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**TECHNOLOGY ENTREPRENEURSHIP (ENT600)**

**“SMART ECO-USB CHARGER WATER BOTTLE”**

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## 1.0 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. Today's, people are concerning about power saving and global warming issue that affects all living things. 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. People are more to think about how "go green" in their everyday life and maybe even might save some money in the process. Eco-friendly devices means something innovation which help to cut down on energy usage.

Our company has come up with this idea in order to reduce this issue by reducing electrical usage and promote active lifestyles among the public. Active lifestyles consumer can save a lot of electricity, time consuming to charge their gadget, improve their personality by using our product. The discreet design and colours of "*Smart Eco-USB Charger Water Bottle*" make it very suitable for young people, student, professional personnel and sport enthusiast.

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. It functions simply, consist of water bottle, mini hydroelectric, 5V rechargeable battery, LED strobe, low profile tact switch, LCD character display and micro USB. 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.

Our "*Smart Eco-USB Charger Water Bottle*" has functions and advantages not found in today's water bottle, thus providing a competitive advantage over more established competitors. The price is reasonable and there is no physical energy used. The management team in our company consist of several sections and is conducted by experienced employee to make sure our company is run efficiently

## 2.0 PRODUCT DESCRIPTION

### 2.1 Introduction

Our company has come up with this idea in order to reduce this issue by reducing electrical usage and our product support the active lifestyle among community. 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 unrenovable 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 Purpose of development

The purpose of the product development are:

- Substitute an external power bank which is used as portable charging device if the permanent electric supply is not available, thus reduce time consuming to recharge gadget.
- Improve personality by using adorable Smart Eco-USB Charger Water Bottle as a daily basis accessory.

### 2.3 Product Concept

- Dishwasher safe - means our product not compromise to prolonged high temperatures and highly effective detergents which can cause any damage.
- Milk bottle shaped water bottle made from low-density polyethylene (LDPE) with multiple choice of colourful bottle caps.
- 1000 ml LDPE coloured water bottle give high resistance from heat, puncture or broken. Fancy printed graphic perfect for outdoor events, lecture and conventions.
- BPA (bisphenol-A) free - Safe for food contact and considered safe for repeated use storing food items.

### 2.4 Application

Function:

- LED strobe strip used act as source of light to be noticed by others (emergency).
- Low profile Tact Switch - Small footprint 'thin tact switch' is surface mounted to switch ON and OFF the LED strobe strip.
- Turbine - Mini water turbine is a turbo machine which extracts energy from or imparts energy to a continuously moving stream of fluid (liquid).
- Water bottle – made from low-density polyethylene (LDPE) are high resistance from heat, puncture or broken
- Bio-plastic (cellulose acetate polymer) - cover up and seal 5V rechargeable battery, mini water turbine, LCD character display and micro USB charger cable.
- Character LCD display - The 16×2 Character LCD display works for display percentage of built in rechargeable battery