

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF BOX
PACKAGES TIME DELAYER**

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ABSTRACT

A parcel sorting center is usually a huge building that is not open to the public. Mail that needs to be sorted into the right areas is delivered and then the workers at the center will categorize and sort according to the last few lines of the address such as in a country, state, area and more. You may find that your parcel that is only going a few streets away is still delivered to a sorting center first. This might seem unintuitive to you, but it is often the best way for postal services to make sure that their routes are efficient. Everything is sent to huge centers, and then distributed from there. This is the best way for these systems to work and ensure that their service remains efficient for everyone. [1]

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Parcel sorting, also known as mail sorting, refers to the methods the postal systems and shipment carriers use to determine where and how to route mail and parcels for deliveries. In the past, mail sorting was once accomplished manually by hand. Now, the process is largely automated through specialized machines. Businesses can reduce their shipping costs and increase the speed of their order fulfillment by presorting parcels before they are handed over to the shipper. This can be done by optimizing parcel sizes, as well as sorting parcels to leverage zone shipping. Earning discounts by more efficiently sorting parcels can save companies money at a time when shipping costs are at some of their highest. Additionally, companies might use parcel sorting to handle incoming mail, such as orders, correspondence, and even paychecks. Dynamic package sortation is the answer to parcel sorting, able to autonomously sort packages at rapid speeds and cut costs from several angles, including shipping, labor, and production. Robotic automation serves as the solution to speeding along with package and handling logistics. In fact, automating parcel sorting can help enhance sorter utilization by up to 50%, reducing shipping costs by up to 20%. The right intelligent robotic sorting solution can enable cost-effective shipment of orders and pre-sort packages with minimal manual intervention. With this technology in your operations, you can pick and induct cases, packages, and individual items into a sortation system to improve sorter utilization. You'll also eliminate label facing issues, with technology able to automatically identify the barcodes on packages without manual intervention or manipulation. Finally, automation means you can sort parcels by zone to achieve freight discounts from mail carriers by leveraging zone skipping with smart robotic solutions. Parcel sorting allows companies to manage higher volumes of small packages and exceed consumer delivery expectations, potentially gaining return customers and promoting the business. [2]