UNIVERSITI TEKNOLOGI MARA MALAYSIA

NEXTGEN ENTERPRISE

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1.0 EXECUTIVE SUMMARY

Shoes are definitely an essential need in one's life. One could never live without a pair of shoes or few. Most individuals in any part of the world own multiple pairs to suit different occasions, such as formal events, casual outings and sports activities. This necessity often leads to challenges in organizing and storing the shoes efficiently, especially to people who face limited spacing. This introduces StepHaven to address this universal need with an innovative and sustainable shoe rack designed specially to combine functionality, technology and environmental consciousness.

Crafted from Kenaf fibers, this renewable and biodegradable material makes StepHaven standout from other brands as a lightweight, durable and eco-friendly. The product integrates advanced features that include solar generated automated conveyor belt for flawless access, motion activated LED lighting to enhance visibility, built in diffusers and sanitizers to maintain cleanliness and eliminate odours. Therefore, this makes StepHaven a practical and sustainable solution for modern households.

Besides that, a survey was conducted to ensure the customers' needs were met. The respondents faced common challenges with their current shoe storage solutions. The respondents faced insufficient space, poor organization, and lack of aesthetic appeal. Therefore, it also revealed strong interest in features in large storage capacity, durability and eco-friendly and affordability which are incorporated in StepHaven's design.

Despite challenges such as pricing adjustments and solar energy reliability, StepHaven offers a compelling value proposition. By addressing the practical storage needs with innovative technology and sustainable materials, StepHaven will not just be a shoe rack that is smart but an eco-conscious investment for all customers.

2.0 INTRODUCTION

According to Copeland (2024), technology refers to the use of scientific understanding to achieve practical goals in human life or, as it is occasionally described, to alter and control the human environment. Technology plays a huge role in how companies create value for customers. In today's fast-moving world, the use of high-tech technologies enables enterprises to come up with products to solve real-life problems that have increased functionality, are easy to use, and sustainable. Modern consumers are looking for more than a solution that just satisfies their functional needs but also one which reflects their values, like the care of the environment and efficient lifestyles. This is a very important reason for businesses today to integrate advanced technologies into common items that would help to better the customer experiences and increase customer satisfaction (Wahab et al., 2011).

It is with this dream of changing the traditional concept of shoe storage-development for those headaches in customers' daily life that the advanced-technology-based StepHaven shoe rack was conceptualized. Unlike any other normal storage, the shoe rack avails users of unprecedented accessibility, hygiene and sustainability. By motorizing the mechanism of a motor-operated conveyor belt, it will allow the user to easily access every pair of shoes through the press of a button and hence avoid the digging that irks them in messy spaces. This capacity enhances convenience for all users which are large households and shoe holders. Hygiene is yet another important factor that StepHaven has been able to address with its shoe rack. Most customers are concerned with maintaining a clean and odourless space for their shoes, especially in shared or high-traffic spaces. In that regard, it also integrates sanitization technology to kill bacteria, fungi, and odours and therefore offers a healthier, hygienic storage option. With this added functionality, the shoe rack assures users who take cleanliness seriously in their homes.

Apart from that, sustainability has turned out to be a big factor in the customers' buying decisions. Contemporary consumers are getting attracted more toward eco-friendly products that create less harm to nature. The principles of StepHaven go hand in glove because it uses renewable energy due to integrated solar panels while manufacturing, using kenaf, which is a biodegradable and durable material. With StepHaven offering a practical product in an environmentally friendly way, that's something many environmentally conscious consumers are

attracted to. The StepHaven is more than a storage unit, serving customers in their lives by providing innovative technologies and intelligent design in one product. An integral diffuser for agreeable smells and LED lighting for better visibility add convenience and comfort to users, inheriting in fact a firm commitment to product development on the part of StepHaven by touching upon various functionalities, hygiene, aesthetics, and sustainability.

2.1 Problem Statement/Issues

Contemporary houses have a significant challenge in storing shoes. Standard shoe racks are very limiting, have no organizational features, and do not offer much in terms of cleanliness. People experience difficulties with the cluttered areas, searching for certain pairs of shoes, and low-quality typical shoe racks. Besides, most of the materials used in the manufacture of most of these shoe racks are not environment-friendly, which is they include metals and plastic that contribute to environmental degradation during production and waste. These materials require so much energy in the production process, and they also contribute much to landfill waste since most of them are non-biodegradable. The third major problem from an environmental perspective involves the disposal of organic materials that include agricultural by-products such as kenaf.

Kenaf, a renewable and multi use fibre crop, is seldom used to its full potential, with a great deal of byproducts being discarded during processing. Similarly, food waste around the world is growing day by day-in huge quantities of both inedible and edible-wasting millions of tons each year. These contributes are landfills filled, increased emission of greenhouse gases, and a complete waste of materials that could have been recycled. These problems are further caused by the inability to implement up-to-date technology in traditional ways of shoe storage. Most of the conventional designs lack modern features such as cleaning solutions, convenience of accessibility, and energy efficiency. For example, shoes kept in tight spaces often retain bacteria, fungi, and odours because of poor aeration and creates hygiene issues. Without technological advancement, users must go through a lot of inconvenience, clutter, and environmental guilt when they have to use traditional, inefficient shoe racks.