

Optimization of KLT Warehouse Management

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Abstract— study of Optimization of KLT warehouse management The objectives were to study 1) KLT warehouse management methods 2) KLT warehouse management efficiency 3) KLT warehouse management efficiency comparison classified by personal information 4) Warehouse management efficiency comparison of KLT companies The effect on efficiency of warehouse management of KLT company. A sample of 50 people was selected by using a questionnaire as a study tool. The collected data were analyzed using percentage statistics and mean t-test. ANOVA was analyzed by F-test, (One-way ANOVA) and Multiple Regression Analysis.

The results showed that most of them were female, aged 31-40 years old, educated below a bachelor's degree. staff position And most of them have been working for 6-10 years. The way to manage warehouses at KLT is very important. KLT's warehouse management efficiency is very important. Personal information, gender, age, education, position and working age The different effects on the efficiency of KLT's warehouse are not different. warehouse management method Maintenance and product delivery Influencing on increasing the efficiency of KLT's warehouse and found that warehouse management methods receiving goods product storage There was no influence on increasing the efficiency of KLT's warehouse at statistical significance at the .05 level.

Recommendations from the results of the study provide an idea of how to manage the warehouse. and warehouse management efficiency to be used as a guideline for warehouse operators has been revised 1) Receiving of goods (Receiving) Should use a barcode system in receiving goods by attaching a barcode to the product to increase the efficiency of the counting work to be more secure. fast and convenient Accurate, save time Reduce errors and reduce costs and make data more accurate. 2) Product storage Should clearly divide product categories. taking into account the products that move frequently to reduce storage time And provide equipment, facilities and sufficient space to support the storage of products. 3) Product maintenance. Should check the procedures for storing products to ensure standards and safety that may cause damage to that product. and arrange regular product counting periods To confirm that the product list and the information in the system are correct. 4) Delivery of the product There should be a board (Visual Control Board) to be used to track customer orders. Make employees aware of the status of that order, which status it is in, for example, the product has been delivered or which order requires urgency.

Keywords— warehouse management method, warehouse management efficiency.

I. INTRODUCTION

Currently, the business sector has realized the importance of logistics cost management. which is hidden in all business activities and industries As a result, logistics operations have evolved and become more complex. To be used as a strategy

to drive the business to have competitiveness. Therefore, from the above issues, it has resulted in the popularity of using the service of Third-Party Logistics Provider or 3PL, which is a complete logistics specialist. and lead to a tendency to use the service Premium Warehouse Business, which is a warehouse for rent that is designed and constructed to facilitate more integrated logistics systems and has a lot of competition in the warehouse business in terms of management both Work processes that need to be developed and modernized by cutting work processes that are not valuable to customers in order to meet the needs of service users. (Stock & Lambert, 2001)

The competition in the goods and services industry is in a very competitive situation. The industry therefore develops and finds ways to improve the competition continuously. And warehouse management, which is one of the important factors from today's competitive business environment, has pressured industrial businesses to improve their operational efficiency. The key factor to create competitiveness is lower cost. superior quality and delivery on time to create maximum customer satisfaction (Hompel, & Schmidt, 2008)

Warehouse management planning is part of the strategy that is important to help the business succeed. and able to compete with competitors in business competition Which the warehouse is the most important in the logistics system in the management of the warehouse which requires many important elements to be involved. And the complexity that requires quality management, which requires system performance. professional personnel to achieve systematic and efficient work Therefore, inventory management is very important in the business sector. The duties of management consist of Movement, storage, layout of the warehouse Selection of equipment for use in the warehouse.

Warehouse management planning is one of the important working strategies that will help the business to succeed. and able to compete with competitors in business competition The warehouse is the most important in the logistics system in warehouse management, which requires many important elements to be involved. And the complexity that requires quality management, which requires a system of professional personnel efficiency to achieve systematic and efficient work. (Jacobs, Chase, & Lummus, 2014)

From the above, the study is therefore interested in studying warehouse management methods and warehouse management efficiency levels of KLT Company in order to use the results of the study as a guideline for improving warehouse management methods to increase warehouse management efficiency of KLT warehouses. next

II. OBJECTIVES OF THE STUDY

To study how to manage the warehouse of KLT company
 To study the efficiency of warehouse management of KLT company

Research Hypothesis

1. Different personal data has decided to use the Esc base camp resort in Prachinburi province. Different
2. Marketing mix factors influencing the decision to use the Esc base camp resort service in Prachinburi Province.

Scope of study

In terms of content, study about the efficiency of warehouse management, KLT uses the concept of warehouse management. Consisting of receiving goods (Goods Receiving), storing goods (Put away), maintaining (Preservation) in the delivery of goods (Goods Issuing), which affects the efficiency of warehouse management. Based on the concept of warehouse management and the concept of efficient warehouse management of KLT, consisting of quality (Quality), reliability (Dependability), speed (Speed) and cost (Cost efficiency)

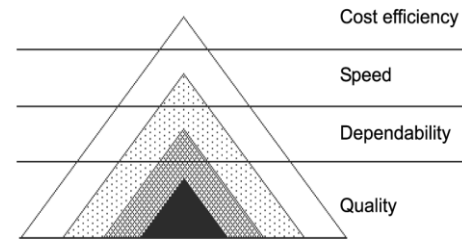
Concepts, theories and related research

Study of Increasing the efficiency of warehouse management of KLT company. The study authors have studied documents, concepts, theories and related research. To be used to define the conceptual framework and guidelines for the study as follows: warehouse management concept

A warehouse is a place where inventory is placed, stored, stored, and distributed. It may be called by other names such as distribution centers. Distribution centers, warehouses, warehouses, storage units, warehouses, warehouses, liquid storage tanks or bonded treasury no matter what it's called The warehouse also performs the same function, namely Is a place to store products or raw materials or things to support in various activities of the delivery process A warehouse is where goods are received, sorted and then distributed.

gave the meaning of warehouse management that Warehouse management (Warehouse Management) is the management of receiving, storing, means delivering goods to recipients for sales activities. The main goal in business administration In relation to the warehouse, it is to achieve a systematic operation that is worth the investment. quality control of the collection picking, preventing, reducing losses from Operate to keep operating costs as low as possible. and taking full advantage of the area (Hompel, & Schmidt, 2008

)The Sand Cone Model)



Source: Ferdows and De Meyer (1990)

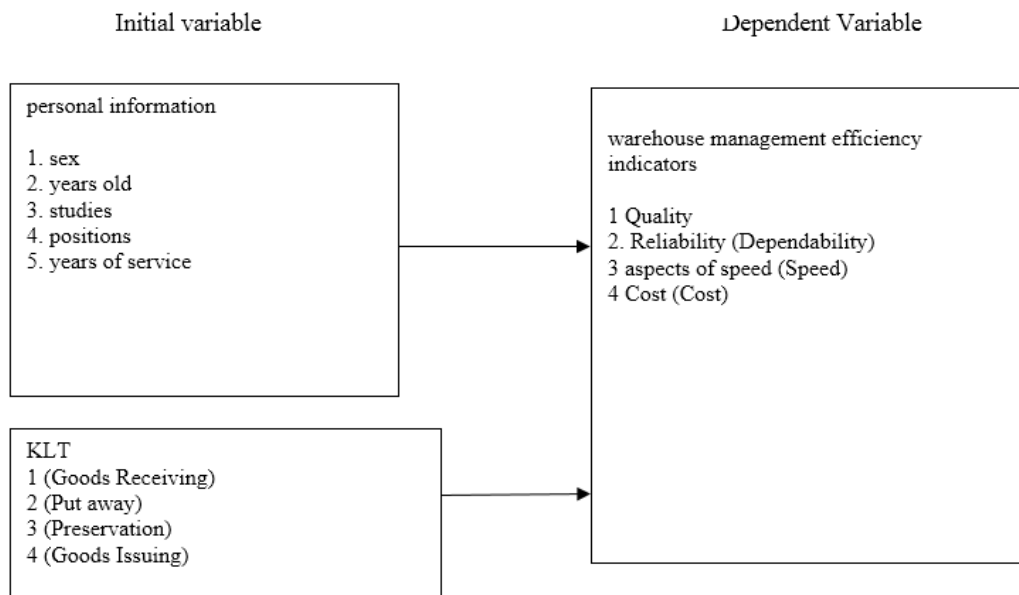
From the figure showing the construction of the cone by pouring sand starting from the base, which is like quality first, quality is like the foundation, then we have to increase the amount of sand to spread more layers to be reliable. Increase speed and reduce costs as floors go up. The base of the cone was enlarged to increase the strength of the needle.

Between quality (Quality), speed (Speed), reliability (Dependability), cost (Cost). There may be questions about whether we should start with anything before or after. We used to think that to get one thing you have to pay for another. (Conventional trade-off theory) such as quality improvement. This may have an impact on costs (Rosario Rosas-Vega, 2000 states, "Manufacturers are not able to perform well to many of the required standards." In which work can be completed faster, it may actually be at the cost of quality and reliability. or must be exchanged like that

)Rosario Rosas-Vega, 2000 (has argued that we may not need to exchange But actually doing one thing might be contributing to another. He presented a model (Model) to describe increasing and maintaining production capacity. This model was guided by a study by (Rosario Rosas-Vega, 2000) cited by who laid the groundwork for Japanese manufacturers to take steps to increase productivity (Rosario Rosas-Vega, 2000) suggest that steps must be taken. Starting from improving the quality (Quality), which will help create dependability (Dependability), followed by gradually increasing the speed (Speed) at the same time. Quality and trust are maintained. Finally, when we move forward, we improve all 3 things: quality, reliability. peed together We allocate resources into cost management (Cost) for efficiency.

Conceptual Framework in Education

From the aforementioned studies, the researchers relied on warehouse management theory and efficiency theory. Summarize and integrate into the conceptual framework of the study. Optimization of warehouse management of KLT as follows:



Research Methodology

The study on the efficiency of warehouse management of KLT company aims to Study how to manage KLT's warehouse, KLT's warehouse management efficiency, compare KLT's warehouse management efficiency, classified by personal data. and warehouse management methods that affect KLT's warehouse efficiency. Data from the study can be used as a guideline for developing warehouse management

methods to increase efficiency. has set the method of study as follows

III. RESULTS

A study on increasing the efficiency of warehouse management of KLT. The sample was KLT employees using 50 questionnaires as a tool for data collection and 50 sets of questionnaires were returned, representing 100% of the questionnaires. into the following:

Analysis of how warehouse management has an influence on KLT's warehouse optimization

Warehouse management	B	Std. Error	Beta	t	Sig.	Test
(Constant)	.605	.263		2.300	.026	yes
receiving goods	.100	.077	.102	1.293	.203	no
product storage	-.038	.094	-.044	-.406	.687	no
Maintenance	.408	.130	.476	3.135	.003	yes
delivery side	.394	.101	.447	3.903	.000	yes

** Statistically significant at the .05 level (2-tailed)

The results of the analysis of warehouse management methods that influence KLT's warehouse efficiency improvement revealed that maintenance and delivery of goods. Influence on increasing efficiency of KLT warehouse, except receiving goods and not influencing on increasing efficiency of KLT warehouse at statistical significance at .05 level.

Summary, Discussion, and Recommendations

The study on warehouse management efficiency of KLT company aims to study methods of warehouse management of KLT company, warehouse management efficiency of KLT company, and comparison of warehouse management efficiency of KLT classified by personal data. The warehouse management method that affects the efficiency of KLT's warehouse by using a questionnaire of 50 sets as a tool for collecting data and using statistics to analyze the data is percentage, mean, hypothesis test, t-test, F-test. (One-Way

ANOVA) and Multiple Regression Analysis. The results of data analysis can be summarized as follows.

Personal Information

According to the study on increasing the efficiency of warehouse management of KLT, it was found that most of the respondents were female, aged between 31-40 years old, with a bachelor's degree. Job positions at the employee level and have a working period between 6 - 10 years

KLT Warehouse Management Information

From the study of information on the importance of warehouse management methods, KLT found that in terms of receiving goods. product storage Maintenance delivery side Overall, KLT warehouse management priority level is very important. The details are as follows.

Receiving goods The results of the study showed that the overall level of opinions was at a very important level. with important details At a very important level, 5 items consist of recording the receipt of goods into the system. counting the number of products to be accurate and consistent with the document Checking sticker labels to be accurate and in accordance with Checking the product condition to ensure that it is complete and correct. The box is not dented or torn.

Product storage The results of the study showed that the overall level of opinions was at a very important level. with important details At a very important level, 6 items include sorting and issuing goods in FIRST IN FIRST OUT (FIFO) storage taking into account the movement of goods that are frequently moved. Storage of goods classified by nature and type of goods Preparation of shelves/storage areas are ready and sufficient. Equipment and storage facilities are ready and sufficient. Dead stock items are notified accordingly.

Maintenance The results of the study showed that the overall level of opinions was at a very important level. with important details There are 5 items at a very important level, consisting of tools to prevent ants and insects, counting of stored products to prevent lost products. There is a detailed inspection of the specific characteristics of the product according to the period. Place and material handling equipment for storing goods have maintenance Prevent the product from deteriorating, respectively.

Delivery side The results of the study showed that the overall level of opinions was at a very important level. with important details At the most important level, 2 items consist of having a product identification document that will be sent to each customer. Product grouping for distribution by area Export , Domestic is at a very important level, 3 items consisting of a fixed time and place of delivery. The equipment for packing the products to be delivered is suitable for the type of product. The use of materials to prevent cargo from falling off the pallet during sequential movement.

KLT Warehouse Management Efficiency Data

From the study of data on the efficiency of KLT warehouse management, it was found that quality (Quality) reliability. (Dependability), speed (Speed) and cost (Cost). Overall, KLT's warehouse management efficiency was at a very agree level. The details are as follows.

In terms of quality (Quality), the results of the study showed that the overall level of opinions had an average level of agreeing with a lot. with detailed comments At the most agree level,

1. item is inspecting the goods received correctly and complete according to the amount. At the very agree level, 2 items consist of products delivered in perfect condition. Stored goods do not deteriorate from long-term storage, respectively. reliability (Dependability) The results of the study showed that the overall opinion level was in the average level of agreeing. with detailed comments In the most agreeing level, 2 items consist of products that are delivered in the correct and complete amount every time. Delivered on time every time and at a very agreeing level,

2. items consisting of The delivered products are of standard quality. The image of the product delivery without damage, respectively. In terms of speed (Speed), the results of the study showed that the overall level of opinions had an average level of very agreeing. with detailed comments In the most agreeing level, 1 item is delivery of goods to customers. The accuracy of the products according to the order and in the level of agreeing with 3 items consisting of Delivery of products to customers is fast. on time The use of technology to record the receipt of goods quickly. There is a system for managing inventory that is fast and efficient, respectively.

In terms of cost (Cost), the results of the study showed that the overall opinion level was in the average level of agreeing. with detailed comments It was at the level of high agreement in 5 aspects, consisting of cost-effective use of storage space. The value of damaged goods during movement is reduced. Cost of storage expenses (Carrying Cost) decreased, reducing transportation costs. Reduce stocking more than necessary accordingly.

IV. DISCUSSION

From the study of Increasing Efficiency of KLT Warehouse Management The study subjects are discussed as follows. Recommendations from the study. The researcher has suggestions for the benefit as follows. In doing this research, we know how to manage the warehouse. and warehouse management efficiency to be used as a guideline for warehouse operators has been revised can be developed to meet the needs of increasing efficiency the most as follows

1. Receiving of goods (Receiving) The barcode system should be used in receiving the goods by attaching the barcode to the product to increase the efficiency of the counting work to be convenient and fast. Accurate, save time Reduce errors and reduce costs and make data more accurate.

2 Product storage Should clearly divide product categories. taking into account the products that move frequently to reduce storage time and providing equipment, facilities and sufficient space to support the storage of goods

3. Product maintenance Should check the procedures for storing products to ensure standards and safety that may cause damage to that product. and arrange regular product counting periods To confirm that the product list with the information in the system is correct.

4. Product delivery There should be a board (Visual Control Board) to be used to track customer orders. Make employees aware of the status of that order, which status it is in, for example, the product has been delivered or which order requires urgency.

Recommendations for Further Studies

1 There should be a warehouse management system (WMS) that is suitable for the company. To help increase the efficiency of warehouse operations.

2. The warehouse layout should be changed appropriately with the current condition of the warehouse. By using the principles of systematic warehouse layout to achieve maximum efficiency.

3. The next study may need to study other types of warehouses as well. In order to know the management of each type of warehouse that affects the efficiency in various aspects.

REFERENCES

- [1] Jacobs, F. R., Chase, R. B., & Lummus, R. R. (2014). Operations and supply chain management (pp. 533-535). New York, NY: McGraw-Hill/Irwin.
- [2] Rosas-Vega, R., & Vokurka, R. J. (2000). New product introduction delays in the computer industry. *Industrial Management & Data Systems*.
<https://doi.org/10.1108/02635570010291775>
- [3] Stock, J. R., & Lambert, D. M. (2001). *Strategic logistics management* (Vol. 4). Boston, MA: McGraw-Hill/Irwin.
- [4] Ten Hompel, M., & Schmidt, T. (2008). *Warehouse management*. Springer Berlin Heidelberg.
<https://doi.org/10.1007/978-3-540-74876-2>