# UNIVERSITI TEKNOLOGI MARA

# DESIGN AND FABRICATION OF PORTABLE TROLLEY GARBAGE COLLECTOR

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# ABSTRACT

The limits of traditional vacuum cleaners are highlighted in this abstract, and a portable trolley rubbish collector is suggested as a potential improvement. Although vacuums can be used for a variety of cleaning tasks, they are mostly surface-level cleaners and may need additional cleaning methods for the best results. Cleaning damp surfaces can be difficult, and dust bags could get hurt. Additionally, because of the smaller diameter of the vacuum nozzle, vacuum cleaners are limited in their ability to suction bigger debris. In order to address these problems, the proposed portable trolley garbage collector offers enough capacity to hold a variety of rubbish, including solid waste and small debris. Because of the trolley's simple mobility design, it may be used in a variety of locations, including homes, public spaces, and construction sites. This technology encourages hygiene and environmental sustainability by increasing rubbish collection efficiency. The project's goals are to decrease energy use in garbage management and create a hoover trolley that can successfully suction heavier particles.

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# INTRODUCTION

## 1.1 Background of Study

Undeniable, vacuums are definitely versatile, yet they are still only surface-level cleaners and occasionally ineffective. As a result, other conventional cleaning techniques including wiping, scraping, scrubbing, and degreasing may need to be coupled with them. Some people struggle to clean wet surfaces. Even if they succeed, the dust bag might be harmed [1]. Other than that, vacuum could not suck a bigger debris or trash since the vacuum diameter of the vacuum nozzle is smaller compared to the size of the trash needed to suck in. Additionally, the effectiveness of particle absorption and capture is highly dependent on the filter's quality [1].

Although most people are aware that vacuums are excellent at cleaning both small and large debris, there is undoubtedly much more to them than just their suction [16]. There are some of the current design of the vacuum cleaner that can suck in a large debris such as cotton buds, cereals, screws and others [2]. The portable trolley garbage collector is design to have sufficient capacity to hold various types of garbage, including solid waste and small debris with the trolley structure is aim for easy mobility.

By involving the design of garbage bin and trolley, the portable trolley garbage collector that can efficiently collect and transport garbage will be invented. The mobility mechanism can make the trolley easy to use around, making it ideal for use in various settings, such as households, public places, and construction sites. The device will be designed to promote cleanliness and environmental sustainability by making garbage collection more convenient and efficient.