The fixed-term contract for both the product and service is with escalation. This means that the supplier, *Olenmedia*, has the right to increase the basic prices, subject to rising costs. However, the supplier can increase the prices only when the contract has lasted for more than three years. (Olenmedia 2013).

Among the basic contract terms are pricing and payment agreements, which clearly state the offered and negotiated prices for the 20 000 units order; they are issued twice a year. The price for QR code is stated as one-time payment; however, the prices for the content updated are included in the special clause. Payment terms specify the ad-

vance payment of twenty per cent from the final price, including VAT. (Olenmedia 2013.)

The delivery terms for the packaging specify the shipping location, which in this case is a central address of an external party responsible for shipping the packaging in the United States, in Minneapolis. Lead time is to be agreed between four to seven working days. Order routine is to be agreed two times a year, however, can be modified according to needs. Delivery liability stays on the supplier's outsourced party. This agreement is governed under the Finnish law; therefore, contractual terms, penalties and any compensation for damages are not an exception. The right for the withdrawal from the above stated terms of the contract, non-performance of the obligations for the delivery of the packaging are governed under the Consumer Protection Act. (Olenmedia 2013.)

Quality issues are discussed in great details by supporting and clarifying the certification of Sustainable Forestry Initiative, as well as references of the materials used for the packaging. The secondary packaging supports the recyclable sources and the primary packaging recycled materials' sources. (Olenmedia 2013.)

4 Conclusion

The aim of the thesis was to increase the sustainability awareness through green packaging and QR code for the *360amigo* company. Therefore, the main objective was to replace the existing software packaging with a new green packaging by effective supplier purchasing process. This was supported by the research of both primary and secondary the data that was needed for accomplishing the project tasks. First, secondary data were collected with the purpose to understand the choices of the commissioning company regarding the environmentally and technology friendly packaging. The implementation of the tasks constitutes two separate purchasing processes, the purchasing of the packaging and the purchasing of the IT service, which, in turn, imply the search, evaluation and assessment of suppliers; these steps are supported by both primary and secondary data.

The objective of the thesis was accomplished, i.e. a sample of green packaging was obtained from a selected supplier, *Olenmedia*; the sample is displayed in the figure 6. The same supplier will be also responsible for the IT services, which makes it easier for the commissioning company to manage its operations. Finally, the tasks were successfully concluded by the negotiations of the parties and contracting of the supplier. The overall benefit from the thesis for the commissioning company is the physical product, the green packaging. Having the green packaging allows the company to gain a competitive advantage over its competitors in the software industry by acting sustainably. This makes a significant contribution to the green practices of the organization.

4.1 Validity and reliability

According to Ghauri and Grønhaug (2010, 210-211) there are various types of validity, such as descriptive, interpretative and theoretical validity. Descriptive validity refers to the description of any processes used in a research. Interpretative type ensures the correct form of the interpretation of data. Proper use of theory supports theoretical validity.

The theory used throughout this thesis highly supports the validity and the reliability of the data and its content. The secondary data use recent valid sources that are connected to the topic of the thesis. A collection of the primary data obtained from a pool of suppliers, the documentation and contracts, is strongly tight to the validity matters. The interpretation of the primary data is used reliably according to the results obtained from suppliers. The purchasing processes used in this thesis are displayed correctly according to the valid sources.

4.2 Recommendations

As the contract was concluded with the selected provider of the new packaging and IT services, *Olenmedia*, I would recommend looking at the following issues that might help companies to release their new product offering successfully:

1. Set a product release date together with the shipping company
2. Design the promotion and advertising campaign to notify new customers about it
3. Spread the word using social media, such as Facebook, Twitter, etc.
4. Design a short survey or any other method of analysing customer opinion about the new green packaging
5. After a trial period and if the green packaging is successful in the United States, the commissioning company shall try another target market
6. From the supply chain point of view, the company should devote time to managing supplier relationship with *Olenmedia* to ensure a successful alliance with the supplier

4.3 Project evaluation

The development of the project thesis was both very interesting and challenging. Delivering the desired outcome for the commissioning company was a lengthy process that required full attention to the details of the tasks. Despite having several difficulties and obstacles while obtaining relevant information from potential suppliers, the project was accomplished within the planned timeframe, as seen in the attachment 2. Together

with the support and the input from the commissioning company, the project was managed with the help of the knowledge acquired at business and specialization courses at Haaga-Helia. The processes used in this thesis comply with the supply chain management practices, specifically, the area of purchasing management and the green supply chain management.

The commissioning company was extremely pleased with the outcome of the project. The feedback from the company highlights that the project work exceeded their expectations. By delegating this task to me, the company relieved itself from extra resources that would be necessary to accomplish this assignment. I feel I have met the expectations of the commissioning company in a right way. Most importantly, accomplishing this project was a great experience that gave me knowledge that would be valuable in my future professional life.

4.4 Personal learning

Accomplishing all project tasks successfully added a great benefit towards my learning and self-confidence. Managing all processes helped me to obtain a large view onto the purchasing and partner management, as well as green supply chain management aspects that are part of supply chain management field. Empowerment that the commissioning company gave me was a great value to my personal learning. Negotiation skills I have gained throughout the discussions with selected supplier provided me an extreme advantage and competence in my personal and professional growth. Besides advantages, I have faced several challenges too. Keeping the timeframe as scheduled, was not easy when handling a responsibility for the project. Particularly, purchasing process of the service provider was performed in a limited time due to the lengthy purchasing process of the packaging supplier. I have learnt that these processes should have been done simultaneously due to the unexpected obstacles that may appear. Overall, accomplishing this project was a great experience that gave me knowledge that would be valuable in my future professional life.

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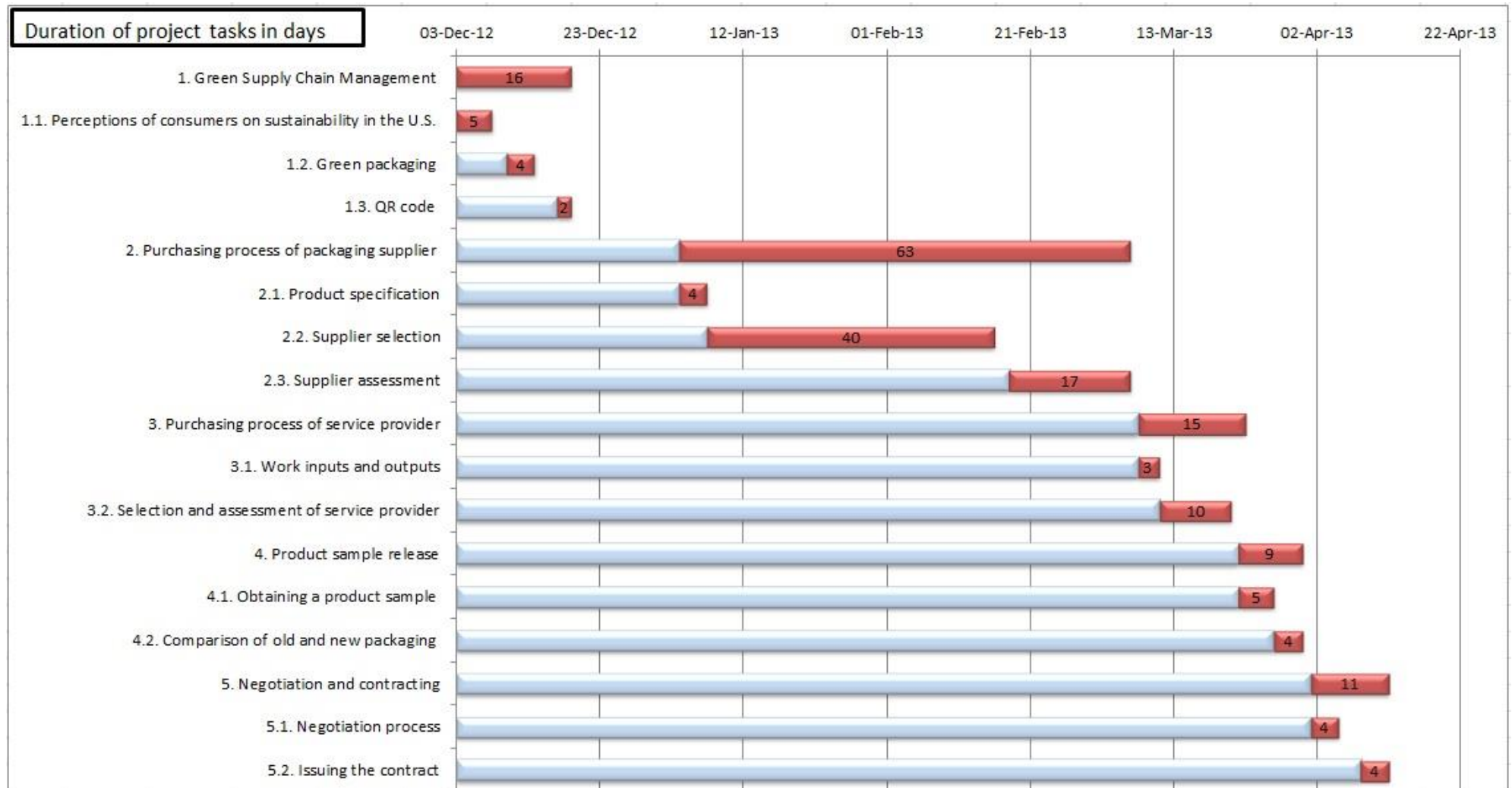
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Attachments

Attachment 1. The timeline of the project

Project tasks	Start Date	Duration(days)	End Date	Responsible party	Resources
1. Green Supply Chain	03-Dec-12	16	19-Dec-12		
1.1. Perceptions of consumers on sustainability in the U.S.	03-Dec-12	5	08-Dec-12	Veronika	Research from Scott, Y.
1.2. Green packaging	10-Dec-12	4	14-Dec-12	Veronika	Online resources
1.3. QR code	17-Dec-12	2	19-Dec-12	Veronika	Online resources
2. Purchasing process of packaging supplier	03-Jan-13	63	07-Mar-13		
2.1. Product specification	03-Jan-13	4	07-Jan-13	CEO, Veronika, 3rd party	Internal decision ***
2.2. Supplier selection	07-Jan-13	40	16-Feb-13	Veronika, 3rd party	Purchasing process guidelines; RFI
2.3. Supplier assessment	18-Feb-13	17	07-Mar-13	CEO, Veronika	Weighted point model; RFQ
3. Purchasing process of service provider	08-Mar-13	15	23-Mar-13		
3.1. Work inputs and outputs	08-Mar-13	3	11-Mar-13	CEO	Internal decision ***
3.2. Selection and assessment of service provider	11-Mar-13	10	21-Mar-13	CEO, Veronika, 3rd party	Purchasing process guidelines
4. Product sample release	22-Mar-13	9	31-Mar-13		
4.1. Obtaining a product sample	22-Mar-13	5	27-Mar-13	Veronika, 3rd party	Internal resources *
4.2. Comparison of old and new packaging	27-Mar-13	4	31-Mar-13	Veronika	Internal resources **
5. Negotiation and contracting	01-Apr-13	11	12-Apr-13		
5.1. Negotiation process	01-Apr-13	4	05-Apr-13	Veronika, 3rd party	Internal resources **
5.2. Issuing the contract	08-Apr-13	4	12-Apr-13	CEO, Veronika, 3rd party	Internal resources *
* monetary and contract document resources provided by 360amigo ** internal documents and specifications *** decisions made by the CEO of 360amigo					

Attachment 2. Gantt chart



Attachment 3. Overlay matrix

Project objective	Project tasks	Purpose	Outcome (chapter)
To find potential supplier of recyclable packaging with QR code for software in order to enhance environmental sustainability and add value to end customers	PT 1: Green Supply Chain Management	Collect secondary data to support the sustainable matters	Chapter 2
	PT 2: Purchasing process of package supplier	Find potential suppliers, assess and select the final one	Chapter 3, subchapter 3.2.
	PT 3: Purchasing process of service provider	Final potential providers, assess and select the final one	Chapter 3, subchapter 3.3.
	PT 4: Product sample release	Obtain the product sample and compare old and new packaging	Chapter 3, subchapter 3.4.
	PT 5: Negotiation and contracting	Negotiate terms and conclude agreement	Chapter 3, subchapter 3.5.

Attachment 4. Example of Request for Information (RFI)



Request for Information

Buyer:

*360Amigo Oy
Fredrikinkatu 45 A
00100 Helsinki
Finland*

Vendor:

Vendor's address

Helsinki 17.12.2012

Background

360amigo Oy is dedicated to providing software utilities that make PCs run like new. 360amigo System Speedup is designed to fix PC problems quickly and cheaply, and extend the computer's life by years. Software is sold as a license, as well as CD version.

Statement of Need

Recyclable package for software CD version

The objective of this project is to switch from plastic package of the product to complete recyclable package. We need two types of packages: the CD wallet and shipping box. We require innovative design of both primary and secondary packages for CD that is wholly recyclable. Design of the print is provided by us, QR code by external provider.

Qualifications and information requested

Outline of the qualifications that vendor should meet and is selected based on:

- *Reputation & references available*
 - *Visible portfolio*
- *Quality of the primary package (CD wallet)*
 - *Suitable for CD*
 - *Easy to open*
 - *Good recyclable print*
- *Quality of the secondary package (shipping box)*
 - *Stable*
 - *Easy to open*
 - *Easy to fold*
 - *Good recyclable print*
 - *Suitable for CD*
- *Package measurements*
 - *Not necessarily standard package measurements*
 - *As small as possible to eliminate use of paper*
- *Environmental sustainability issues*
 - *CD wallet made of biodegradable paper/recycled paper*
 - *Shipping box must be wholly recyclable*
 - *Information on materials used for the package*
 - *Eco-friendly ink*
- *Easy and fast delivery*
 - *Lead time*

Time for Response

Estimated time for the response to the supplier is 14 days. Afterwards vendor is contacted by the buyer about the outcome of the selection.

Helsinki 17.12.2012

Name and signature of the buyer

Attachment 5. Example of Request for Quotation (RFQ)



Recyclable package for CD
Helsinki, Finland 20.12.2012

Revised on: November 30, 2012
Request for Quotation

Date: _____
Quotation No. _____

360amigo Oy
Fredrikinkatu 34 A
0100 Helsinki
Finland

Please quote your lowest price on the item/s listed below, subject to the General Conditions on the last page, stating the shortest time of delivery and submit your quotation duly signed by your representative not later than December 28, 2012.

Buyer

- NOTE:**
1. ALL ENTRIES MUST BE TYPEWRITTEN
 2. DELIVERY PERIOD WITHIN 14 CALENDAR DAYS
 3. WARRANTY SHALL BE FOR A PERIOD OF SIX DAYS FROM DATE OF ACCEPTANCE BY THE PROCURING ENTITY
 4. BIDDERS SHALL SUBMIT ORIGINAL BROCHURES SHOWING CERTIFICATIONS OF THE PRODUCT BEING OFFERED.

ITEM NO.	ITEM & DESCRIPTION	QTY.	UNIT PRICE

Model of the package : _____
Delivery Period : _____
Warranty : _____
Price Validity : _____

We quote you on the item at prices noted above

Printed Name / Signature

Tel. No. / Cellphone No.
e-mail address

Date and place

Attachment 6. Supplier selection analysis: weighted point model

Criteria (weight)	OLEN MEDIA	WE WOW UK	GROOVE HOUSE	GUIDED PRODUCTS	STUMP TOWN PRINTERS	LJHE	BREED MEDIA	SF GLOBAL SOURCING	CDVD TURNKEY	FORSSA PRINT	SP-PAINO
Price (35)	1	4	3	4	2	2	3	4	1	3	3
Innovation (20)	2	1	4	3	3	2	2	3	3	4	4
Reputation (10)	1	1	4	2	3	4	3	1	4	3	3
Lead time (15)	1	3	4	2	4	3	3	3	4	2	1
Environmental sustainability (20)	2	2	2	3	1	4	1	2	3	4	4
TOTAL	1,40	2,55	3,25	3,1	2,4	2,75	2,4	2,95	2,55	3,25	3,1
RESULTS	1	2	3	4	5	6	7	8	9	10	11
Company	OLEN MEDIA	STUMP TOWN PRINTERS	BREED MEDIA	WE WOW UK	CDVD TURNKEY	LJHE	SF GLOBAL SOURCING	GUIDED PRODUCTS	SP-PAINO	GROOVE HOUSE	FORSSA PRINT
	1,4	2,4	2,4	2,55	2,55	2,75	2,95	3,1	3,1	3,25	3,25

1= perfect
2= good
3= satisfactory
4= unsatisfactory

Attachment 7. Example of the packaging offer from Olenmedia



SOLUTIONS THAT YOU NEED!

Customer: 360Amigo Oü
Viru 9/1
10140 Tallin
Estonia
www.360amigo.com
veronika@360amigo.com

OFFER: 08032013-13
DATE: 08.03.2013

Description: Eco-friendly media packaging

Thank you for your inquiry. We are pleased to quote for the following:

Offer 1: price per unit

Recycled CD wallet	
Recyclable box	
	VAT 23%
	Total

Offer 1: price for 20 000 units

Recycled CD wallet	
Recyclable box	
	VAT 23%
	Total

Prices are in EUR.

Terms of payment: 100% after 15 days upon approving offer.

All the prices are without value-added tax. The price is valid until 31.12.2012. We reserve the right to change prices, in case the value of the services changes during the validity period.

Cordially,

Olenmedia Representative

Olenmedia Oy
Fredrikinkatu 45 A
FI-00100 Helsinki
info@facemedia.fi

Attachment 8. Example of service offer from Olenmedia



SOLUTIONS THAT YOU NEED!

Customer: 360Amigo Oü
Virtu 9/1
10140 Tallin
Estonia
www.360amigo.com
veronika@360amigo.com

OFFER: 08032013-13
DATE: 08.03.2013

Description: QR Code and landing page design and development

Thank you for your inquiry. We are pleased to quote for the following:

Offer 1

QR Code	
Design and Development of Landing page for QR Code	
	VAT 23%
	Total

Terms of payment: 100% after 15 days upon approving offer.

All the prices are without value-added tax. The price is valid until 31.12.2012. We reserve the right to change prices, in case the value of the services changes during the validity period.

Cordially,

Olenmedia Representative

Olenmedia Oy
Fredrikinkatu 45 A
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