CHAPTER 1
INTRODUCTION

1.1 Background

1.1.1 Thesis Background

COVID-19 has caused a prodigious influence on global online market, both positive and bad, but ultimately, e-commerce is developing quickly as a result of the virus. Global retail e-commerce sales increased by more than 25% in the year of the epidemic. Customers were driven to utilize the internet and make it a habit in their daily routine as a result of the Coronavirus (Abiad, Arao, & Dagli, 2020). However, e-commerce businesses, which revolves around supply chain and distribution world, may confront several problems, including extended delivery times, difficulty controlling movement, and lack of traceability. (Hasanat et al., 2020). Even if the shipping and supply processes are now sluggish, individuals are still buying since they have no other option. Fortunately, advances in information technology helps contribute to solve problems that most supply chain industry faces, including distribution efficiency and inventory issue. As Khan et al. (2016) defines, “The main purpose of using technology in the supply chain industries is to improve operational and transactional efficiency in order to adapt to the rapid changes in market trends, especially in the areas of production, sourcing, and distribution inside a firm and across its chain of supply.”

One of the approaches to help businesses sustain in the modernization era is to implement deliberate transformation in supply chain and production line, applying more advanced technologies and automation to improve business processes. According to Davenport, process reengineering concerns the radical redesign of existing business processes from an end-to-end perspective information to achieve significant improvements in quality, cost, and outcomes through the utilization of IT's potential as a significant drive of innovation (Brocke & Rosemann, 2015). Therefore, information technologies should not only be utilized to automate existing business processes, but also to reshape these processes to meet broader objectives, which includes adapting to era trends for market sustainability. Augmenting this view, many
companies are preparing to redefine its operational paradigms by implementing Business Process Reengineering (BPR), and potentially enable the efficient integration of supply chains.

Freight transportation in supply chain system have long played an essential role in ensuring the safe and timely transfer of products. The continuous expansion of the logistics sector over the last few years has been attributed to industrial organizations' needs of logistics outsourcing (Song & Regan, 2001). With the growth of B2C global turnover each year and the growing awareness of network consumption among consumers, many well-known companies around the world, for instances Wal-Mart, Target, and others, are launching B2C direct sales channels to sell products online while maintaining traditional sales channels (Ming Li, 2015). According to Indonesia Logistics and Forwarders’ Association, the cold chain market in Indonesia has grown significantly by 4-6% amidst the COVID-19 pandemic, and will expand continuously in the upcoming years, with the projection of 8-10% in the next 5 years (Jati, 2020). ALFI/ILFA Chairman, Yukki Nugrahawan Hanafi, reckons most cold chain logistics in Indonesia are primarily Business to Business (B2B), while the demand for B2C has recently been quite high (Jati, 2020). Logistics companies should take use of improvements in information and communication technology, as well as the opportunities presented by the global proliferation of business-to-business (B2B) marketplaces and business-to-consumer (B2C) online retailers in order to gain new market segmentation and business processes optimization. Hence, Business Project Reengineering is essential to accord with the subject, PT Prima Trans Logistic, as it is necessary as a respond to the economic and market environment changes.

1.1.2 Company Background

PT Prima Trans Logistic is a well-known company that works in the logistic sector, mainly providing services for cold storage rental and reefer freight. The head office currently resides at Muara Baru, North Jakarta. The company was first established in 2001 by Mr. Eko Wijaya and has been rapidly growing throughout these 20 years. It operates in various islands across Indonesia, covering regions of Sumatra, Java, Bali and Lombok Islands. This company was formed under the principle of the community’s necessity to obtain food with the best quality and therefore sparks the
concept of providing a cold chain system to maintain the food’s quality along the distribution process. It is the motto of the company to be a “Reliable Cooling Transport Partner”

Since it is a relatively recent establishment, PT Prima Trans Logistic lacks the advancement of information technology integration to their core business processes, furthermore integrated management systems are a large portion that the organisation lacks. The current processes bereft the integration and power of a proper information system, where documentations and distribution management are handled manually, including manual data entry on its inventory recording system, which may trigger human errors and cause setbacks. Information systems is a crucial building block of the business process as it seamlessly streamlines people, network, data, hardware, software (Markgraf, 2019).

Realizing the company’s missions are to provide operational excellence in conducting daily business activities and maximizing performance, and to provision innovative and sustainable ways of supply chain deliverables for frozen food, the author is driven to ponder on determining the work scope and, as a result, determining which of their supply chain processes should be redesigned, additionally remodelling to B2C to achieve breakthrough innovation. An effective solution is to apply the BPM implementation framework as it helps further a company’s mission and organizational strategy (Aston, 2021). This paper will cover detailed analysis of the company’s current end-to-end process and implementation design of BPM through process revamp in order to optimize efficiencies and effectiveness.

1.1.3 Problem Identification

Due to the pandemic era, many big suppliers are trying to press their distribution cost with the ideal of serving their products directly to customers without the need of any agents or intermediaries stores. Moreover, meetings for contract discussion, which is essential for a B2B company, are becoming more inconvenient since the arrival of the COVID-19 Delta variant, where physical contact contributes to a high risk of transmission. ALFI/ILFA Chairman, Yukki Nugrahawan Hanafi, reckons most cold chain logistics in Indonesia are primarily Business to Business (B2B), while the demand for B2C has recently been quite high (Jati, 2020).
Substantially, according to RedSeer's study, the pandemic had been anticipated to add 12 million additional e-commerce consumers. This enormous development might have taken 1.5 to 2 years under normal circumstances. Not only was the pandemic anticipated to expand e-pool commerce's of customers, but it has also piqued the interest of around 40% of new users, who have expressed an interest in continuing to use the platform once the epidemic is gone (SIRCLO, 2020). Henceforth, many small entrepreneurs are now attempting to establish businesses through e-commerce platform. PT Prima Trans Logistic should utilize this opportunity and shift its business model to B2C to gain new market segmentation, aiming to provision innovative and sustainable ways of supply chain deliverables for all market, while expanding its services to flexibly serve various temperature of goods and be the first 3PL logistic company in Indonesia that focuses on end-to-end solution.

Internally, the issue stems from the current business processes, which must be assessed and evaluated in order to achieve optimization. The company relies heavily on manual processes, with no technology components such as EDI (Electronic Data Interchange) utilized within the process although the process has a lot of physical documents. This reduces the possibility for managers to track the business activities and their process status visibility throughout. It also triggers a risk of human errors and time-consuming operation because of the necessity to handle multiple calculations and analyses in a transaction.

1.2 Scope

The objective of this project is to reengineer the current business process in order to optimize efficiencies and effectiveness of processes, while shifting towards B2C model to achieve market breakthrough. There has not been found any major cold chain logistics in Indonesia that focuses on end-to-end solution, while small entrepreneurs are lacking of 3rd party solution providers. As a result, the likelihood of market penetration will increase, and the implementation of information technologies will enable the efficient integration of supply chains.
The scope for this project will only focus on the followings:

1. High-level business process coverage of PT Prima Trans Logistic, particularly in operating cold storage and fleet distribution, excluding finance system. Only until agile sprint 2 focusing on Customer, Operation and Finance.


Project limitations, which are out of scope, are as follows:

1. Human Resource Management and its counterparts - this includes personnel selection, personnel recruitment, profile development and Training as well as Payroll.

2. Maintenance of equipment - this includes scheduling for maintenance, informing and reaching out to vendor selection and source of cooler material parts.

3. Monitoring of asset - this includes asset overview, condition and vendor source.

4. Finance system – this includes the posting transactions, taxes and general ledgers.

1.3 Aims and Benefits

1.3.1 Aims

The purpose and objective of making this project are defined through the following key aspects, which includes:

1. To assess current business processes of the company, identify critical problems that may exist, and restructure its operation to initiate changes.

2. To shift the company’s business model from B2B to B2C and design a website or application for small entrepreneurs to directly order service, bringing about an innovative supply chain deliverables of 3PL solution during the pandemic era, being the first cold chain logistic company in Indonesia that focuses on end-to-end solution.
3. To design a fleet management system for ensuring on-time deliveries and route optimization.
4. To design a warehouse management system for monitoring the temperature quality of storage and placement to optimize the following supply chain process.

1.3.2 Benefits

The benefits acquired through this research includes:

1. Improve the company’s internal process in terms of efficiencies and effectiveness through elimination of redundant processes.
2. Increase in information accuracy and better productivity through restructured integration of systems and transparent visibility of process monitored on a dashboard.
3. Gain new market segmentations from small entrepreneurs and an increase in market scope.
4. Increase customer satisfaction by provisioning a one stop service of storage and distribution which reduce their logistic cost as they can solely focus on production, clear visibility in delivery process, and on time deliveries.

1.4 Research Questions

Based on the research background, several inquires will be examined to gain a deeper insight in this project field.

1. What is the company’s target plan as a logistic in the cold chain system?
2. Which business process variables are the most significant to be analysed in the research?
3. Do existing organizational procedures routinely impede the efficient, effective, and timely fulfilment of responsibilities, substantially in deliveries?
4. How efficient is the distribution route optimization and existing warehouse management system perform?
5. How does Covid-19 pandemic affect the market and what are the challenges that the company face?
1.5 Thesis Structures

This thesis will be divided into 7 chapters, which covers the following systematic structure:

CHAPTER 1: INTRODUCTION

This chapter discusses on the background of the topic, project scope, research aims and benefits, research hypothesis, and the systematic structure of the research.

CHAPTER 2: THEORITICAL FOUNDATION

This chapter provides fundamental basis and elaborates definitions of relevant theories and technical framework that will act as a guideline and parameter on supporting this research.

CHAPTER 3: USER REQUIREMENT

This chapter analyses the current business foundation and existing process of PT Prima Trans Logistic. To define the required functions that match the scope, it is essential to comprehend the business objectives and needs from end users. Organization’s strategy, how the company conducts its business, problems faced during performance will be scrutinized thoroughly.

CHAPTER 4: SOLUTION DESIGN

This chapter proposes the solution design created through Business Project Management framework with a new B2C business model after assessing the current system. The chapter will be divided into two sections.
1. Innovation, which covers a new process selection matrix, updated activity diagrams, and process cycle that outlines the newly designed system model.

2. Development, which covers system design of the solution architecture with UML method and user interface prototype to assist in visualizing.

CHAPTER 5: IMPLEMENTATION PLAN

This chapter elaborates on the necessary preparation needed to deploy and implement the newly designed system. The chapter will be divided into two sections.

1. People, which covers a RACI model and people capability matrix analysis

2. Implementation, which covers strategy of implementation, required technologies, and new people-process technology.

CHAPTER 6: EVALUATION AND DISCUSSION

This chapter evaluates the study results and assess on how the new proposed system will perform in supporting the company.

CHAPTER 7: CONCLUSION AND RECOMMENDATION

This chapter summarizes overall findings and results from this project and concludes the report. The chapter will also suggest recommended actions and initiatives to be applied for ameliorations that can further enhance this research in the coming references.