A STUDY ON MATERIAL HANDLING AND STORAGE PACKAGING AT GOOD TRANS LOGISTICS

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ABSTRACT
The researcher investigates the material handling and storage packaging at Good Trans Logistics. The primary objective is to know about the material handling and storage packaging process and to identify areas of improvement. The secondary objective is to study the types of packaging, most desirable qualities, and technologies and to find the best measure to improve these. By examining these factors, the study aims to recommend a suitable measure for material handling and storage packaging that satisfies the customer. The findings of the study will help the GTL to improve the practices of material handling and storage packaging.

Key Words: Material handling, storage packaging

INTRODUCTION
Material handling and storage packaging are very much important in logistics. Material handling involves the movement, storage, and protection throughout the processing starting from the manufacturing, warehousing, consumption, and distribution. Effective material handling will improve productivity, reduce cost, minimize waste, maximize customer satisfaction, etc. Storage packaging refers to the type of packaging we use to protect, organize, and store goods during transportation and warehousing. Proper packaging will prevent the material from damage, spoilage, and contamination and helps in loading, unloading, and inventory management. In conclusion, both material handling and storage packaging are the key elements of logistics that help the company to grow more.

REVIEW OF LITERATIURE
Hans-Henrik Hvolby, Fabio Sgarbassa, and Jan Ola Strandhagen (2023) The researcher uses multiple case studies to map sterile instrument logistics and evaluate the transportation performance of material handling systems in terms of flexibility, productivity, quality, and costs.
Brajesh Kumar Panda, Shubham Subrot Panigrahi, et al. (2023) This study focuses on the mechanism of end effector robots in the food handling process. The food industry has been evolving continuously in implementing robots due to the varied characteristic of different food materials. Efforts have been proposed to design soft robots for flexible adaptation in material handling during various food processing operations. These operations are carried out by the robot's end effectors.
Taniya Mukherjee, Isha Sangal, et al. (02 Dec 2022) This study aims to optimize the material handling cost within a cross-dock when goods are unloaded and transferred from the dock area to the storage area. The result explains that a variation in the number of inbound trucks, product quality, and pallet handling prices influence the net material handling cost. It also verifies that applying direct transfer of product through cross-docking is economical as fewer products in storage reduce the handling cost.

Li & et al. (2021) The author proposed a new method for optimizing material handling paths in warehouse management to minimize the total travel distance and time of material handling equipment. The study demonstrates the effectiveness of the method to reduce travel distance and improve warehouse efficiency.

Pervan I., & Pavlic D. (2020) The study focuses on the role of smart packaging in driving supply chain sustainability. The author discusses various types of smart packagings, such as active and intelligent packaging, including reduced waste and improved supply chain visibility.

OBJECTIVE OF THE STUDY

Primary Objective

- To study the material handling and storage packaging at Good Trans Logistics.Secondary Objective
- To understand the most preferred packages by the customers.
- To discover the most desirable qualities of GTL.

NEED OF THE STUDY

- To keep away the unnecessary and deficient level of inventories in the organization.
- To increase the service to the customer through short, convenient, and conveyance.

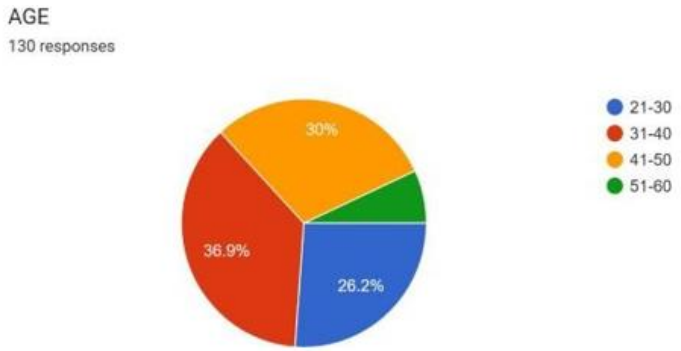
SCOPE OF THE STUDY

- To give the arrangement to the organizations like what to arrange, when to arrange and the amount to be arranged.
- To find the most desirable qualities.
- To acknowledge the most preferred packages.

DATA ANALYSIS

Percentage analysis indicating the age of respondents

OPTIONS	RESPONDENTS	PERCENTAGE
21-30	34	26.2
31-40	48	36.9
41-50	39	30
51-60	9	6.9



INFERENCE:
The majority (36.9%) of the respondents are between 31-40.

- CORRELATION ANALYSIS

Correlation analysis in research is a statistical method used to measure the strength of the linear relationship between two variables andcompute their association.

HYPOTHESIS

H0 (Null Hypothesis): There is no significant relationship between age and materialhandling.
H1 (Alternative Hypothesis): There is a significant relationship between age and material handling.

		AGE	Material handlinginGTL is satisfactory
AGE	Pearson Correlation	1	.017
	Sig. (2-tailed)		.845
	N	130	130
Material handling in GTL is satisfactory	Pearson Correlation	.017	1
	Sig. (2-tailed)	.845	
	N	130	130

INFERENCE:

There is no relationship between age and material handling.

- ANOVA

Anova is a statistical formula used to compare variances across the means of different groups.

HYPOTHESIS

H_0 (Null Hypothesis): There is no significant difference between gender and technology.

H_1 (Alternative Hypothesis): There is a significant difference between gender and technology.

The tracking system is useful

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.175	1	.175	.630	.429
Within Groups	35.556	128	.278		
Total	35.731	129			

INFERENCE:

There is no significant difference between gender and technology.

SUGGESTIONS

The overall experience from the index to the study reveals that GTL has good experience and strong customer service. According to the respondents, GTL can improve their company by focusing a little more on packaging, features, technologies, etc. Dock equipment and automation are the best measures to improve material handling and storage packaging.

CONCLUSION

The study found that the material handling and storage packaging which the company is following are satisfactory, but there are some areas to be improved. By understanding the most preferred packages, qualities, and technologies' the researcher identified many suggestions to improve material handling and storage packaging that will lead to higher customer satisfaction. Furthermore, the researcher found that there is no relationship between age and material handling and there is no relationship between gender and technology. The suggested measure identified by the researcher in this study will help GTL to improve its efficiency, reduce cost, and improve customer satisfaction.

REFERENCE

- Autonomous mobile robots in sterile instrument logistics: an evaluation of the material handling system for a strategic fit.
- Robotics for general material handling machines in food plants.
- The effect of material handling automation on logistics performance.
- A multi-objective optimization model for storage location-allocation in a cross-docking center.
- Improved genetic algorithm for material handling system optimization in logistics.