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NEW PRODUCT DEVELOPMENT: HOVERBIKE

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TABLE OF CONTENTS

| | |
|--|-----------|
| TABLE OF CONTENTS | 1 |
| LIST OF FIGURES | 2 |
| 1.0 EXECUTIVE SUMMARY | 3 |
| 2.0 INTRODUCTION | 4 |
| 2.1 Problem Statement/Issues | 4 |
| 2.2 Objectives of Report | 5 |
| 2.3 Scope | 5 |
| 2.4 Methodology | 6 |
| 2.5 Limitations | 6 |
| 3.0 NEW PRODUCT DEVELOPMENT | 7 |
| 3.1 Definition | 7 |
| 3.2 Classification of NPD | 7 |
| 3.3 New Product Development Process | 9 |
| 3.3.1 Research & Development..... | 9 |
| 3.3.2 Product Design/Features..... | 12 |
| 3.3.3 Concept Testing | 14 |
| 3.3.4 Build Prototype (2D or 3D)..... | 18 |
| 3.3.5 Test Marketing..... | 19 |
| 4.0 CONCLUSION | 22 |
| 5.0 REFERENCES | 23 |
| 6.0 APPENDICES | 25 |
| APPENDIX A | 25 |
| APPENDIX B | 25 |
| APPENDIX C | 26 |

LIST OF FIGURES

| | |
|--|----|
| Figure 1: The pie chart shows the result from the concept testing survey on what is the distance from respondent's place to work/campus..... | 14 |
| Figure 2: The pie chart shows the result from the concept testing survey on what is the transport used from respondent's place to work/campus. | 15 |
| Figure 3: Front view and side view of the chosen product, Hover Bike. | 18 |
| Figure 5: The 3D view of the Hover Bike prototype..... | 18 |
| Figure 6: Global electric scooter and motorcycle market, by product (2013-2025)..... | 21 |
| Figure 7: Prototype from the Concept 1, which is "Hoverbike"..... | 25 |

1.0 EXECUTIVE SUMMARY

The production of modern hoverboard nowadays gave many negative drawbacks to customer in terms of safety and comfort. In order to overcome the issues, new invention of hoverboard, invented as hover bike are designed perfectly to fulfil the customer's demand. Hover bike is classified as one type of mobile personal transport similar to skateboard, but using magnetic means of levitation instead of wheels. This new product had so many additional features that will help the customer ease their routine in daily life such as solar shade with USB port and compressible seat. The new features give more comfort and more user friendly to the future customer. In conjunction with that, there are several objectives of this invention, which are to design a more stabilize hoverboard, to reduce the dependency of using electric as energy sources and the most important one is to ensure the safety of the customer. However, this hoverbike has its own limitations, which are its limit in accessibility and weight limitation. A concept survey was conducted by distributing a set of questionnaires to any possible customers such as students, staffs and netizen around Seksyen 7, Shah Alam, Selangor. There are six (6) classes of new product development (NPD) including new-to-the-world-products, new product lines, additions to the existing product lines, improvements and revisions of existing products, repositioning and cost reductions. Besides, there are several steps that need to be followed accordingly in the process of new product design. Firstly, it is needed to do some research & development that consists of idea generation, idea screening and market survey. Next, the product needs to be designed and show their specific features that differ them with another existing product. Before building the prototype (either in 2D or 3D), the concept needs to be tested first by conducting a survey to get information about customer's need as many as possible. Only then, the completed prototype could be viewed by others to test whether they are willing to buy such product or not. This last step is called as test marketing product process, which in this case the testing is conducted by distributing a set of questionnaires to the possible customers. All in all, the new product design is a successful design to be proud of after finishing it according to the steps that were highlighted in the new product development process.

2.0 INTRODUCTION

New technologies had been introduced and promoted to the world. This applied to all industry including sports, entertainment, movies and others. Developing new technologies or products consumed a lot of time, energy and money. This is because in order to ensure that the product can survive in the market, many research and testing were done. The final products developed need to function well, can be rely on and safe to use.

Hover board had caught the world's attention since early 2013. The first hoverboard was being introduced by Shane Chen, the creator, in China. The hoverboard or also being known as the self-balancing scooter had increases it popularity after being used by international artist as a prop in their performances (Pearce, 2015).

As for our new development product, the conventional hoverboard were improved with more features and technologies that can ease the consumers. The new improved hoverboard came with a compressible seat and solar shade with USB port. The product is known as the Hover Bike. Hover bike was designed to allow consumer to transport comfortably from one place to another.

The idea of producing this product came by the interest of children and students to have new things to play with. Plus, due to the natures of these groups that always want for something unique and rare, hover bike was designed to complete this desire. The hover bike was designed with the combination of bicycle, umbrella and power bank.

2.1 Problem Statement/Issues.

Traditionally, hoverboard was used as an entertainment and sport's props. People especially the children tends to involve in accident when using this product. Stability is the most important element that being need when using the hoverboard. With only two tires, the users tend to fall down and injured their legs and hands. Worst case, small children may tend to injure their head when playing using hoverboard.