



**SMART ECO-USB CHARGER WATER BOTTLE WITH FANCY LED**

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## TABLE OF CONTENTS

Contents	Page Number
1. EXECUTIVE SUMMARY	1
2. INTRODUCTION	2
3. NEW PRODUCT DEVELOPMENT	3
3.1 Definition	3
3.2 Classification of NPD	3
3.3 New Product Development Process	4
3.3.1 Research & Development	4
3.3.2 Product Design/Features	4
3.3.3 Concept Testing	5
3.3.4 Build Prototype (2D or 3D)	6
3.3.5 Test Marketing	9
4. CONCLUSION	9

## **1. EXECUTIVE SUMMARY**

Smart Eco-USB Charger Water Bottle is a new product developed to meet the need of modern generation where everyday life routine circling around electronic gadget or device, whether for personal or work activities. Smart principle behind the design allow for caring to the environment, without using too much electricity we ensure the rising concern of today generation towards global warming and excessive use of unrenewable energy are tackled. Eco-friendly portable water bottle with USB charging function which are easy to carry around with its unique design, are expected to become popular among people with busy and active lifestyle. Electricity that are generated with only using the movement of water inside the bottle is a new applied technology used to provide clean and renewable source of electricity which can be carry around by everyone, and hoped to bring more simple and easy invention that help with people daily routines.

## 2. INTRODUCTION

### 2.1 Problem Statement

Today generation daily life evolve around the use of gadget for their daily routines whether work or personal. Smart phones and tablets are few electronics device that has become compulsory for the public, but these device however depend on battery which has to be recharged over time to ensure proper functions of the device. Normally, user will bring with them an external power bank which is used as portable charging device if the permanent electric supply is not available around them. This however bring hassle to some of the user as they have to carry around multiple electrical device every time they went out from home, especially during outdoor activities such as cycling, jogging or just for a simple walk in the park. Moreover, various environmental issue that occur over the years has bring concern to the public on how this will affect their lives and what is the counter measures to overcome this problem. Renewable resources for energy generation for public use is one of the issue that has caught attention of some of the public who has awareness towards this kind of issue. Most of the source of energy nowadays come from unrenewable sources such as petroleum for fuel and electricity. Thus, this new product development is establish to cater the need of today generation whom want a new technology that make their life much easier and at the same time provide clean source of energy.

### 2.2 Methodology: Data Collections

For gathering information for this new product development, public survey using interviewing method are used to establish general public requirement and need for the new product. Survey were conducted in recreational park, and educational institution where target group are students, cyclists, hikers and other fitness enthusiasts with a total of 30 people age between 18 to 35 years old were interviewed. Survey were done during weekends morning in recreational park where public mostly spend their time in the park, while survey in educational institution are done during lunch hour where students has their lunch break. One recreational park and one educational institution were chosen for the surveys.

### 2.3 Limitations

Surveys are limited to 30 respondents only due to lack of time and human resources to conduct a survey covering a larger area. Exclusion is set for people below 18 and above 35 years old.

## **3. NEW PRODUCT DEVELOPMENT**

### 3.1 Definition

New product development is defined as the process by which an entrepreneur designs and creates a new product or service that will be sold to customers. The Smart Eco-USB Charger Water Bottle is designed through a survey done to establish a customer need and interest base data, to come up with a technological solution that fulfilled their needs. This product is perceived to be new in the mind of customers as there are no other water bottles with a similar design.

### 3.2 Classification of NPD

There are two classifications of new products: either Completely New Product or Improvements on Existing Products. Completely New Product can be that the product is either new-to-the-world products, meaning the first of its kind or new inventions, or new to the firm, meaning new product lines for the company but not necessarily new to the market. The Smart Eco-USB Charger Water Bottle is classified as Completely New Product as there are no water bottles in the market with similar functions and technology, and it is also the first product in line for the company.