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LOGISTICS FULFILLMENT SERVICES FOR CROWDFUNDING
CUSTOMERS OF CASE COMPANY

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The purpose of this thesis was to set up logistics fulfilment services for on-going Crowdfunding projects and other products for new Webshop of the start-up company, Case Company. Especially, since the company didn't own any warehouse facility, there was a need to look for contract warehousing, a third party logistics partner (3PL).

Accordingly, the first challenge was to do research based on company's evaluation criteria for a third party for contract warehousing and then learned to be accustomed to this third party warehouse facilities and operations. On the other hand, as Case Company was specialized in custom crowd funding service packages (Kickstarter, IndieGoGo), another challenge was to follow up with inventory forecast from or for various crowd funding customers, especially since the demand would not be stable.

Following the thesis's purpose, the theoretical background was conducted to include all necessary knowledge about basic inventory concepts and practices, just-in-time logistics perspective as well as business research about 3PL definition and crowd funding areas.

The empirical part would be based on author's experiences when she was doing internship for the Case Company. All data included in the thesis must be allowed and reviewed by Case Company's owner. However, due to matter of confidential information, there were parts where data were marked up or given with false estimation according to company's owner decisions. Last but not least, expert interviews with company's owner alongside with author's work feedbacks would bring better view of company's situation and a better direction to the final logistics fulfilment services design.

CONTENTS

1	INTRODUCTION.....	5
2	CONCEPTUAL FRAMEWORK AND THESIS PURPOSE.....	5
2.1	Thesis Conceptual Framework	5
2.2	Research Objectives.....	6
2.3	Research Boundaries.....	7
3	THEORETICAL BACKGROUND	7
3.1	Basic Inventory Concepts	7
3.2	Basic Inventory Management	10
3.2.1	Impact of Demand Patterns on Inventory Management.....	12
3.2.2	Inventory Management under Conditions of Certainty.....	12
3.2.3	Financial Aspects of Inventory Systems	15
3.2.4	Order Processing: Inventory Systems	16
3.2.5	Returning Goods: Handling and Logistics Costs	18
3.3	Just-in-Time Logistics (JIT)	19
3.3.1	The Goals of Just-in-Time (JIT) Logistics	19
3.4	Contract Warehousing	20
3.4.1	Third Party Logistics (3PL): Advantages and Disadvantages.....	21
3.4.2	Contract Warehouse (3PL): Decision Criteria and Considerations.....	22
4	METHODOLOGY APPROACH.....	24
4.1	Quantitative Research	24
4.2	Qualitative Research	24
4.3	Data Collection and Analysis.....	25
5	LOGISTICS FULFILLMENT SERVICES: PHASE 1 – BUSINESS REVIEW	25
5.1	Case Company’s Service Identification.....	25
5.2	Company Products	26
5.3	Company Operation Process.....	26
5.4	Company Activity-Based-Costing (ABC) Analysis 2016.....	27
5.5	Problems Identifications	30
6	LOGISTICS FULFILLMENT SERVICES: PHASE 2 – OPERATIONS SETUP AND CONSIDERATIONS.....	31
6.1	Third Party Logistics (3PL): Research and Solution	31
6.1.1	China Divisions	32
6.1.2	GLS	33
6.1.3	Avid Logistics	33

6.1.4 Final Selection: Shipwire	33
6.2 Warehouse Facilities Management	34
6.3 Inventory Setup (SKU)	35
6.4 Order Fulfillment and Shipping Plan	36
6.5 Cost Structure and Considerations	37
7 LOGISTICS FULFILLMENT SERVICES: PHASE 3 – JUSTIFICATIONS, FEEDBACK AND EVALUATION	38
7.1 Inventory Management Practices	39
7.2 Customs Clearance and Import Duties	40
7.3 Customer Service Aspects and Order Fulfillment Process	41
7.4 Finalizing Logistics Fulfillment Services Design	42
7.4.1 Activities checklist and reminder	42
7.4.2 Customer Service Aspect and Order Fulfillment Process	44
7.4.3 Customs Clearance and Import Duties	46
8 SUMMARY AND CONCLUSION	47
9 FINAL WORDS	48
REFERENCES	49
APPENDICES	

1 INTRODUCTION

Being originally based in New York, U.S.A, Case Company has been in the business for almost three years with its own storage space there. However, realizing the inefficient uses of this facility, the owner decided to shut it down to look for other fulfillment solutions for easier movement and faster access to company's goods and shipments status.

Starting from January, 2017, the thesis author took logistics intern position in Case Company and ever since, she has been assisting company's owner with the set-up of logistics operation, one of which was to search for eligible 3PL (third party logistics) partner.

At the moment, the author has successfully contacted and established the partnership between the company and a 3PL partner, named Shipwire (based in U.S). According to the sales plan, for the incoming six months, both sides shall work together on setting up SKU in chosen Shipwire's warehouse facilities as well as managing the orders' shipments worldwide.

Upon the approval of Case Company's owner, the author shall have access to the company's data concerning SKU, shipping plan, returning goods policy, and other inventory management practices. Due to the matter of confidential information, there will be parts where data would be marked up or given with false estimation according to company's owner decisions. Either way, all these data and information upon applying necessary theories shall equip the author with detailed insights toward her thesis topic.

2 CONCEPTUAL FRAMEWORK AND THESIS PURPOSE

2.1 Thesis Conceptual Framework

For the purpose of designing logistics fulfillment services for Case Company, the conceptual framework of this project consists of the relationship between inventory management and demand allocation upon the support of concerned department.

First, it's necessary to describe about Case Company background concerning the company's business projects and sales target. In fact, the first phase of logistics services design will focus on business review, company's operation performance analysis and logistics problems identification. Then, the second phase of the strategy will focus on Case Company 's logistics operations set-up and consideration for the preliminary strategy design. After that, phase three of the strategy will justify the preliminary strategy with thorough considerations to finalize the logistics fulfillment services design. Lastly, the conclusion and recommendation will summarize the author's findings from doing researches for the strategy design and finalize the thesis learning outcomes.

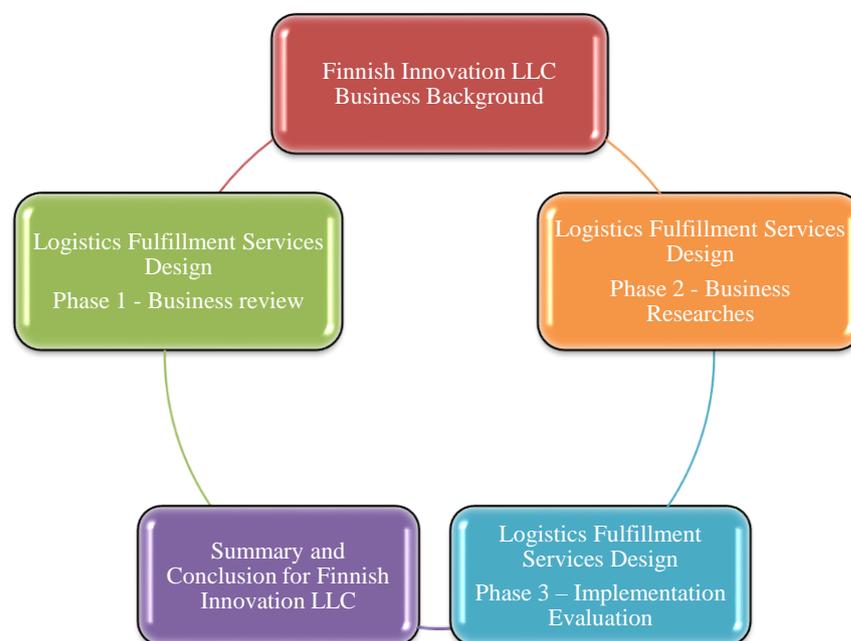


Figure 1: Logistics Fulfillment Services Design (Duong, 2017)

2.2 Research Objectives

What are the products or service that Case Company is offering?

What are the current logistics problems or challenges that Case Company is encountering?

Who are the potential partners that Case Company plans to cooperate with?

What is the cost for using 3PL for Case Company?

What are the requirements for 3PL of Case Company?

How does Case Company manage its inventory and shipping orders through 3PL strategy? (shipping schedules, goods returns, 3PL agreements, etc...)

2.3 Research Boundaries

Since the internship is done in mobility, distance meetings and schedules must be set and followed strictly. Especially, this project is aiming at global growth of the company, time management becomes more crucial when it comes to contact with partners from other countries.

Other than that, the student is entitled to be logistics manager and though receiving great support from owners with many ideas, majority of the research and partnership contact will be based on student's own knowledge and much of individual efforts.

3 THEORETICAL BACKGROUND

3.1 Basic Inventory Concepts

Inventory management is an important business practice, hence there is a need to understand inventory role in production and marketing operation within a company. Basically, holding inventory has great impact over these five areas: Economies of Scale, Balancing Supply and Demand, Specialization, Protection from Uncertainties and Inventory as a Buffer (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 128 – 130). The following mind map will clarify the relationship between holding inventory and these impacts.

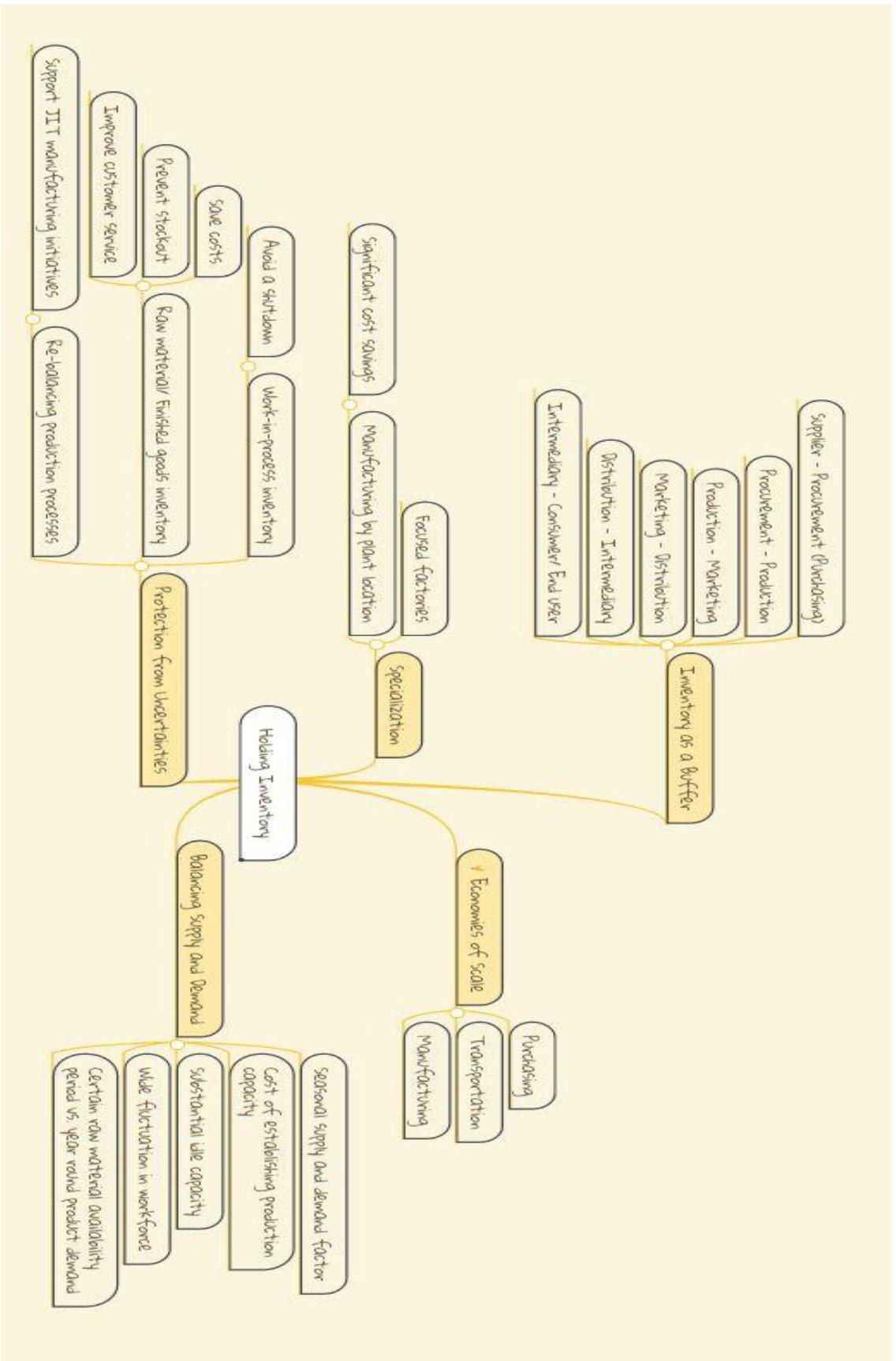


Figure 2: Holding Inventory Purposes (Mindmeister, 2017)

On another approach, there're other reasons for holding inventory, namely as following:

- Uncertain and unpredictable demand patterns
- Trade-off between transport and shipping costs, justifying larger shipments
- Discounts via bulk buying
- Distance between manufacturer and the end customer
- Cover for production shutdowns
- Availability to increase production runs
- High seasonality
- Spare parts storage
- Work-in-process storage
- Investment stocks
- Document storage

Other than understanding the purposes of holding inventory, categorizing inventory types is also an important practice in inventory management area. There are six types of inventory:



Figure 3: Inventory Types (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 131 – 135)

Cycle stock occurs to replenish used or sold stock to meet demand under conditions of certainty, concerning demand prediction and lead times. In-transit inventories, on another hand, distinguish itself from cycle stock for they are not for sale or used as subsequent reshipment. These inventories move from one place to another as one at the place of shipment origin. Speculative stock mainly deals with uncertainties as

lack of material or workforce problems. Seasonal stock deals with matters of seasonal supply and demand factor, specialized in accumulating inventory before seasonal period begins. Finally, dead stock refers the inventory that no longer had any demand and has been staying idle for some certain period of time. (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 131 – 135)

Eventually, it is as logical to understand about inventory waste concept. The wastes will be resulted in these following scenarios: Excessive stock as materials or finished products are over purchased than needed for short-term benefits. These stocks can also be stacked up inventories to safeguard continuation of production. Idle in-transit stock, on another hand, is queues of materials, waiting to be processed for continuous processing. Dead stock as useless stock with no demand, is subsidized by earnings retained from other production. Lastly, out of stock means unavailable resources for production or distribution, which will influence company's sales. (Lai, K., Cheng, T.C.E., 2009, 81) More or less, these are factors that incur companies high cost either economical or opportunistic in inventory management. All in all, there might be crucial need to consider about Just-In-Time inventory practices, including precise demand forecast, careful capacity plan in accordance with sales plan and market conditions report.

3.2 Basic Inventory Management

As a brief sum up, the following table about pitfalls of inventory management and their symptoms shall provide a big picture on areas of consideration for inventory management.

Pitfalls	Symptoms
1. No supply chain metrics	<ul style="list-style-type: none"> • Independent and disconnected individual sites • Incomplete metrics • Performance measures not tracked • No attention to measures tracked
2. Inadequate definition of customer service	<ul style="list-style-type: none"> • Inadequacy of line-item fill rate measure • No measures for response times • No measures for lateness • No measures for backorder profile
3. Inaccurate delivery status data	<ul style="list-style-type: none"> • Delays in providing delivery information • Inaccurate delivery information
4. Inefficient information systems	<ul style="list-style-type: none"> • Inadequate linkage among databases at different sites • Proliferation of operating systems for the same function at different sites • Delays and inaccuracies of data transfer
5. Ignoring the impact of uncertainties	<ul style="list-style-type: none"> • No documentation or tracking of key sources of uncertainties • Partial information on sources of uncertainties
6. Simplistic inventory stocking policies	<ul style="list-style-type: none"> • Stocking policies independent of magnitudes of uncertainties • Static stocking policies • Generic and subjective stocking policies
7. Discrimination against internal customers	<ul style="list-style-type: none"> • No service measures of internal customers • Low priority for internal orders • Inappropriate incentive systems • Jockeying for priority among different internal divisions
8. Poor coordination	<ul style="list-style-type: none"> • No coordination among supplying divisions to complete an order • No system information among multiple supplying divisions • Independent shipment plans
9. Incomplete shipment methods analysis	<ul style="list-style-type: none"> • No consideration of inventory and response time effects
10. Incorrect assessment of inventory costs	<ul style="list-style-type: none"> • Omission of obsolescence and cost of rework • No quantitative basis for inventory holding cost assessments
11. Organizational barriers	<ul style="list-style-type: none"> • Independent performance measures and incentive systems at different sites • Barriers between manufacturing and distribution
12. Product-process design without supply chain consideration	<ul style="list-style-type: none"> • No consideration of manufacturing and distribution in product-process design • No consideration in design for customization and localization • Organizational barriers between design and the supply chain
13. Separation of supply chain design from operational decisions	<ul style="list-style-type: none"> • Chain decisions without consideration of inventory and response time efficiencies
14. Incomplete supply chain	<ul style="list-style-type: none"> • Focus on internal operations only • Inadequate understanding of operational environment and needs of immediate and ultimate customers

Figure 4 Pitfalls of Inventory Management and Their Symptoms (Lai, K., Cheng, T.C.E., 2009, 82)

Accordingly, the following parts are measurement tools and practical areas to build up such efficient logistics fulfillment services design. These include: inventory management measurement of effectiveness, impact of demand patterns on inventory management, inventory management under conditions of certainty, financial aspects of inventory strategy, forecasting, order processing and returning goods policy.

3.2.1 Impact of Demand Patterns on Inventory Management

As explained earlier, demand forecast plays critical factor in inventory management practices, helping companies to reduce inventory wastes and save operation costs. Accordingly, “pulled” or “pushed” inventory systems and “independent” or “dependent” demand have such implications for inventory management methods.

“Pull” or “Push” inventories are driven by the way companies distinguish their production. Push inventories are prepared to serve actual customers’ demand while pull inventories are relied upon demand forecast or anticipated sales estimates to customers.

On another hand, “independent” or “dependent” demand inventory focuses on whether the demand for an item depends on demand for something else. Independent demand item or finished good is based on customer orders amount while dependent demand items as raw materials or derived components for finished goods, will be calculated upon production schedule of the finished goods.

Either way, it’s the inventory manager who has final words of how much inventory to store as well as the right time to order them in. (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 136)

3.2.2 Inventory Management under Conditions of Certainty

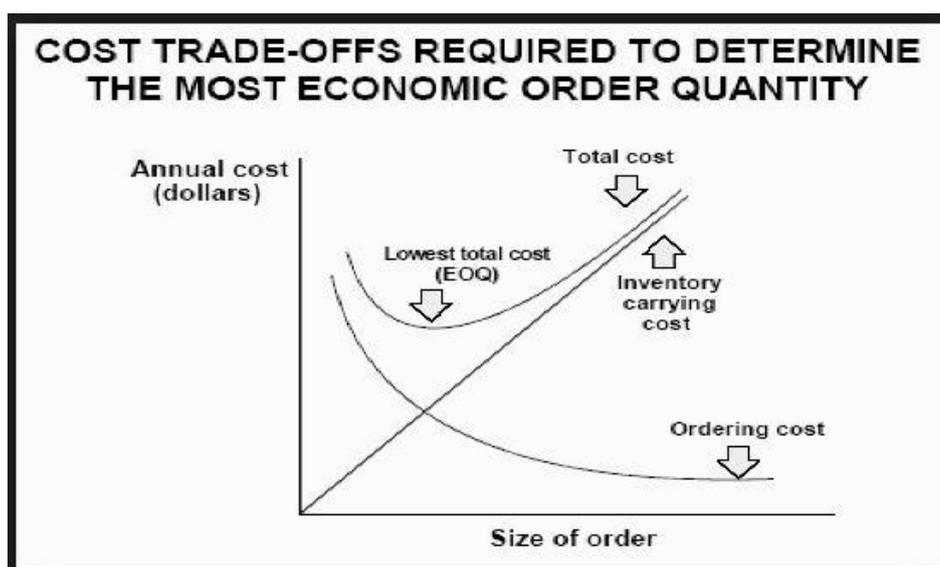


Figure 5: Cost Trade-off Required to Determine the Most Economical Order Quantity (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 137)

The best ordering policy can be determined by minimizing the total of inventory carrying costs and ordering costs using Economy Order Quantity (EOQ) method.

The calculation is clearly stated as following:

$$EOQ = \sqrt{\frac{2PD}{CV}}$$

- P = ordering cost per order
- D = annual demand or usage of product (number of units)
- C = annual inventory carrying cost (as a percentage of product cost or value)
- V = average cost or value of one unit of inventory

The EOQ concept determines the optimal order quantity on the basis of ordering and carrying costs. (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 136).

The simple EOQ model is based on the following assumptions:

- A continuous, constant and known rate of demand
- Constant and known replenishment or lead time
- Constant purchase price independent of the order quantity or time
- Constant transportation cost independent of the order quantity or time
- The satisfaction of all demand (no stock-outs are permitted)
- No inventory in transit
- Only one product in inventory or at least no interaction between products (independent demand items)
- An infinite planning horizon
- No limit on capital availability

As for the big picture, the following diagram which links the connection between marketing and logistics objectives will indicate the components and all costs required in a closed logistics systems.

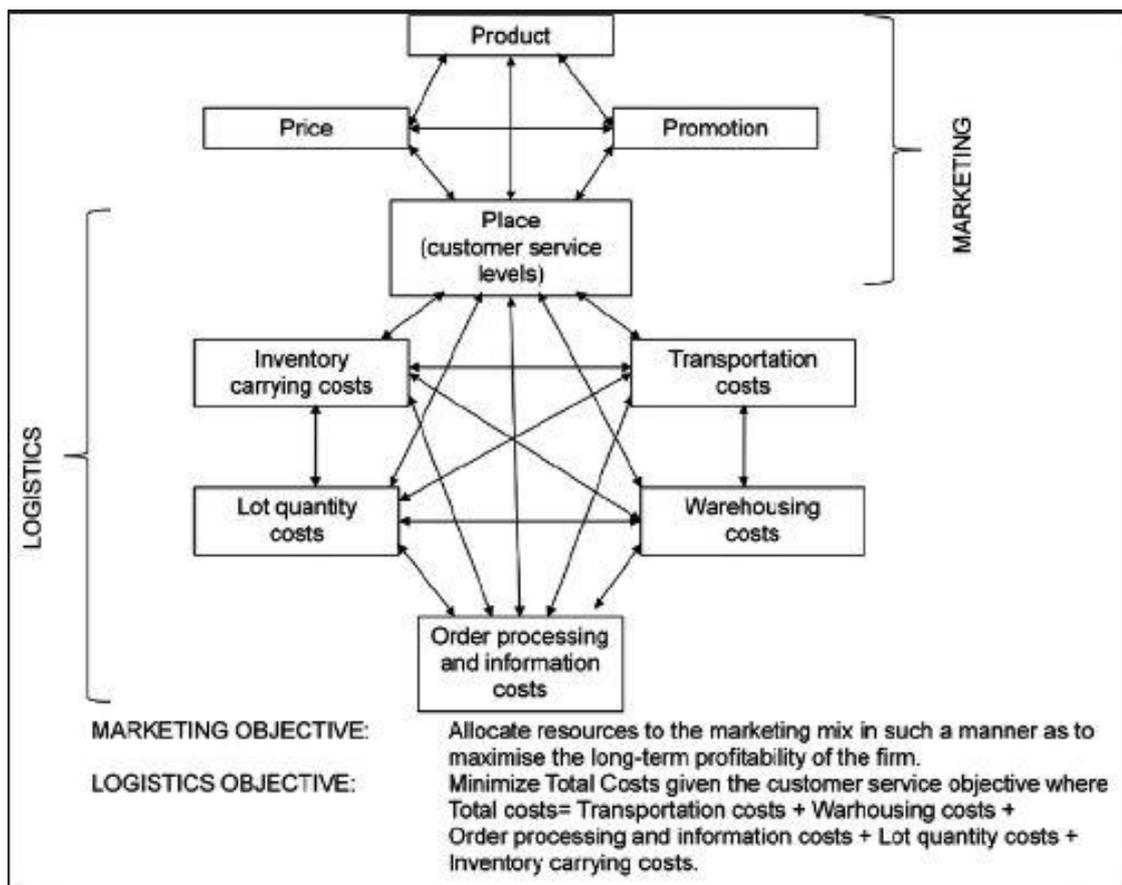


Figure 6: Costs Trade-offs Required in a Logistics System (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 45)

Accordingly, this diagram is more or less a logistics cost structure matrix, divided by distinctive areas of marketing and logistics departments. While each department has its own areas of focus: 4Ps for Marketing and different costs varieties for Logistics, both share the same interest of place or known as customer service levels.

In linkage of holding inventory and customer service level, a safety stock policy has always been a hot issue for managers. Such factors to consider are: customer relations, customer wants and needs, competitive service levels and the ability of the firm to support continuous production processes. In most situations, customer service levels are improved by adding safely stock for cost of carrying inventory has often been included for the firm or has been set arbitrarily at an artificially low level.

Although inventory investment figures will vary from case to case, relationships between inventory investment and service percentage are similar. Apparently, customer service levels cannot improved solely by adding safely stock but there's a need to develop precise inventory carrying cost so that inventory planning will be clear. Generally, a more economical policy is to stock the highest volume items at

retail locations, high and moderate volume items at field warehouse locations, and slow-moving items at centralized locations. The centralized location may be a distribution centre or a plant warehouse. This type of multi-echelon stocking procedure is referred to as ABC: Activity Based Costing analysis. (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 139)

3.2.3 Financial Aspects of Inventory Systems

Inventory plays an important role for a firm's assets. In fact, excessive inventory will reduce corporate profitability by net profit and/or company's total assets. The net profit is pulled by costs with holding inventory as insurance, taxes, storage, obsolescence, and damage & interest expense. In meantime, inventory investment amount will add on company's total assets, decreasing asset turnover and hurting cost of opportunity for other productive assets. Either way, excessive inventory badly damages company's net worth return.

The following graph shall demonstrate the calculation method with all costs associated with the amount of inventory stored by different categories: capital costs, inventory service costs, storage space costs, and inventory risk costs. (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 143)

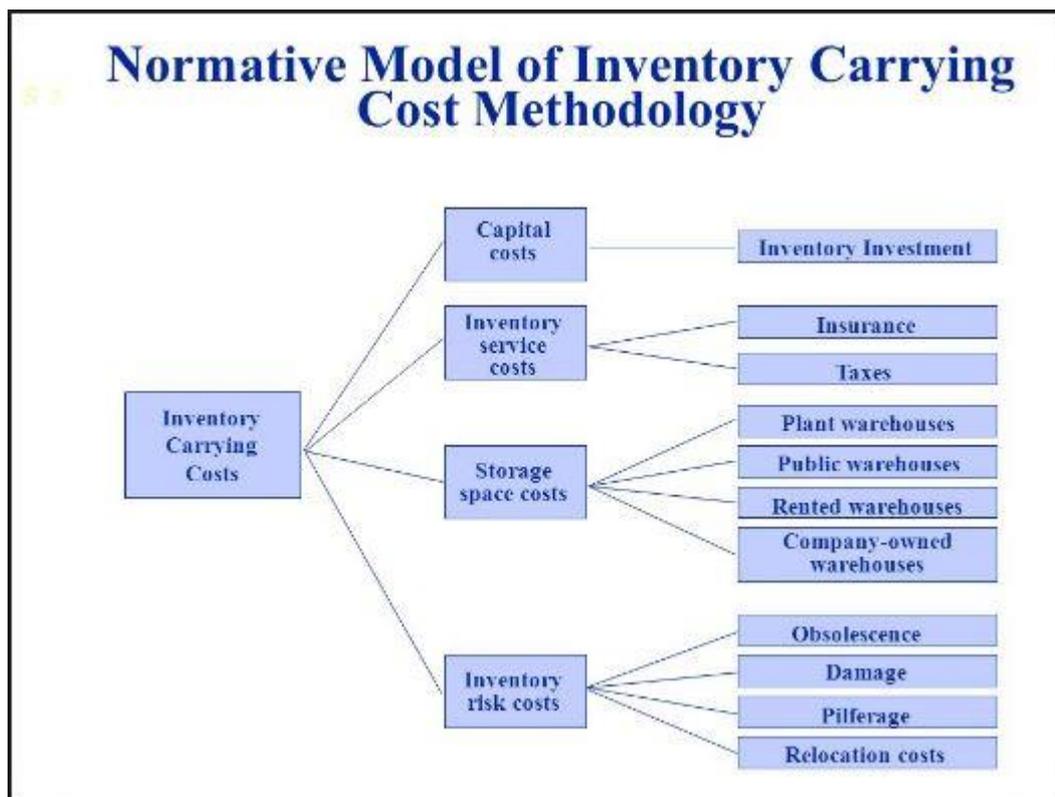


Figure 7: Normative Model of Inventory Carrying Cost Methodology (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 143)

3.2.4 Order Processing: Inventory Systems

A primary goal of inventory management is to achieve the best balance between inventory carrying costs and customer service. The essential task requires continuous and comprehensive planning upon the availability of information through communications.

By the fully updated information on orders, raw materials inventory and production scheduling shall be better managed. The distribution center can meet customer commitments without increasing inventories. The firm can prepare more accurate invoices, invoice customers sooner, and receive payments more quickly and with fewer reconciliations. In addition, reduced inventories and faster invoicing shall improve company's cash flow. Eventually, inventory management will be improved if crucial information is provided in time for planning inventory strategies. (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 157 – 158)

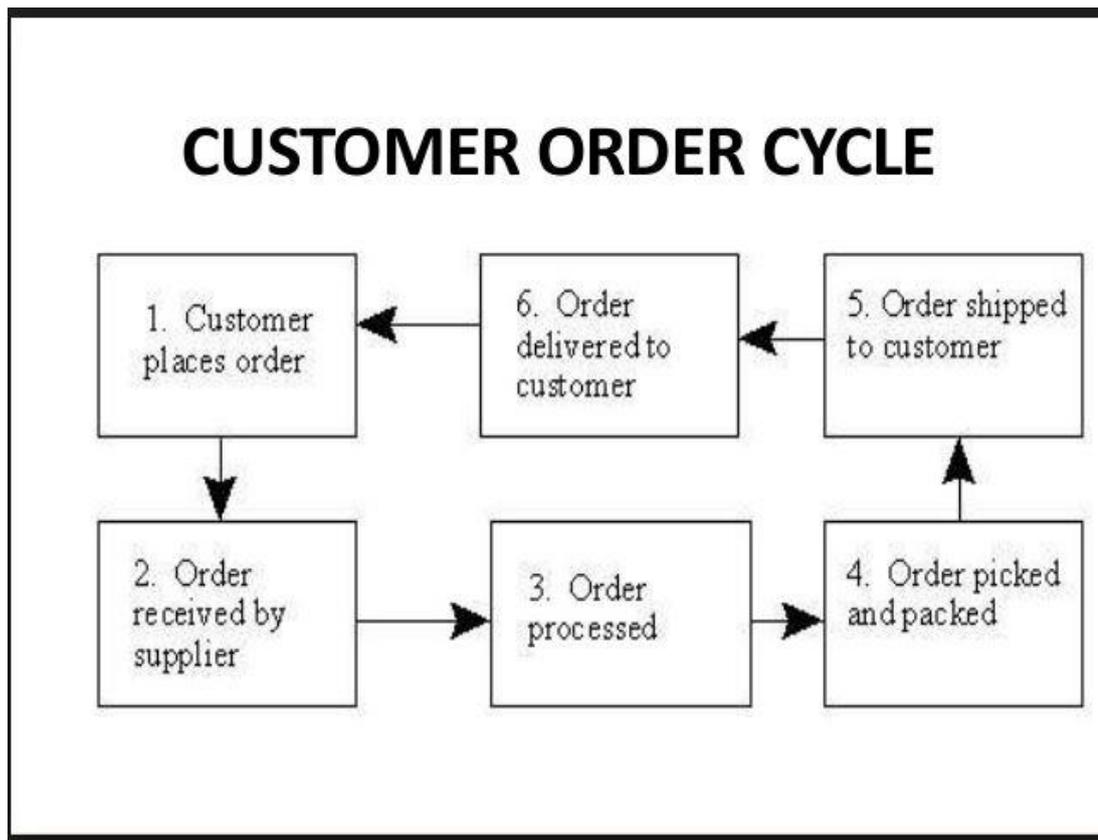


Figure 8: The Customer Order Cycle (Lai, K., Cheng, T.C.E., 2009, 59)

According to this graph of the customer order cycle, customers will first place their orders which will be grouped in batches to handle later. These grouped orders help companies to save costs and bring out good economies of scales in transportation and administrative processes. Once the order batches are received, the supplier will confirm via receiving notices and start preparing the orders. As processing these orders, the supplier will arrange necessary stocks according to the orders' details. The order will then be forwarded to accounting department for billing purposes. After the orders got ready to be picked and packed, the goods will be sent to warehouses and handled with protective materials for proper care if necessary.

As preparing shipments to customers, it's necessary to consider carefully about transportation choices so that the orders will be arrived on time and be maintained in good conditions. Once the orders are delivered to customers, customer service will take care of communication part to assist with uncertainty matters as goods returns, goods damages, theft and/or loss and etc. (Lai, K., Cheng, T.C.E., 2009, 58 – 59)

3.2.5 Returning Goods: Handling and Logistics Costs

While being at the end of order cycle system, goods returns is always the most problematic part with extra costs and more responsibilities laid on companies or suppliers side. Commonly, this is the stage where customer service proves their efficiency through effective communication with customers. Accordingly, there're two areas of considerations of how this returning matter can be managed: the reversed logistics and the returns processing.

Reverse logistics can be defined as the process of planning, implementing, and controlling the efficient, cost effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal. Essentially, reverse logistics is the process of moving goods from their "point of consumption" is the appropriate link in the supply chain for the purpose of capturing any residual value through remanufacturing or refurbishing, or for proper disposal. Thus, reverse logistics management represents a "systematic business model... to profitably close the loop on the supply chain". (Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram L.M., 2006, 282)

In the meantime, returning process involves the handling of the goods returns, transit packaging and surplus items. As a result, the process operation would incur reparation, reuse, refurbishment, recycle and disposal. Economically, there are considerations of economical scales of reusing products and the effect on cash flow of items that can be repackaged to be available for sale. Fines will be charged if the products and packaging are not disposed in a friendly to environment way. Nevertheless, doing nothing about returns also costs money as these stocks take up space, are difficult to count during stock takes and difficult to value.

Overall, the idea behind returns processing is to handle the return stock one way or another as fast as possible so that the return items would not sit in the warehouse for too long. Thus, there's a need for return items to be carefully managed and handled, especially as dealing with damaged and/or defective items, chemicals and hazardous products.

3.3 Just-in-Time Logistics (JIT)

Just-In-Time (JIT) is based on the concept of delivering raw materials just when needed and manufacturing products just when needed. The focus is to minimize waste in manufacturing. Despite the fact that JIT adoption brings great benefits to firm performance, many firms have found JIT logistics, with its focus on business logistics, difficult to practice.

From an operations perspective, the scope of business logistics is very broad. Hence, many innovative management concepts and terms have been built upon the basis ideas of JIT logistics. These concepts focus more on the two-sided relationships between customers and suppliers. Specifically, SCM, customer relationship management (CRM), vendor managed inventory (VMI), Efficient customer responses (ECR), and cooperative planning, forecasting and replenishment (CPFR) are the most widely known among management concepts for just-in-time logistics. (Lai, K., Cheng, T.C.E., 2009, 47).

Eventually, other areas as relations between JIT and firm performance: competitiveness and limitation, customer service management tools and other critical factors for successful JIT planning will provide a complete overview of implementing JIT in firms. (Lai, K., Cheng, T.C.E., 2009, 159 – 165)

3.3.1 The Goals of Just-in-Time (JIT) Logistics

The primary goal of JIT logistics is to eliminate waste in production and material for good economical scale of the company as well as prove friendly to environment by avoiding dead stocks and disposal activities for inventories that have been sitting in warehouses for a long time. JIT logistics operations also help to reduce lead time, throughput time while improving production quality, boosting productivity and thus enhancing customer responsiveness. Furthermore, JIT logistics practices help to cut down purchasing costs from owning excessive stocks.

JIT logistics method shall conduct such efficient communication within the firm, between the firm and the stakeholders. In short, the method helps structuring organization discipline and managerial involvement, empowering and motivating employees to engage in the decision-making process. Eventually, JIT logistics

activities shall integrate different functional areas inside the company without the gap between production and accounting. (Lai, K., Cheng, T.C.E., 2009, 21)

3.4 Contract Warehousing

In definition, warehouses operated by third-party logistics (3PL) providers are either established on behalf of a single customer or can be shared-user or public warehouses where a number of different customers share resources and are accommodated under one roof. Over the years, E-fulfilment services have been developed widely, for instance, warehouse premises for different business aspects. In fact, many multichannel operators have adopted the strategy of keeping e-retail volumes and traditionally store volumes together, either to utilize spare capacity or to maximize uses of separating channels. Several fulfilment services can be listed as following:

- Integrated fulfillment, where internet sales are carried out alongside existing retail operations
- Dedicated fulfillment, carried out in a purpose-built facility
- Store fulfillment, which involves picking online orders from existing retail shelves for separate delivery ex store.

Overall, 3PL services have been growing favorable ever since with the launch of new service and establishment of e-fulfillment. (Richards, G., 2014, 22-23). Under the 3PL model, there are three parties involved with getting a product to a customer: the manufacturer, the customer, and the shipper or 3PL firm. The services a third party logistics firm vary widely among fulfillment and logistics functions as following:

- Dedicated transportation contracting
- Transportation procurement.
- Inventory management
- Logistics management and consulting
- Freight audit and consulting
- Shipment tracking and tracing
- Reverse logistics (returns) and value added services (Handsake, 2016)

In a nutshell, 3PL service providers specialize in managing all aspects of shipping goods from manufacturers and distributors to their customers, wherever the location

is. The 3PL firm can operate their own fleets or those of their customers, reducing the manufacturers' liability and cost related to payroll, taxes and workers' comp insurance. A 3PL carrier may even cover the cost of cargo insurance.

3.4.1 Third Party Logistics (3PL): Advantages and Disadvantages

As everything has its two side, the uses of 3PL also has its ups and downs. In this part, the analysis of advantages and disadvantages from using 3PL shall equip the author proper knowledge to proceed with the 3PL research in later practical parts.

Concerning advantages of recruiting 3PL, the benefits can be described as following:

- 3PL has access to newest technology that is required to perform the functions easily and with efficiently.
- 3PL will pull out most use of modern technology at an appropriate standard than any other organization.
- 3PL has sufficient facilities and space to perform all the required tasks such as heavy transport facility and warehousing.
- 3PL is capable of fulfilling the requirements and goals of multiple clients at same time.
- 3PL can provide great flexibility and resources to fulfill the customer demands at different places.
- Through 3PL, inventory will be easily accessed and the orders can be delivered at very rapid pace. (Writepass, 2012)

Basically, a third party logistics provider handles all necessary regulations and makes it easier for manufacturers and/or firms to test and enter foreign markets. Aside support on freight services, a 3PL can as well assist with logistical issues involved with internationalizing a product line, including translating packaging and handling the shipping requirements for such low cost. In case of customs issues like lost shipments, lack of tracking ability, brokerage fees and unpredictable delivery times that can make shipping internationally quite challenging, a third party logistics provider can bring great help as well.

On another hand, 3PL has the ability to manage fulfillment from multiple markets. Specifically, 3PL is able to ship goods around the country or around the world. They

also have the warehouse capacity to set up fulfillment in many foreign and domestic markets. In terms of up-front costs, it's much cheaper to hire a 3PL service provider than owning or renting warehouse space in targeted markets to test or penetrate. Through 3PL's fulfillment services in multiple markets, companies can save much cost on smaller shipments, and getting products into customer hands much more quickly.

Concerning the disadvantages of recruiting 3PL, there are considerations in case of uncertainties to avoid great problems that damage the company's reputation. One of the biggest problem is the communication conflict that can result operation failures or interruptions. The outsourcing company that uses 3PL service may end up losing some of the control over the operation, for instance, lost control over shipping function or bad effects on customer satisfaction. Another disadvantage is the hidden cost factor. A 3PL service provider may be cheaper up front, but over time, the cost structure will likely be more expensive than handling the shipping functions in-house, provided those in-house functions are operating efficiently. (Sooper Articles, 2011)

3.4.2 Contract Warehouse (3PL): Decision Criteria and Considerations

Having identified the uses of 3PL service providers alongside all benefits and disadvantages, there now comes the considerations among selection criteria for an eligible 3PL partner.

First, it is efficient to consider about the basic qualities that a 3PL should acquire for a long-term partnership commitment. The quality checklist is described as following:

Cost efficiency	
Increasing in reliability and strength in service	
Imporving space and capacity utilization	
Short lead time	
Developing of flexibility	
Provide access to techniques and expertise	
Better cash flow	

Figure 9: Factors of choosing a partner (I2 Wordpress, 2017)

Second, logistics audit will clarify operations performance and ability of supplier or logistics partners. The audit purpose is to gather sufficient information about current operations and performance of such suppliers or partners or even the logistics companies themselves. It helps to review the performance and efficiency of the concerned parties' logistics procedures, costs, resources, products and etc. (Waters, F., 2003, 75)

Last but not least, consideration to work toward customer responsiveness along with all catching-up innovations in last few decades will help building better production practices and improving the company's logistics performances. Indeed, the following graph about the tranformation in different logistics models over the years will bring a refreshing view of how companies have been catching up with latest logistics trend.

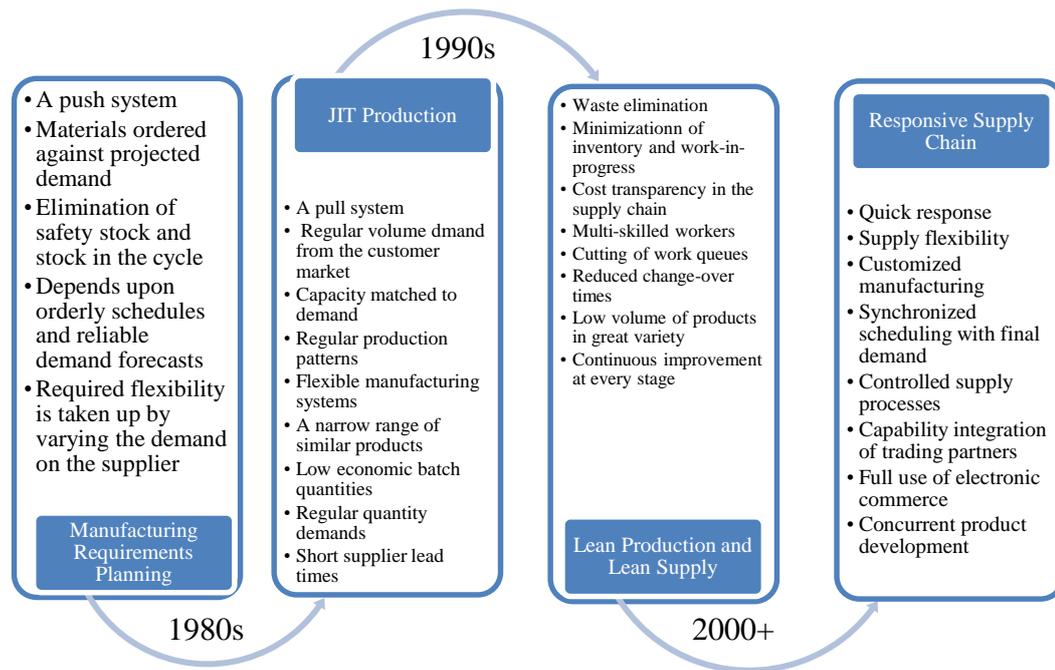


Figure 10 Innovation in Production Supply Chain (Hughes, J., Ralf, M., Michels, B., 1998, 96)

4 METHODOLOGY APPROACH

The following content will be including the research work which is conducted for practical parts of the company case.

4.1 Quantitative Research

Since there are three stages of the logistics fulfillment services design, the quantitative research involves such data collected from Case Company database of historical sales records, inventory records and the company's logistics operation cost structures.

4.2 Qualitative Research

The qualitative research on another hand is the author's own research for 3PL partners, company information about procedure and policies in inventory

management. Other areas to cover will be including the company's ordering process, ABC analysis.

4.3 Data Collection and Analysis

The data collection and information search will be mostly found from company's database with the approval of company's owner. Other than that, to find out the objectives or problems that Case Company is having with their inventory management practices, expert interviews (with owners) as well as discussion contents with suppliers and/ or partners can be included for the in-depth analysis by the company's owner permission.

5 LOGISTICS FULFILLMENT SERVICES: PHASE 1 – BUSINESS REVIEW

In linkage with the thesis topic, the author shall go on identifying the Case Company's problems with inventory management for an appropriate solution in the end. Specifically, it is necessary to firstly investigate the Case Company's logistics performance and activities for the past year. Then, in-depth discussion on company's problems identifications and areas of consideration shall equip the author enough knowledge to properly approach the second stage of the inventory strategy.

5.1 Case Company's Service Identification

As mentioned before, Case Company's service is based on fulfilling needs of Crowdfunding projects. Accordingly, these Crowdfunding suppliers got their products' ideas presented on Crowdfunding platforms as Indiegogo or Kickstarter to receive financial supports from backers as prior advances to actual manufacture. During the fund raising process, business customers (B2B) and private customers (B2C) database shall be built while the Crowdfunding companies pull their resources together to manufacture the products. In short, despite the fact that sales will keep pouring in with full details of customers' orders, there is no inventory available.

Toward Case Company perspectives, before signing service agreements with Crowdfunding suppliers, the company owns none of the inventory nor has any control over the manufacturing process. Consequently, company's logistics model and specifically the inventory management process will be organized and handled differently. As there are different needs from various Crowdfunding projects to be fulfilled, the company's logistics service is varied from case to case. However, the main aim of the service is to provide a full package to Crowdfunding customers including worldwide warehouse facilities, international/ domestic shipping fulfillment as well as occasional set-ups for custom clearance, VAT registration and etc. Thus, there is a high need for Case Company to associate with third party logistics partners (3PL) to become eligible for such logistics services.

5.2 Company Products

Over the years, Case Company has been working on several Crowdfunding projects, namely: Leveraxe and Spinegym. While Spinegym products are still under manufacturing, the company has been selling Leveraxe products for a couple of years now. The main distribution channels are Amazon, official Crowdfunding suppliers' websites as well as Case Company customized webshop.

As a result, the company has reached new deals with more Crowdfunding projects, namely: Fitwood, Neck Backer and etc. On account of the new webshop, the company has launched new webshop website with new means of inter-departmental communication platforms of Trello and tickets systems (customer inquiries). Some of the products to be sold on the webshop are Bubble Cap, Ricu Cut and etc.

5.3 Company Operation Process

There are two distinctive operation processes that Case Company go through as different phases of company's business. First, the product approval process is incurred to establish partnerships with new Crowdfunding projects. Then, the focus on company's logistics area is described in the company's retail process map. Overall, both process maps are attached and illustrated in the Appendices 2 and 3.

In short, Case Company's retail process aka the product fulfillment matrix involves interdepartmental communication and procedures among sales and marketing, customer service and logistics departments. The final outcome is to effectively associate with Crowdfunding projects' needs and get the logistics services delivered to end customers.

Accordingly, once new Crowdfunding project is permitted, sales and marketing department will get on their expertise areas of products advertisement, sales plan with support from customer service on products warranty, return policy, maintenance and language translation. As customers' orders come pouring in, Crowdfunding suppliers will build up customer database and issue order confirmation to their customers. The information will then be passed to logistics department including all necessary product details to arrange equivalent logistics services. After that, Case Company logistics department will co-operate with 3PL partners to process all received orders and get them shipped to end customers. During this process, tracking confirmation will be issued and communicated among all concerned parties internally and externally (Case Company to Crowdfunding partners and then to end customers). Upon uncertainties as un-delivered products or products returns and exchanges, customer service department will contribute their assistance with direct customer contacts.

5.4 Company Activity-Based-Costing (ABC) Analysis 2016

As reviewing Case Company ABC analysis in 2016, the company's cost structure is consistent with activity costs of customers placing orders, order processing, products' picking and packing, shipment pickups, customer service and product return process. The differences in cost structure, however, are varied among different service fees, namely: salaries with social expenses, sales channels fees (Amazon, customized webshop, etc.), cost of premises, shipping fees, product returns and other costs. Under circumstance of company's confidential information, the activity cost structure has been converted to percentage over total operation costs. The details is shown in the following table:

Case Company Cost Structure 2016						
	Customer places order	Order processing	Pick and pack product	Shipment pickup	Customer service	Product return process
Salaries with social expenses	13,10%	8,73%	4,37%	1,31%	13,10%	3,06%
Sales channel fee	1,16%	0,87%	0,87%	0,00%	0,00%	0,00%
Cost of premises	7,97%	2,28%	6,83%	1,14%	4,10%	2,73%
Shipping	0,00%	0,00%	0,00%	21,84%	0,00%	1,46%
Product returns	0,00%	0,73%	0,00%	0,29%	0,00%	1,16%
Other costs	0,48%	0,48%	0,48%	0,48%	0,48%	0,48%
TOTAL COSTS	22,72%	13,10%	12,55%	25,06%	17,68%	8,89%

Figure 11 Company Cost Structure 2016 (Case Company , 2017)

From this data table, there are three areas that occur major costs for the company. Mainly, they are service fees for customer places order (22,72%), shipment pickups (25,06%) and customer service (17,68%). The product return process occur the least cost of 8.89% over company's total operation cost. These numbers reveal that there are distinctive focus areas for Case Company and thus the concerns in these areas might remain for the following year in 2017. In reference to the resource drivers, the different fees components are explained through the following table:

The Resource Drivers	
Salaries with Social Expenses	Working hours
Cost of Premises	m ²
Sales Channel Fees	Assigned directly to customer events
Shipping	Per lbs.
Product Returns	Per item

Figure 12 Resource Drivers (Case Company , 2017)

Though not shared by company's owners, some assumptions on problems under the focus areas can be taken into account. The second highest cost of customer placing orders incurred by various fees components of salaries with social expenses (13,10%), sales channel fees (1,16%) and cost of premises (7,97%). While the salaries must have been paid to sales executive to produce sales and gather customer

database, cost of premises can be in account of office or other working space rental. Much as being in different cost category, the order processing is as important as having customer placing orders and thus these activities could have been closely linked and done by same department.

In regards to shipping cost structure including products' picking and packing and shipment pickups, it generates major focus on shipping activity by the highest fee of 22%. Since the activities in this area might have been carried by third party logistics or freight shipping partners, there was little need of premises for instance, warehouse facility. However, as there was still a need of empty and wide space to handle inventory, the premise cost component of 6,83% to pick and pack the products was reasonable.

On account of customer service cost structure, the main activity could have been responding to customers' inquiries toward deliveries, handling customer complaints and etc. Thus, it was as reasonable as the many hours the job could have taken to get customers placing order, which incurred the same level of activity cost contribution of 13,10%.

Lastly, details of Case Company assets under depreciations shall equip a better view of different cost allocation of different activities inside the company. In definition, depreciation refers to the cost allocation of assets during the period those assets were used. Accordingly, shipping activities take the highest depreciation percentage of 55%, while customer service operation is the second highest by 25% depreciations of company's assets. Lastly, the order processing area has the lowest assets depreciation of 20%. The data is clearly demonstrated in the table below:

The Assets Under Depreciations Divided into Different Activities	
Customer Places Order	10%
Order Processing	10%
Pick and Pack Product	30%
Shipment Pickup	25%
Customer Service	15%
Product Return Process	10%

Figure 13: Company's Assets Under Depreciations (Case Company , 2017)

Through these data, the company might have owned warehouse facility until last year, 2016. However, realizing that the warehouse use was not as efficient as expected, the owner decided to shut down this facility to look for fulfillment solution

from a third party logistics. As for other areas of sales and marketing (orders processing) and customer service, though those cost allocation took less than logistics part, the importance was apparent and thus could not eliminate nor dismiss in any way. Yet, improvements in communication channel or some restructure of communication model could be useful. After all, in able to improve company's logistics activities performance, it requires harmonious co-operation and good information flow between logistics department and the other two.

5.5 Problems Identifications

In order to align the company's logistics problems with the thesis topic about logistics fulfillment services design, the author had an interview earlier with company's owners. Details about the interview is attached in Appendix 1.

First question about company's goal of logistics, the owner revealed that he wanted to have the least expensive, most responsive, most flexible, and convenient logistics service for FI webshop and for the crowdfunding customers to ship their products. As more Crowdfunding signed contracts means more money, the owner wanted to offer these customers a nice logistics package to ship their products after their campaign is over.

Second question about logistics challenges that the company is facing, the owner revealed that Case Company doesn't own any warehouse right now. The fact that the company owns little inventory would mean little bargain over shipping companies. Other than that, the company doesn't run any logistics software nor any other software integration to company's sales channels.

Third concern about an logistics fulfillment services design, the owner expressed that he would like thesis author to provide a solution or even better to come up with such plan.

Fourth, the owner expressed the need to look for third party logistics (3PL) partner and there was a selection criteria for the research. The chosen 3PL should be eligible for competitive price, effective sales channels integration, global warehouses for easy access to inventory from different location in the world.

In term of getting access to company's confidential information and data as well as the permission to reveal them in thesis, the owner said to mention the company's

name as much as possible. However, every information or data to be used for the thesis must be explained to get the owner's approval, case by case.

6 LOGISTICS FULFILLMENT SERVICES: PHASE 2 – OPERATIONS SETUP AND CONSIDERATIONS

Toward the interview with Case Company 's owner, there will be other outcomes coming along with the thesis research rather than its primary topic on logistics fulfillment services design. The main purpose is to solve logistics problems that the company is facing, especially with its unique business model. These outcomes would relate to inventory management practices to come up with a relevant logistics fulfillment services design in the end. Specifically, these outcomes are: the selection process for 3PL, inter-departmental communication model, logistics service process and communication between Case Company , 3PL and Crowdfunding customers.

In this part, the author shall discuss about considerations for these outcomes as well as all possible problems/ hazard that would relate to her thesis topic. The selection process for 3PL with detailed supplier audit plan on areas of pricing, competitiveness, and global locations will first solve company's problems of warehouse facilities. Then, the communication within the company and between the company and Crowdfunding customers will be done on basis of getting shipping details (inventory information and volume, shipping plan) as well as shipping addresses and other information. Eventually, the purpose is come up with a preliminary design of logistics fulfillment services.

6.1 Third Party Logistics (3PL): Research and Solution

In the beginning of the search for 3PL, there was a set of the selection scope, namely: 3PL's service quality, warehouse locations, cost structure, reliability, related freight companies, relevant policies and conveniences. After looking around for compatible 3PL partners in combination with Crowdfunding customers suggestions, the comparison was based on some companies as following: TNT, Customs Parcel Solutions, China Divisions, Shipwire, GLS, and Avid Logistics. Except for TNT and

Customs Parcel Solutions, two companies that didn't respond to logistics inquiries of Case Company, other companies assisted all concerns thoroughly and thus the selection process went smoothly.

As an intern of logistics department for Case Company, the author sent out a general message to request order fulfillment and warehouse quotation for one of the Crowdfunding project, Spinegym. In detail, the quotation was to be built upon the package dimensions (Length x Width x Height) of 1.8" x 16.7" x 2.6" at weight of 9.5 lbs. In the following part, the supplier audit progress and the specific bargain over the selection criterias will be analysed case by case.

6.1.1 China Divisions

In short description, China Divisions is specialized in providing full package of order fulfillment services for E-Commerce business. The company has had prior experiences dealing with similar customer as Case Company. Specifically, the contacted fulfillment executive revealed that she has lately handled two different Crowdfunding projects (Kickstarter and Indiegogo) with total fulfillment orders up to 8000 units.

The limitation was that China Divisions only has their warehouses in Shenzhen, China. Their bargains were that owning multiple warehouses are not always as helpful as they seem to be. The saving in shipping costs might not outweigh the increased cost associated with sending goods to each of the additional warehouses. After all, multiple warehouses only make sense if there's a focus area of customers, to whom the products will be sold to and where they are sent to. Nevertheless, this bargain led to an offer of free-of-charge warehouse for at least the first three month period.

In term of returning policy, the procedure is promptly addressed by the fulfillment executive. However, no further information can be found on the 3PL's website and thus, the policy appears to be confusing as the share of responsibility remains unclear. Eventually, there is a high possibility that the returning and refund procedure will be handled case by case which can be very time consuming.

Toward the cost structure, the basic quotation was based on warehouse fee, shipping fee, picking and packing inventory fee as well as tariff and VAT fees to get the

inventory imported into China. Depending on the volume of inventory and its value, the quotation will be calculated accordingly. For instance, after three months of free warehouse, there will be certain charge per cubic meter (CBM) whether total inventory is smaller or bigger than 10 CBM. As for the import tariff and VAT, the calculation is based on custom rules and relevant tax regulations of certain country. According to China Division, the quoted inventory is subjected to 23% of tariff and VAT (6% tariff and 17% VAT) over total value of inventory. Otherwise, there's another way to countervail tariff and VAT issues through a China Division's relevant certificate, which cost about 800\$ within one month time to get it ready.

6.1.2 GLS

GLS is a big logistics company, one of the leading parcel service providers in Europe, which covers up to 41 European countries and 7 US-American states (GLS, 2017). However, due to uncompetitive quotation with limited warehouse locations in Europe and USA while Case Company ' Crowdfunding customers receive orders from all over the world. The owner decided to not choose GLS.

6.1.3 Avid Logistics

AVID Logistics is a new logistics business, found in 2011 and based in USA. The company operates in small scale and focus on contract warehousing and fulfillment services. (AVID Logistics, 2017). Yet, on basis of general quotation with possibility of many hidden costs, Case Company owner also decided to turn AVID's service offer down.

6.1.4 Final Selection: Shipwire

Shipwire is a big company that belongs to the Fortune 100 companies list. As a business unit of Ingram Micro, Shipwire makes its presence with advanced technology platform and distribution centers in over 45 countries in the world. Over the years, the company has been awarded with its Shipwire platform and become a

leading European E-Commerce service provider. In short, the 3PL is well-known for its global order fulfillment, commerce at scale services upon quite competitive pricing strategy. (Shipwire, 2017)

After a round of comparison and thorough consideration, the owner decided to choose Shipwire to be 3PL partner for Case Company . Basically, the E-Commerce service provider adapts well with almost all quality that Case Company was looking for: competitive cost structure, various contract warehouses around the world, responsive to customers' inquiries, wide network with many reliable freight companies and etc. On top of everything, there is the convenience of Shipwire platform that enables various features under customer's account. These features complete such competent order management solution so that the orders can be extended to anywhere, including: quick access to locations, inventory management, order routing, order processing, providing shipping rates, label creation, sales automation and so much more.

Other than that, Shipwire structures and organizes all necessary information on their website quite clear and thus it makes all communication between concerned parties transparent and very helpful. Concerning matters of inventory management, such guidance on shipping and inbound inventory, return and refund policy prove to be very handy as they act as check list on requirement how the inventory should be packed and received at warehouse so to avoid extra cost for handling inventory. More details about Shipwire and the support upon inventory management strategy shall be mentioned in the following part and in the Appendix.

6.2 Warehouse Facilities Management

As mentioned above, one main quality to choose any 3PL is that 3PL should have various contract warehouses around the world. The reasons are to gain quick access to inventory, reduce shipping cost, not to mention other conveniences in inventory management practices. Concerning Shipwire, the 3PL is present all over the world with various fulfillment centers in Canada, UK, Netherlands, China, Hong Kong, Australia and different States in U.S.A.

Nevertheless, there are also downsides as in importing and extra costs on transportation that make the uses of multiple warehouses become more sensible. The

causes behind these disadvantages are the necessity of registering the business abroad as well as following tax regulations in different regions and countries. Even with the support of NRI (Non-Resident-Importer) or custom brokerage, there will always be a must to submit service tax and tariff. Eventually, this will not just affect shipping cost standpoint but also transit time and inbound freight costs. Thus, there will occur the need of another 3PL or 4PL for further assistance on these matters.

Meanwhile, there are basic operations as setting up inventory, preparing SKU as well as gathering all other necessary documents to clear off import duties so that the inventory can be well received and recognized at ports and warehouse. As always, the more preparation is taken care, the less uncertainties there are and thus extra fees can be avoided.

6.3 Inventory Setup (SKU)

As Case Company is not manufacturing nor owning the inventory, the co-operation with Crowdfunding customers for relevant information to set up SKU (Stock Keeping Unit) is very important. The necessary information include products volume; specific details on how the products are packaged: inner packages, master cases or pallets by dimensions in inches and weights in pounds. Other than that, since majority of the orders shall be shipping internationally, it acquires information to conduct proper importing procedure. Accordingly, such relevant information include EAN (European Article Number), products' country of origin, HS code (Harmonized System) as well as estimation of production cost, whole sale and retailing prices. While the packages dimensions and products' wholesale and retailing prices are simple to acquire from Crowdfunding customers, it is rather difficult to get the production cost as it is confidential information.

Afterward, the practices of obtaining all these necessary information must be pulled together, filed by Case Company then get them uploaded into the 3PL, Shipwire's platform before inbound shipments. The main purpose is to issue ASN label (Advanced Shipping Notice) for Crowdfunding customers to attach outside of their packages. The labels with details of SKU barcodes, product description and warehouse address shall help to recognize the inventories once they are shipped and received at ports and warehouses.

On another hand, such applicable shipping documents as ISF form (Importer Security Filing), bill of lading, pro forma invoice, packing list will become handy to clear custom duties. These documents are prepared by Crowdfunding customers and/or the chosen freight forwarders. However, they need to be filled and sent back to the custom brokerage before the inbound shipments reach any port to get transferred to warehouses.

On top of everything, it's unnecessarily that all Crowdfunding customers have their own logistics department or their relevant knowledge of these areas. Thus, a checklist with inventory information to be gathered and guidance on proper packaging will be as convenient so that all costs are promptly addressed without incurring any penalty or extra fees.

6.4 Order Fulfillment and Shipping Plan

Before getting any further with details on order fulfillment and shipping plan, it is necessary to review sales aspects from both sides, Case Company and Crowdfunding customers. The nature of Crowdfunding projects is that the orders are placed and purchased even before the products are manufactured and thus though sales are produced, orders will not be fulfilled right away. Toward Case Company, the company doesn't own inventory as in term of manufacturing or directly supplying them, at least not until the company signed service contract with Crowdfunding customers. Upon this business nature, demand forecast is almost impossible to make however there is still a need to keep some sales plan coming up in case there are returned products stacking up in the warehouse. Accordingly, this model mainly involves push strategy to fulfill orders under scenario the inventory are ready for outbound shipments to end customers.

Concerning the 3PL, Shipwire's orders fulfilling procedure, after identifying and uploading SKU information into their platform and get the inventory sent to the selected warehouses, the next step is to set up back orders information. Specifically, this worksheet contains details of customers' orders with products quantity, description, contact information and shipping addresses. Through this worksheet, Shipwire can set up shipping plan, calculate transit time and shipping costs for the outbound shipments. As for Case Company share of responsibility, the company

needs to clarify cases of priority orders, updates on adds-on and customers' addresses changes. The purpose is to get the back orders worksheet as accurate and up-to-date as possible so that it can help reducing uncertainties and maximizing customers' satisfaction.

Overall, while the orders fulfillment and shipping process seems clear, the obtained information requires major support of customer service in term of customer satisfaction and orders' updates. As mentioned above, the pre-orders are placed as in return of financial backers for Crowdfunding projects. Alongside with the manufacturing which takes months, the backers can grow impatient and thus changes, urges are understandable. Under these circumstances, customer service plays an important role in easing the situation and "buy" some more time in case of manufacturing delays. On account of Case Company customer service practices, the company carries on a ticket system that allows the concerned departments to receive and solve customers' problems soonest as they arise. All in all, these practices help to pull all actions in line with updated information and thus its effects on on orders fulfillment and shipping plan cannot be underestimated.

6.5 Cost Structure and Considerations

Now that the problems and the basic operation of Case Company's logistics department have been clearly identified, it is about time to consider about cost structure as well as the solutions to the remaining problems or possible hazards. While the cost structure cannot be mentioned, considerations about ways to keep such effective cost will be taken into account. Other than that, relevant solutions to current Case Company logistics problems shall provide a better view for phase two of the logistics service design. Afterward, the purpose is to come up with the final plan with alternatives in phase three of the inventory strategy.

Concerning warehouse facilities management, the monthly cost structure consists of a minimum monthly spend amount, handling fee, storage and support pricing that Case Company has to settle with the 3PL, Shipwire. However, the nature of Crowdfunding business is unstable with changes to be incurred from time to time. Thus, negotiations for flexible terms of service contract with Shipwire shall cut the tension for Case Company if Crowdfunding customers need more time to get their

products ready for inbound shipments. Accordingly, Case Company reached the deal to have the minimum monthly spend to be waived during the ramp period of the first ninety days. The handling fee will only occur once the inventory is received to handle and pick at the warehouse. The storage and support pricing calculation is based on total inventory volume by CBM (cubic meters) yet there is no additional charge to use multiple warehouse facilities.

Concerning logistics fulfillment services design, there's a high need to conduct clear guidelines on shipping and inbound inventory for Crowdfunding customers to follow precisely. In case the inventory does not come in standard packaging size, there will be an additional charge of value added services on basis of hourly rate per work order. Hence, it is best to have clear communication between Case Company and Crowdfunding customers toward the packaging guidelines to avoid the extra cost of handling the inventory.

Concerning the support of customer service, excellent customer relationship with assistance on customer inquires, updates on orders' changes as well as follow-ups on orders' returning/ exchanging process is crucial to keep all logistics practices in line. Specifically, high rank of customers' satisfaction means less orders' cancellation while shipping list will be kept up-to-date with all changes to be promptly addressed. Accordingly, the shipping route shall be planned precisely by correct inventory allocation and thus all relevant costs of transportation, inventory storage, order processing and information will be addressed effectively.

Concerning matters of custom clearance and/ or VAT registration over the imported inventories, Case Company shall need to own these inventories including all necessary products' information of production cost, HS Code, EAN/GTIN code, country of origin, selling prices, relevant invoices and etc. Overall, this shall require close contacts between FI and Crowdfunding customers to collect the required information.

7 LOGISTICS FULFILLMENT SERVICES: PHASE 3 – JUSTIFICATIONS, FEEDBACK AND EVALUATION

In this part, the author will apply the preliminary design of logistics fulfillment services design on a combined shipments that she has had experiences working on

during her internship. Specifically, this shipment involves two Crowdfunding customers of Case Company for their upcoming shipment from Finland to U.S.A in mid of May, 2017. The author's responsibility was to look for eligible custom brokerage to import the products into U.S.A, assist inventory setup, upload SKU information on 3PL's platform and other practices to get the inventory ready for inbound shipments. Accordingly, all encountered problems and learning experiences shall be addressed as consideration to finalize the logistics fulfillment services design.

7.1 Inventory Management Practices

First of all, it's important to have Crowdfunding customers go through a checklist for clear awareness of necessary information and procedure upon inventory management practices. Two documents of the inbound inventory & shipping guidelines and the return & refund policy are quite handy and efficient in this stage.

After gathering all necessary products' information, it is about time to fill in SKU details and get them ready to upload into 3PL, Shipwire's platform. The purpose is to successfully process the "send inventory to warehouse" function as well as to issue ASN label (Advanced Shipping Notice) to Crowdfunding customers with inventory barcode and the warehouse addresses. Afterward, these practices help to get the inventory well received and easily recognized once they reached to the warehouse.

As the inbound shipment is ready to go, Crowdfunding customers can review the following reminder to make sure the package is prepared in the standard scheme to avoid additional cost of non-standard receiving. This final checklist can be described as following:

Checklist Tasks	Status
Have a Receiving Order (ASN) created for it	
Arrive with tracking information	
Arrives properly labeled and packaged	
Arrive with the products listed on the ASN	
Arrive free and clear of customs, duties, and tariffs, with correct importer of Record & Tax ID information	
Arrive at the pre-scheduled appointment date/time	

Figure 14: Checklist on Standard Receivings (Shipwire, 2017)

7.2 Customs Clearance and Import Duties

By the fact that Case Company will act as the importer in most cases, it is necessary that the company has as much ownership of the inventory as Crowdfunding customers. Thus, there is a need for FI to actually buy the products to be company's own inventory. Other than that, as FI is registered in U.S.A, there will another need to register business for valid VAT (Value Added Tax) and tax ID in other countries that has 3PL, Shipwire's warehouse facility.

As for the combined shipment of Crowdfunding customers, Case Company decided to go with customs brokerage service from customs brokerage partner for their worldwide service range. Accordingly, there is a checklist of applicable shipping documents to prepare and submit to customs brokerage partner at least 24 hours prior to sailing. The documents list is as following:

Documents Required	Actions
ISF '10+2' (Importer Security Filing) worksheet	Filled by the freight forwarder or Crowdfunding customers
Bill of lading	Prepared by Crowdfunding customers
Pro forma invoice	Prepared by Crowdfunding customers
Packing list	Prepared by Crowdfunding customers

Figure 15: Document Checklist for Customs Clearance (Duong, 2017)

In term of cost structure, the customs clearance service fees are based on the commodity volume, description and total number of annual shipments. Regarding the combined shipment, there was a concern if the reported commercial value can be lowered in terms of free gifts to influencers/ backers for their Kickstarter support. However, in reference to US guideline on customs value and information from the customs brokerage consultant, no items can be valued at no charge providing there's a must to clarify reasonable value on the invoice that reflects the item. Basically, different countries have different tax regulations and thus with or without customs brokerage service, there will be a need to look up relevant information to solve Crowdfunding customers' tax inquires case by case.

7.3 Customer Service Aspects and Order Fulfillment Process

As mentioned above, customer service proves their sufficient supports to logistics activities through updating order changes, repsonding to customers' inquires and handling return & refund requests. In order to keep these practices in line with logistics activities, it requires in-sync communication between customer service and logistics departments. Accordingly, Case Company has come up with the ticket system for such communication purpose. In case of unsolvable logistics related inquiries, customer service agent can pass them over to logistics executive for better solutions or responses.

Mainly, these inquiries refer to the order changes either by shipping addresses or additional add-ons. As customer service agents pull the order changes into a summarized worksheet, logistics executives will update these changes accordingly into proper Crowdfunding campaigns (either Kickstarter or Indiegogo) orders' lists. Due to the big order amount in range of thousands, confusions and duplications can take place and thus there's a need to mark these odds for further discussion and cross communication between logistics, customer service departments and end customers. From experiences of updating add-ons orders, the author has summarized the odds that require further support from customer service as well as their implementation progress. Afterward, the main purpose is to provide precise updates for back order worksheet, which will allocate the inventory to the right warehouses and later on

benefit the shipping plan and minimize much of cost structure. Overall, the updates results are illustrated as following:

Marking Color and Symbol	Definition	Actions Required	Progress
ABC	Normal changes	None	Done
ABC	No new changes found or there are addresses changes only	Recheck with customers on their orders amount	
ABC	No new changes found thus no change done!	Recheck with customers on their orders amount	
ABC	Results found in red zone (unpaid customers) but updated the changes anyway	Recheck with customers on their orders amount	
ABC	No results found (either by email or customers' names)	Recheck with customers on their orders amount	
ABC	Found in both Indiegogo and Kickstarter lists. There are more than 3 results in same file, meaning the updates has been done --> repeated content.	Recheck with customers on their orders amount	
ABC	5 - 6 results found in same file (in both orders placed and refund areas)	Recheck with customers on their orders amount	
ABC	4 - 6 results found in same file with repeated contents, no change made	Recheck with customers on their orders amount	
ABC	4 - 6 results found in same file with repeated contents, but updated on 1 row anyway	Recheck with customers on their orders amount	
ABC	Spine Gym Seated? Unsure how to update	???	
ABC	Confused results	Recheck with customers on their orders amount	

Figure 16 Add-ons Updates Results and Progress (Duong, 2017)

7.4 Finalizing Logistics Fulfillment Services Design

In summary, the final design of logistics fulfillment services design will be developed throughout justifications from actual logistics work orders' experiences.

7.4.1 Activities checklist and reminder

The activities checklist is necessary to review the whole process between concerned parties: Case Company , Crowdfunding customers, Shipwire and customs brokerage. Majority of these activities must be done and checked up before the inbound shipment within boundaries of logistics service contracts. Specifically, this checklist includes:

Main Checklist	Status
Request on product information: commodity description, package dimensions, total weights: before and after packing.	
Customs clearance document and/or VAT registrations (FI is the importer): product's country of origin, wholesaling and retailing prices, manufacturing cost, EAN/ GTIN code, HS code, bill of lading, commercial invoice, ISF form, pro forma invoice, packing list	
Inbound inventory and shipping guidelines (Appendix 6)	
Stock-Keeping-Unit (SKU) upload into Shipwire's platform and process "send inventory to warehouse" function.	
Prepare the Advanced Shipping Notice (ASN) label to email to Crowdfunding customers	
ASN label must be attached outside of products' packages	
Customs clearance document and/ or VAT registration must be filled and sent back right after inbound shipments	
Prepare back order templates with with updates on shipping addresses/ orders details for outbound shipments	
Outbound shipments quotations	
Return and refund policy (Appendix 7)	
Payment settlement and monthly reports: shipments report, inventory management report, customers' account balance report.	

Figure 17 Preliminary Checklist for Inventory Management Practices (Duong, 2017)

After gathering all necessary products' information, SKU details will be uploaded into 3PL, Shipwire's platform. The purpose is to successfully process the "send inventory to warehouse" function as well as to issue ASN label (Advanced Shipping Notice) to Crowdfunding customers with inventory barcode and the warehouse addresses. Afterward, these practices help to get the inventory well received and easily recognized once they reached to the warehouse.

As the inbound shipment is ready to go, Crowdfunding customers can review the following reminder to make sure the package is prepared in the standard scheme to avoid additional cost of non-standard receiving. This final checklist can be described as following:

Checklist Tasks	Status
Have a Receiving Order (ASN) created for it	
Arrive with tracking information	
Arrives properly labeled and packaged	
Arrive with the products listed on the ASN	
Arrive free and clear of customs, duties, and tariffs, with correct importer of Record & Tax ID information	
Arrive at the pre-scheduled appointment date/time	

Figure 18: Checklist on Standard Receiving (Shipwire, 2017)

7.4.2 Customer Service Aspect and Order Fulfillment Process

First, effective communication process is necessary to gather all relevant information and documents above. The process, however, should be divided into different stages: early preparation for the inbound/ outbound shipments; order fulfillment and storage support. This process stages can be described as following:

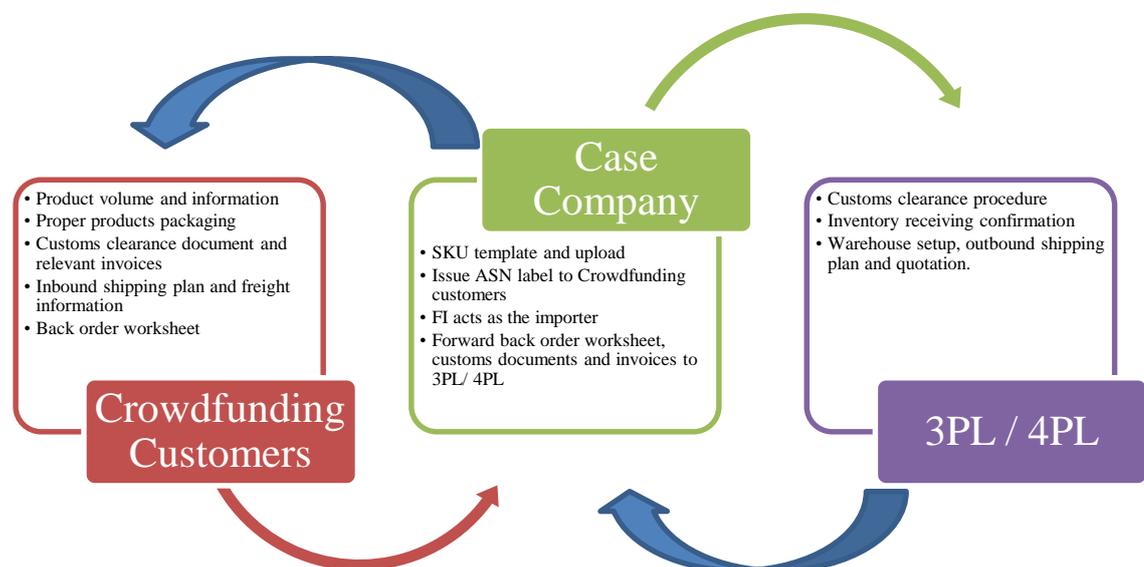


Figure 19 Early preparation for inbound/ outbound shipments (Duong, 2017)

For this early preparation stage, the main aim is to ensure the inbound/outbound shipments to go smoothly so that the inventory will be shipped and received safe and sound without incurring any unexpected cost or uncertainty.

with their 3PL guidance. Specific details can be found in Appendices 5 and 6. Overall, the main purpose is to equip Crowdfunding customers and their own customers with relevant amount of information toward areas of storing and managing the inventory.

While the inbound inventory and shipping guidelines help carrying on proper products' packaging in standard dimensions, the return and refund policy clearly states returning procedure and investigation for individual customers' orders. Either way, these documents will only be effective if they are clearly introduced and promptly addressed by all concerned parties. Thus, clear internal and external communication models above are very important to follow. Accordingly, Case Company has come up with the ticket system for such communication purpose. In case of unsolvable logistics related inquiries, customer service agent can pass them over to logistics executive for better solutions or responses.

In most cases, these inquiries refer to the order changes either by shipping addresses or additional add-ons. As customer service agents pull the order changes into a summarized worksheet, logistics executives will update these changes accordingly into proper Crowdfunding campaigns (either Kickstarter or Indiegogo) orders' lists. Due to the big order amount in range of thousands, confusions and duplications can take place and thus there's a need to mark these odds for further discussion and cross communication between logistics, customer service departments and end customers. Afterward, the main purpose is to provide precise updates for back order worksheet, which will allocate the inventory to the right warehouses and later on benefit the shipping plan and minimize much of cost structure.

7.4.3 Customs Clearance and Import Duties

There is a checklist of applicable shipping documents to prepare and submit to customs brokerage at least 24 hours prior to sailing. The documents list is as following:

Documents Required	Actions
ISF '10+2' (Importer Security Filing) worksheet	Filled by the freight forwarder or Crowdfunding customers
Bill of lading	Prepared by Crowdfunding customers
Pro forma invoice	Prepared by Crowdfunding customers
Packing list	Prepared by Crowdfunding customers

Figure 22: Document Checklist for Customs Clearance (Duong, 2017)

In term of cost structure, the customs clearance service fees are based on the commodity volume, description and total number of annual shipments. Regarding the combined shipment, there was a concern if the reported commercial value can be lowered in terms of free gifts to influencers/ backers for their Kickstarter support. However, in reference to US guideline on customs value and information from the customs brokerage consultant, no items can be valued at no charge providing there's a must to clarify reasonable value on the invoice that reflects the item. Basically, different countries shall have different tax regulations and thus with or without customs brokerage service, there will be a need to look up relevant information to solve Crowdfunding customers' tax inquires case by case.

8 SUMMARY AND CONCLUSION

In summary, from the internship experiences with Case Company and further researches toward thesis, I have learnt so much more about logistics operations as well as new aspects of logistic services (3PL fulfillment) for Crowdfunding projects. Throughout time, though there were many obstacles to overcome, all learning outcomes were rewarding. Not only I managed to work independently most of the time, I also received positive comments from the Case Company's owner on my working ability and good endurance with stress and deadlines.

Concerning research objectives of the thesis framework, I have successfully established Case Company's partnership with the 3PL, Shipwire for contract warehousing and E-commerce fulfillment services. I also worked well with other Case Company's departments to prepare sufficient procedure and policy for logistics operations,

namely: goods returning policy, outbound shipment and product packaging as well as logistics contract with Crowdfunding customers and 3PL partners. Other than that, I prepared well for a combined shipment of two Crowdfunding customers of Case Company. My main responsibility was to ensure that the outbound shipment got out smoothly with SKU setups, fluent communication with 3PL for required procedure as well as searching for custom brokerage service in U.S.A for the goods custom clearance there. During the preparation process, there were many misunderstanding between Case Company and Crowdfunding customers however in the end, everything fell in place and the shipment got out fine.

9 FINAL WORDS

First of all, I would like to dedicate my appreciations for Case Company's owner supports for that I didn't lose track along the way and carried on well with both my internship period and thesis research.

Second, I would like to send my many thanks to my thesis supervisor, Mr. Anssi Pajala for keeping up with my tight schedule so that I could manage my thesis progress as planned.

Last but not least, I would like to dedicate my many thanks to my opponents, Brian Simiyu and Kumudha Mariaraj for their helpful comments on my thesis content for proper adjustments.

REFERENCES

- Aktas, E., Ulengin, F., (2005). Outsourcing logistics activities in Turkey: *Journal of Enterprise Information Management*, pp. 316
- AbdulLatif, S., Azri, D.(2009).Third Party Logistics Service Providers and Logistics Outsourcing in Malaysia *The Business Review*, pp. 265
- Forrest B., Will T., Stephanie R., Ashwini N., Eric W., (2008), A Practitioner's Perspective On The Role Of A Third-Party Logistics Provider: *Journal of Business & Economics Research* 6, pp. 9
- Grant, D.B., Lambert, D.M., Stock, J.R. & Ellram, L.M. (2006), *Fundamentals of Logistics Management*, Berkshire: McGraw-Hill Education, pp. 45 – 252.
- Hughes, J., Ralf, M., Michels, B. (1998), *Transform Your Supply Chain: Releasing Value in Business*, London: Thomson Learning, pp.96
- Hugos, M. (2003), *Essentials of Supply Chain Management*, New Jersey: John Wiley & Sons Inc.
- Knemeyer, A. M., and Murphy, P. R. (2004). Evaluating the Performance of Third-Party Logistics Arrangements: A Relationship Marketing Perspective. *Journal of Supply Chain Management: A Global Review of Purchasing & Supply*, 35-51.
- Kuglin, A.F., Rosenbaum, A.B. (2001), *The Supply Chain Network @ Internet Speed: Preparing Your Company for the E-Commerce Revolution*, New York: Cap Gemini Ernst & Young U.S LLC,
- Lai, K., Cheng, T.C.E. (2009), *Just-in-Time Logistics*, Surrey: Gower Publishing Limited, pp. 21 – 82.
- Lowson, B., King, R., Hunter, A. (1999), *Quick Response: Managing the Supply Chain to Meet Consumer Demand*, West Sussex: John Wiley & Sons Ltd,
- Poirier, C.C. (1999), *Advanced Supply Chain Management*, San Francisco: Berrett Koehler.
- Richards, G. (2014), *Warehouse Management*, New Delhi: Replika Press Pvt, pp.8 – 83.
- Waters, D. (2003), *Logistics: An Introduction to Supply Chain Management*, New York: Palgrave Macmillan Ltd., pp. 75

- Website of Handshake, viewed 05.05.2017, <https://www.handshake.com/blog/third-party-logistics/>
- Website of I2 Wordpress, viewed 28.03.2017, <https://i2.wp.com/writepass.com/journal/wp-content/uploads/2012/11/166.png>
- Jessop, D., Morrison A. (1994), *Storage and Supply of Materials*, Glasgow: Bell & Bain
- Website of Mindmeister, viewed 03.04.2017, <https://www.mindmeister.com/875791454>
- Website of Placebookmarks, viewed 28.03.2017, <http://placebookmarks.info/photo/q/quantitative-methods-of-demand-forecasting/0/>
- Website of Shipwire, viewed 11.05.2017, <https://www.shipwire.com/>
- Website of Small Business, viewed 28.03.2017, <http://smallbusiness.chron.com/advantages-qualitative-forecasting-37020.html>
- Website of Sooper Articles, viewed 05.05.2017, <http://www.sooperarticles.com/business-articles/strategic-management-articles/advantages-disadvantages-third-party-logistics-340565.html#ixzz4dU4RUJG4>
- Website of Ultracart, viewed 05.05.2017, <https://www.ultracart.com/resources/integrations/fulfillment/shipwire/>
- Website of Write Pass, viewed 05.05.2017, <https://writepass.com/journal/2012/11/advantages-and-disadvantages-of-hiring-third-party-logistics-providers-3pl/>
- Website of AVID Logistics, viewed 11.05.2017, http://avidlogistics.com/?page_id=515
- Website of Boundless, viewed 19.04.2017, <https://www.boundless.com/marketing/textbooks/boundless-marketing-textbook/integrated-marketing-communications-12/selecting-the-promotion-mix-for-a-particular-product-84/push-and-pull-strategies-425-4128/>
- Website of Custom Writing Tips, viewed 28.03.2017, <http://customwritingtips.com/component/k2/item/6435-evaluating-the-quantitative-forecasting-methods.html>
- Website of Ehow, viewed 28.03.2017, http://www.ehow.com/info_12116753_advantages-quantitative-techniques-forecasting.html

Website of Georgetown University, viewed 28.03.2017,
http://faculty.msb.edu/homak/homahelpsite/webhelp/Content/Demand_Forecasting_Quantitative_Qualitative.htm

Website of GLS, viewed 11.05.2017, <https://gls-group.eu/EU/en/the-company>

APPENDIX 1

INTERVIEW WITH COMPANY'S OWNER

Question 1: Confidential information about the company, can I reveal the data and name of company in my report?

Answer: You can reveal the name of my company. Advertise it as much as possible, as for the data. This you will have to get my approval on, case by case.

Question 2: What is the goal that you want to reach with logistics work/ research? (What is the desired result to reach for the company?)

Answer: goal is to have the least expensive, most responsive, most flexible, and convenient logics service for Case Company 's webshop and for our crowdfunding customers to ship there products. We can get many contracts = money, from our crowdfunding customers if we can offer them a nice logistics package to ship their products after their campaign is over.

Question 3: What are current challenges or problem statements that Case Company having with logistics?

Answer: no warehouse, low volumes = bad contacts with shipping companies, no logistic software, no logistics software integration to our sales channels.

Question 4: Inventory management plan?

Answer: we don't have one, please suggest one.

Question 5: 3PL selection criteria?

Answer: price, sales channels integration, global warehouses, for our products are made in different places in world.

Question 6: Can I contact SpineGym directly or through you?

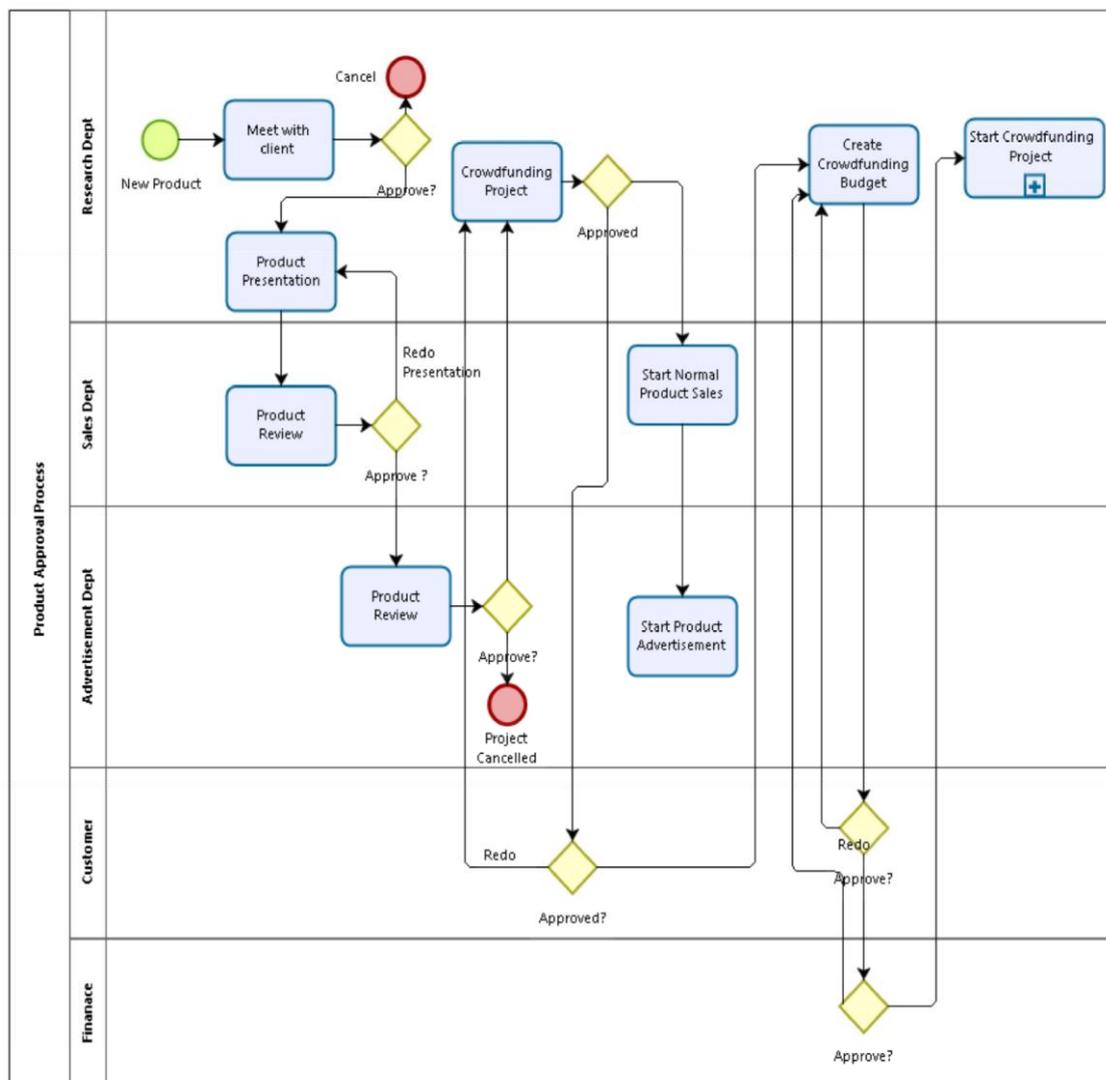
Answer: only through me. Spinegym is very busy.

Question 7: Does Case Company have strategic plan for next 5 years for logistics growth? Can you be more specific?

Answer: no it would great if you could create one.

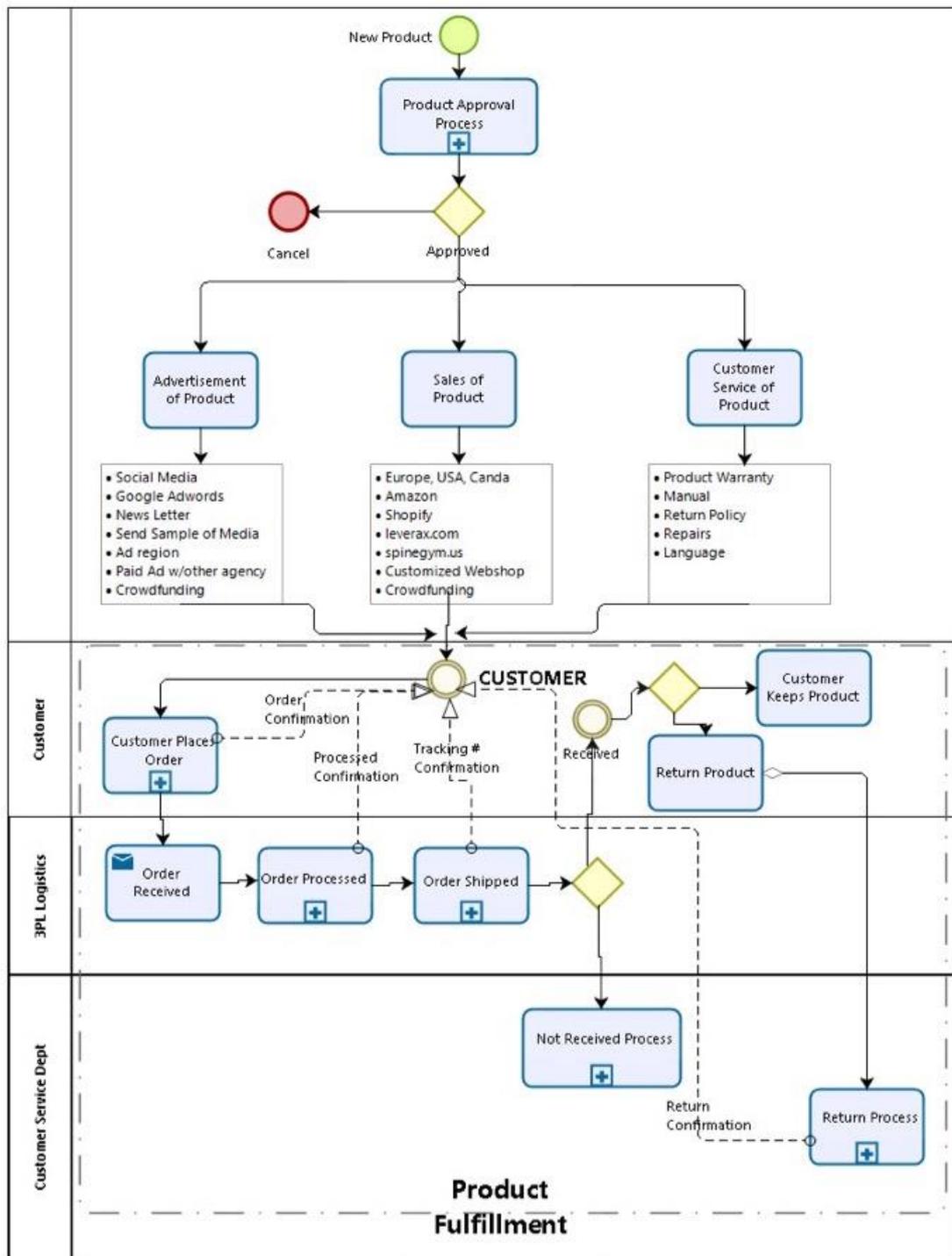
APPENDIX 2

PRODUCT APPROVAL PROCESS



APPENDIX 3

COMPANY PROCESS MAP



APPENDIX 4

CASE COMPANY – 3PL RESEARCH AND COMPARISON

Introduction

- ❖ The comparison is done based on researches of 3 PL companies:
 - ❖ GLS (Poland),
 - ❖ Shipwire (U.S.A)
 - ❖ China Divisions (China)
- ❖ Three selection criterias:
 - ❖ Price
 - ❖ Warehouse locations
 - ❖ Logistic plans.

Price

Price (\$ USD)	Shipwire	China Divisions	GLS
Shipment fee from warehouse to customer	\$ 98.381,19	\$ 297.317,1	\$ 861.711
Warehouse fee	\$ 1.796,95	Free offer	N/A
Handling fee	\$ 12.383	N/A	N/A
Freight cost estimation	\$ 12.307,55	\$ 2.658,58	
TOTAL	\$ 124.868	\$ 299.975	\$ 861.711

Warehouse Locations

- ❖ Shipwire:
 - ❖ UK (Laughton, Lewes - East Sussex)
 - ❖ U.S.A (California, Illinois, and Pennsylvania)
 - ❖ Netherlands (Tilburg)
 - ❖ Canada (Ontario, British Columbia)
 - ❖ Hong Kong (Tin Shui Wai)
 - ❖ Australia (New South West)
- ❖ China Divisions: Shenzen (China)
- ❖ GLS: Poland

Logistic Plan – Shipwire (USA)

- ❖ Custom clearance will be done by Shipwire.
- ❖ Customer service/ goods return procedure to be followed with Shipwire policies
- ❖ Orders will be stored in different warehouses around the world then be shipped accordingly.
 - ❖ U.S Warehouse: United States, Mexico, Panama
 - ❖ UK Warehouse: United Kingdom, Norway, Israel, United Arab Emirates, Ireland, Chile, Portugal, Turkey, Brazil and Russian Federation
 - ❖ Netherlands Warehouse: Germany, France, Switzerland, Netherlands, Spain, Italy, Finland, Belgium, Sweden, Austria, Denmark, Romania, Greece, Hungary, Europe, Czech Republic, Luxembourg, Poland

Logistic Plan – Shipwire (USA)

- ❖ Hong Kong Warehouse: Thailand, Singapore, Hong Kong, South Korea, Malaysia, Japan, India, Taiwan, China, Saudi Arabia, Philippines, Qatar, Indonesia, South Africa, Kuwait and Oman
- ❖ Canada Warehouse: Canada
- ❖ Australia Warehouse: Australia and New Zealand
- ❖ Lebanon is a restricted country thus no shipment can be made
- ❖ Hidden costs:
 - ❖ Tax numbers for different warehouses: Canada, Australia, and Netherlands.
 - ❖ Freight cost for goods to be sent to different warehouses.
 - ❖ Possible Import duties and brokerage fee when importing in to different countries.
 - ❖ Fee for Custom Clearances which includes the commercial invoice is 1,5 usd/paackage.

Logistic Plan – GLS (Poland)

- ❖ Warehouse is only available in Poland
- ❖ Hidden cost:
 - ❖ Custom clearance service charges

Custom Clearance charges (EXPORT - per claim, IMPORT - up to 5 customs positions)	INCOTERM				
	10	20	30	40	50
Albania, Bosnia and Herzegovina, Montenegro, Kosovo, Iceland, Macedonia, The Faroe Islands	--	--	--	40 €	7 €
Serbia	40 €	25 €	40 €	40 €	7 €
Great Britain (Channel Islands)	40 €	25 €	40 €	40 €	7 €
Italy (Livino, San Marino, Campione D'Italia)	40 €	25 €	40 €	40 €	7 €
Norway	40 €	25 €	40 €	40 €	7 €
Switzerland, Lichtenstein	40 €	25 €	40 €	40 €	7 €
Spain (Canary Island, Melilla, Ceuta, Gibraltar, Andorra)	40 €	25 €	40 €	40 €	7 €
Turkey	--	--	--	40 €	7 €
Incoterm conditions (EuroBusinessParcel)					
INCOTERM CONDITIONS	SENDER		RECIPIENT		
Incoterm 10 DDP	transport, custom clearance, customs, taxes		-		
Incoterm 20 DAP	transport, custom clearance export		customs clearance import, duty, taxes		
Incoterm 30 DDP, VAT, unpaid	transport, custom clearance export + import, duty		taxes		
Incoterm 40 DDU, cleared	transport, customs clearance export + import		duty, taxes		
Incoterm 50 DDP	transport, customs clearance export + import		-		

Logistic Plan – China Divisions (China)

- ❖ Warehouse is only available in Shenzhen, China
- ❖ Hidden costs:
 - ❖ Freight cost for goods to be sent to Chinese warehouse
 - ❖ Tax numbers (VAT + Tariffs: \$ 16.256 USD)
 - ❖ Tax certification (\$ 800 USD)
- ❖ Custom clearance will be taken care by China Divisions.
- ❖ Customer service/ goods return procedure to be followed with China Divisions policies

3PL Comparisons

SHIPWIRE

- ❖ Pros
 - ❖ Competitive price
 - ❖ Flexible warehouse locations
- ❖ Cons:
 - ❖ Hidden costs of tax numbers for different warehouses

CHINA DIVISIONS

- ❖ Pros
 - ❖ Competitive price
 - ❖ Transparent information about cost and service
- ❖ Cons
 - ❖ Sole warehouse in Shenzhen, China

APPENDIX 5 CASE COMPANY – SHIPPING AND INBOUND INVENTORY GUIDANCE

Introduction

In order to provide the best experience to Customer, Finnish Innovations LLC (Supplier) utilizes a methodical, repeatable and scalable inbound inventory process. This allows the inbound operation to pre-assign storage locations, make better use of resources and move inventory as efficiently as possible. By following this guide, Customer will help Supplier to provide expedited service levels for the inbound inventory. In addition, the shipments will be done quicker with less unnecessary charges, errors and delays.

Before You Ship: Checklist

Customer can follow this checklist to make sure the product packaging is done correctly regarding Supplier's Standard Inbound Inventory Guidelines. Should there be any question, please contact Supplier's Logistics Manager via the email address provided in the Master Service Agreement (MSA).

Standard Inbound Inventory

Standard inbound inventory means the products that follow Supplier's guidelines and thus, require less time to unload. To be considered standard, an inbound inventory should follow Supplier's checklist below:

- Have the receiving order (ASN: Advanced Shipping Notice) created for the inventory
- Arrive with tracking or bill of lading (BOL) information
- Have the inventory properly labeled and packaged
- Arrive with the products and product counts listed on the receiving order (ASN)
- Arrive free and clear of customs, duties and tariffs with correct Importer of Record and Tax ID information.
- Arrive at the pre-scheduled shipment date and time (if more than 8 pallets)

Following these guidelines will ensure optimized processing for Customer's inventory. Otherwise, non-standard inbound inventory will incur additional fees and be likely to take longer to be stored and processed. Furthermore, in the case of floor loaded containers, non-standard inbound inventory fee will be charged.

***Floor loaded containers: Floor loading is a method of loading containers where goods are loaded directly on the floor rather than using pallets. It provides the greatest opportunity for utilizing the full cube of the truck, but tends to be more labor intensive and may therefore incur non-standard receiving charges.*

Preparing Shipments

Getting ready to send Customer's inventory to Supplier's warehouses.

Packaging

Please follow these specific guidelines about how Customer's goods should be packaged before sending to Supplier's warehouses.

Packaging Master Cases Using Cartons

Cartons are protective packaging materials used during inbound transit and the inbound inventory process at warehouses. Cartons and other packaging materials must sufficiently protect products from damage during transit and inbound inventory process.

- If the single product's weight is smaller than 70 lbs. (31.75 kg), the master case must be double wall corrugated.
- If the single product's weight is bigger than 70 lbs. (31.75 kg), the master case must be triple wall corrugated.
- Cartons must qualify a minimum of 200 lbs. for the bursting strength test and 32 ECT for the edge crush test.
- Any carton of two or more mixed individual products should have a packing list attached.

Polybags and Soft Inner Packaging

Soft packaging, such as plastic polybags, should be used as protection during shipment. Polybags can be used to protect products (i.e. apparel) during storage and the outbound shipments.

- For apparel, use low – density, recyclable, polyethylene dry-cleaning-style bags of at least 0.04 inch thick (1mm). Contents should be easy to remove from these bags.
- Plastic bags used for products sent to warehouses must comply with all federal, state and local laws.
- Include a silica gel pack if the product is sensitive to moisture.
- To ensure that any packaging used for toys is not hazardous to children, do not package toys in bags that stretch to more than 14 inches (35.5cm) in neck circumference or to more than 23 inches (58.4 cm) when the stretch neck circumference and the bag's length are combined.

Packaging Oversized and/or Heavy Individually Packed Items

Cartons or individual items larger than 18 inches (45.7 cm) in any two dimensions (i.e. length and width) and/or with weight greater than 28 lbs. (12.7 kg) are considered as oversize and/or heavy individually packed items.

Oversized and/or heavy individually packed items should be sufficiently packaged to withstand pressure incurred through the normal course of handling heavier items. These items should be able to sustain being moved or handled with equipment including, but not limited to: forklifts, pallet jacks, clamp trucks, conveyors, hand trucks and sortation equipment.

Oversized items may incur additional inbound inventory charges. For further concerns, please contact Supplier's Logistics Manager via the email address provided in the Master Service Agreement (MSA).

Fragile Products

Products or packaging susceptible to damage through ordinary handling or extended storage must be able to pass a 4-foot drop test onto a hard surface without the product breaking.

Performing this test on the packaging ensures that the products will be able to withstand typical impacts during shipping and handling. A typical drop test consists of five drops:

- Flat on base
- Flat on top
- Flat on the longest side
- Flat on the shortest side
- On a corner

If the packaging can safely withstand these tests, it has passed the 4-foot drop test and can be used to safely ship the products. In addition, these products should be able to withstand a full minute vigorous shaking test (FMVS) without any of the contents breaking.

Labeling

Please follow the guidelines below to prevent unnecessary errors and delays.

ASN Labels

As sending inventory to Supplier's warehouses, cases and/or cartons must have an affixed ASN (Advanced Shipping Notice) label. These labels will be created by Supplier and emailed to Customer free of charge after Customer has sent Supplier an inbound inventory order. The ASN labels should be attached on each case or pallet before the inventory is sent to Supplier's warehouses.

ASN is not a shipping label. Shipping label must be handled separately by Customer.

Labeling Pallets



If the inbound inventory is sent as one or multiple pallets of goods, Customer must ensure that each pallet has a label attached. The label must include the following information:

- **ASN:** The Advanced Shipping Notice (ASN) number provided and emailed to Customer by Supplier.
- **From:** Customer's company name and address.
- **To:** The warehouse destination address. Supplier's company name must be listed as the recipient.

The following requirements are also applied to all pallets' labels:

- Label must be white
- Minimum font size of 12 pt.
- Minimum label size must be 4 inches x 6 inches (10cm x 15cm)

Labeling Master Cases



All master cases received at Supplier's warehouses must include the following information:

- **From:** Customer's company name and address.
- **To:** The warehouse destination address. Supplier's company name must be listed as the recipient.
- **ASN:** Include the Advanced Shipping Notice (ASN) number provided after Customer creates Inbound Inventory Order.
- **Case contents:** Include the case SKU as well as any unit SKUs it contains (i.e. quantity x SKU name).

The following requirements are also applied to all master cases' labels:

- Label must be white
- Minimum font size of 12 pt.
- Minimum label size must be 4 inches x 6 inches (10cm x 15cm)

Labeling Mixed Cases



If Customer is sending a case containing mixed base products or inner packs, but does not want them to be inventoried as a master case, SKU definition is not required. Instead, the label should include the “From” and “To” fields, as well as a list of the SKUs (and their quantities) that the case contains.

The following requirements are also applied to mixed cases’ label:

- Label must be white
- Minimum font size of 12 pt.
- Minimum label size must be 4 inches x 6 inches (10cm x 15cm)

Labeling Individual Base Products

The product label should be visible on the outside of the packaging. Do not include the label on the inside of the product (i.e. inside a polybag). If the item is too small for a label, Customer must ensure the case label containing the base product discloses its contents.

Customer must also affix the base product label outside of the case (so the case should be labeled with the case label and base product label).

The following requirements are also applied to individual base product’s label:

- Label must be white
- Minimum font size of 12 pt.
- Minimum label size must be 1” x ¼” (2.5cm x 0.6cm)
- Minimum label size must be 1/16” (0.2 cm) white space around border
- Barcode is optional, but recommended

Sending Customer's Shipment

Sending shipment to Supplier's warehouse is simple as following these steps:

- Email Supplier's Logistics Manager the following information:
 - Ship from address and ship to address.
 - Complete list of number of cartons and complete list of their contents.
 - Estimate arrival date to Supplier's warehouse.
- Supplier's Logistics Manager will create ASN label and then email them in PDF form to Customer.
- Customer prints out ASN labels following the above guidelines on size and attach them outside each of the boxes, cases or pallets before shipping.
- Customer ships the inventory to the desired warehouse using the preferred carrier or other shipping method.

Providing Tracking Numbers

Upon the shipment, Customer needs to send the tracking number and/or BOL (Bill of Lading) information received from the chosen carrier to Supplier's Logistics Manager.

All inventory must have valid tracking included at least 5 days before its scheduled arrival. Inventory that arrives at the warehouse unexpected or unscheduled is considered non-standard and may incur non-standard inbound inventory fees.

Scheduling for Larger Shipments

If Customer sends 8 or more pallets (512 cu. ft.) to Supplier on a single ASN number, Supplier must schedule a delivery window. Customer needs to contact Supplier in regards to this at least 4 days before its scheduled arrival at the warehouse.

International Inbound Inventory

If Customer is sending international inventory into the U.S.A, Canada, Hong Kong, Australia, Netherlands and/or UK, the Incoterms 2010 must be DAP (Delivery At Place) or DDP (Delivery Duty Paid). In the case of DAP, Supplier will become the goods' owner. Supplier will handle the goods' customs clearance including paying taxes and duties which will then be invoiced to Customer. This shall speed up importation as Supplier has all the necessary tax ID and documents.

The inventory must arrive at Supplier's warehouses cleared of all customs' related fees and taxes. Otherwise, Customer's inventory will not be accepted into the warehouse and addition cost will be invoiced to Customer.

Shipping Insurance

To protect Customer's inventory and business, insurance is a must. There are three kinds of insurance Customer can use to protect the products at various stages: inbound, storage and outbound.

Inbound Shipping Insurance

This insurance covers inventory when it is being shipped from Supplier or Supplier's manufacturer to Customer's warehouse. It covers unexpected mishaps during shipping. This is the choice and responsibility of Customer.

Outbound Shipping Insurance

Insuring Customer's outbound shipments to Customer's client will protect Customer from loss or damage during transit from the warehouse to Customer's client doorstep. This is automatically added to the outbound shipment as stated in the Master Service Agreement (MSA).

Inventory Insurance

Inventory insurance protects Customer's stored inventory from loss, damage or theft. It is recommended, but optional for Customer to purchase monthly depending on the value of Customer's inventory. Customer is also responsible for the deductible if they choose to use inventory insurance in a case of damages incurred.

Returns

Supplier can quickly and efficiently handle Customer's or Customer client's returned items. The return process works as following, in regards of B2C (Business to Customer) logistics:

- Customer submits returned package's requests via automated sales channels (amazon, webshop, etc.) or email to supplier's Logistics Manager:
- Supplier's Logistics Manager will prepare a pre-paid (only in USA) or non-prepaid shipping label and email it to Supplier.
- Customer then emails the label to Customer's client where they will print it out and attach it to the returned package and then send it off.

The returns fees for prepaid (inbound) items are the same as the outbound costs as in the total sum of shipping fee, picking fee and shipping insurance. The only difference is the addition of the fee

per returned package which will be charged by Supplier for the restocking fee. Check MSA for details.

Once the returned item arrives at Supplier's warehouse, Supplier will process it within 2-5 business days of arrival.

As for B2B (business to business) with freight logistics of over 50 lbs., the returns fees shall be discussed case by case between Supplier and Customer. Supplier can organize all freight pick up and shipping. Supplier will invoice Customer for these freight and related costs upon Customer's agreement.

Return Labeling

If Customer's client is sending merchandise back to the warehouse, Supplier will generate a Return Materials Authorization (RMA) label, which **MUST** be placed on the return. This will ensure Supplier quickly add it back to Customer's inventory while maintaining inventory counts accurate.

In instances where Customer or Customer's client sends their returns without RMA (Return Materials Authorization) labeling (simply putting it in a package and sending it to the warehouse), Supplier will make attempt to match the returned item with Customer's order information. This is done by best effort basis. Please note that further research of unidentified returns must be covered with a work order and thus, it may incur a fee to cover the investigation.

Paying for the return shipping, outside of USA

Customer's client pays for the international shipping fee for the returned item. Supplier will provide a proper RMA label to Supplier's warehouse. Customer's client shall download this label and tape it on the return package and take it to the postal facility of their choice. A carrier with tracking is recommended. Customer's client is responsible for the shipment. It is also recommended that they insure the package.

Paying for pre-paid shipping label, inside U.S.A

Customer will be charged for the return postage and Customer's client shall have to take it to the nearest facility that matches the postage carrier.

Tracking Returns:

Prepaid Return Label (inside U.S.A): Tracking is available immediately and Customer or Customer's Client can track the return shipment to the warehouse.

Non-prepaid Return Label (outside of U.S.A): Customer ensures that Customer's Client provides a tracking number to Supplier to track the return.

Once the return is processed at the warehouse, Supplier will determine whether it is in good condition or damaged. Customer will receive a message regarding the return through email. The message will state either the product was returned in good condition and back in the inventory or (that) it was damaged and no longer available for fulfilling orders.

Damaged Returns: In standard procedure, the damaged goods are placed in a section of the warehouse with other damaged goods and eventually will be discarded. If Customer would like to have the damaged items back, Customer must create a separate work order and define the following and send it to Supplier's Logistics Manager:

Original order #:

Damaged good(s):

Send To: Address

Recipient:

Shipping Method:

CASE COMPANY – RETURN AND REFUND POLICY

Return and Refund Policy

Thank for shopping at our site (www.websopxxx.com). If you are not entirely satisfied with your purchase we are here to help.

Returns

You have 30 calendar days to return the item from the day you received it. To be eligible for a return, your item must meet the following conditions:

1. Unused and in the same condition that you have received it.
2. In the original packaging.
3. Include the receipt or proof of purchase.

If item does not meet all of the above criteria, you will not be refunded for your item.

Shipping Damage

If your item has been damage by the shipping company upon you receiving it please notify us right away by going to (www.websopxxx.com) and open a ticket through the customer service system.

Return Shipping

All returns must be handled by us through our website. Please do not mail your return or send it by any other method. Here are the steps to follow to ship your item back to us.

1. Start the return process by going to (www.websopxxx.com) and open a ticket through the customer service system.
2. We will send a shipping label by email.
3. Print out the shipping label
4. Attach label to the cardboard box with you item in it. Do cover up any codes or text on the label. The shipping label includes information vital for handling the return.
5. Get the package to the carrier/shipping company that is mention on the label.

Thanks for doing your part. We will take care of the rest.

Refunds

When we have received you returned item, we will go through the following steps:

1. We will inspect it and notify you of the status of your refund through email.
2. You will not be refunded for the shipping cost that you were charged when you have purchased your item.

3. If your refund is approved we will initiate a refund to you by the original payment method.
4. The refund processing time will depend on your method of payment and may take up to 3 weeks.
5. All shipping costs are non-refundable. If the item is eligible for refund, the return shipping cost will be deducted from the refund.

Contact Us

If you have any questions about this policy or returning your items please contact us by going to (www.websopxxx.com) and open a ticket through the customer service system.

Sincerely,

Customer Service Team
Finnish Innovations LLC