



SMART BAND

TECHNOLOGY ENTREPRENEURSHIP (ENT600): NEW PRODUCT DEVELOPMENT

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1.0 EXECUTIVE SUMMARY

Smart Band is a device intent to help people who want to protect their skin from UV and acid rain. This device will display the measurement of UV to help the users in applying the right amount and quantity of sunblock in daily basis through the Smart Band apps. This Smart Band also will display the pH level of the rain. This band and apps will help its user by notifying the UV and pH level as well as reminding the users to apply the protection for skin such as sunblocks and raincoat. This band is made of silicon strap with an OLED screen and capacitive button. Before the product is out in the market, public opinion is take into account for acceptance and their opinions on improvements. Majority of the respondents decided that they are more likely to recommend this product to their peers and families. This product and its process development were discussed further in the following chapters.

2.0 INTRODUCTION

Atmospheric levels of ozone-depleting substances (ODS) are rapidly increased nowadays. Because of this issues there are high chance of UV ray that can penetrate through the ozone layer. People should aware regarding this issue to concern about their skin that exposed to the sun ray. Acid rain is a result of air pollution. The smoke contains lots of invisible gases such as nitrogen oxide and sulphur dioxide that can be even more harmful to our environment. These gases react with the tiny droplets of water in clouds to form sulphuric and nitric acids. The rain from these clouds then falls as very weak acid which is known as acid rain.

2.1 Problem Statement/Issues

Anyone who spends considerable time under the sun may develop skin cancer especially for albino people. Sun protection is essential if skin cancer incidence is to be reduced (Armstrong, B. K., & Kricker, A. 2001). However, people awareness and knowledge about sunblock usage is still low. Sunblock need to be reapplied after some period of time to enhance maximum protection from the UV radiation. The epidemiological data suggest that, exposure towards increasing sunlight intermittency can be avoided if people started using sunblock and sunscreens from young age. Plus, people awareness on acid rain is low too and they are not aware about the pH level of the rain. The major post deposition effect of the acid rain phenomenon is subsequent human exposure to mercury, lead, cadmium and aluminium (Goyer, R. A., et al., 1985). Thus, people need to be aware on when to protect themselves from the acid rain.

2.2 Methodology: Data Collections

There are two methods involved in collecting data for the new product development. The methods are:

i) Online questionnaire

We had used google forms to develop an online questionnaire and spread the link using social media such as WhatsApp to spread the questionnaire to the public. There is a total of ten questions; nine are multiple choices questions and one write-in question. The data obtained is analyse using Microsoft Excel then present in table and graph. The questionnaire is as in APPENDIX A.

ii) Face-to-face interview

We had interview several UiTM Puncak Alam students using the same questions in the online questionnaire. The data is recorded to analyse using Microsoft Excel then present in table and graph.

2.3 Limitations

Even though the product had been carefully designed and tested, there are three known limitations of the device. The first limitation is the device only provide for band not for watch. So, people who prefer wearing watch rather than band will not purchase this product. Second, the device cannot navigate through a building. This is because the GPS system data does not come with building interior design thus it can only navigate outside. Lastly, the production of this device is costly. Integrating new technology and quality of materials used lead to increase in price thus some people may not able to purchase it.