UNIVERSITI TEKNOLOGI MARA

ENT600

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NEW PRODUCT DEVELOPMENT

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PROJECT TITLE : **EVAlcohol**

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1.0 EXECUTIVE SUMMARY

Our innovation is focusing on a new product that will give benefit to human kind. Almost every day we heard about accidents that happened around us. The number of crush occurred involving drunken driver is uprising. These events have caught our concern to develop new product that will ensure safety all road user.

Thus, we are introducing EVAlcohol which is a smart device that can detect the alcohol level of the driver. The device has ignition interlock system that could be fitted as a universal accessory in vehicles. Drunken driver who exceed the BAC level would not be able to drive the car.

In order to develop this product, we had conducted a survey to see the potential market demand and potential user. Apart from that, research and observation are being carried out to ensure the product can functioning well and satisfy user's demand.

2.0 INTRODUCTION

2.1 Problem statement/Issues

The number of accidents in Malaysia is increasing alarmingly. One of the factors that lead to this case is drunk drivers. Based on the statistics, in Selangor shows increasing number of accidents. Meanwhile in Kuala Lumpur, the number of accidents decreased. However, regarding 228 urine test that has been done in 2017, there were 29 drivers that were positive with drug which are three bus drivers, eight lorry drivers and three assistants, 10 car drivers and five motorcycle riders.

In addition, in 2019, the accidents that caused by drunk drivers has frequently been happened which caused high injury and death of the victims. In order to reduce the number of accidents, EVAlcohol is recommended as it is an alcohol testing device which is functioning to sensor the alcohol level of the drivers through their breath and skin epidermis. As the device has an alarm and interlock system, this can help to prevent the drivers to drive.

2.2 Methodology

The idea had been obtained by observing many accident cases that caused by drunk drivers in 2019. The statistics of the accidents was collected from Jabatan Kerja Raya (JKR) website for only two urban areas which are Selangor and Kuala Lumpur. In Selangor, the number of accidents increase from 154, 958 in 2017 and 163, 078 in 2018. Meanwhile in Kuala Lumpur, the number of accidents is slightly decreased from 72, 940 in 2017 and 72, 284 in 2018.

The idea also was generated by collecting the data referring to the news of the accidents happened in 2019. There are a few cases of accidents that caused by drunk drivers which lead to serious injury and death of the victims. For example, the latest news on the case that caused to the death which involved innocent CIMB female staff on November 16, 2019 and a male contractor on July 9, 2019.

2.3 Limitations

The limitation of this study is the collected data. Mainly because the data collected are only based on a certain area hence it may affect the reliability of the data.

3.0 NEW PRODUCT DEVELOPMENT

3.1 Definition

- EVAlcohol, an alcohol testing device
- Incorporated with two types of advanced sensor technology
- Xtend Fuel Cell Sensor Technology is used for detection of Blood Alcohol Content (BAC) through breath and WM-DPTR system through human skin epidermis
- Quick, can estimates blood alcohol content in seconds and offer a short warm-up time
- Know when your BAC will return to 0.00% with Zero Line Technology
- Easy to read, cool blue two-digit LCD display
- High level of accuracy, reliable results from 0.00-0.40% BAC
- Small with sleek design
- Solar panel as a source of energy
- Perfect for staying safe and consuming alcohol responsibly

3.2 Classification of NPD

- Our alcohol analyser is completely not a new product. The first alcohol analyser has been existed ever since 1954 which based on a chemical principle.
- EVALCOHOL is an alcohol testing device that has ignition interlock system that could be fitted as a universal accessory in vehicles.