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UNIVERSITI
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Le Calme SMART DIFFUSER

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| TECHNOLOGY ENTREPRENEURSHIP (ENT600) | : NEW PRODUCT DEVELOPMENT REPORT |
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1.0 EXECUTIVE SUMMARY

The Patron of the Malaysian Psychiatric Association (MPA) said according to the 2017 National Health and Morbidity Survey, 29% of Malaysians had depression and anxiety disorder compared with 12% in 2011. Thus, the team decided to develop *Le Calme* Smart Diffuser that intend to enhance user wellbeing by utilizing many benefits from natural refreshing scents of pure essential oils.

The smart diffuser has emotional intelligence sensor that able to detect users emotional by changes in body temperature because as according to the Healthline in 2018, people experience a significant increase in body temperature as high as 106°F (41°C) when exposed to an emotional situation and people with chronic stress shows a persistent low-grade fever between 99 and 100°F (37 to 38°C).

This development also comes together with phone application and voice control that allow the user to build their own profile at one's fingertips and the product diffuser cover wide coverage area and detect more than one user to improve the health of the body, mind, and spirit. Hence, a survey on potential buyer and potential market have been conducted together with research background on developing the product.

2.0 Introduction

2.1 Problem Statement/Issues

According to The American Institute of Stress (2019), Work-related stress causes 120,000 deaths and results in \$190 billion in healthcare costs yearly. Therefore, stress, depression, and anxiety are, unfortunately, part of the modern human condition. Global statistics show that an increasing amount of people are struggling with mental health issues. Moreover, people nowadays have lesser time for taking care of their mental health.

2.2 Methodology

The data has been collected from the students and workers inside and outside UiTM Shah Alam, Selangor. The data was collected by poll to students and workers by using media social platform which is Instagram.

3.0 New Product Development

3.1 Definition

- Le Calme Smart Diffuser is a a humidifier that diffuses aromatherapy that automates the experience of adding aromatherapy scent to a home or work environment.
- Building up a profile of the user's needs through the phone app and pumping out the optimal fragrance to suit their routine throughout the day and voice command could also makes any changes needed by the users.
- It also detect the user body temperature changes through the emotional intelligence sensor that will emit aromatherapy based on the user emotion that results in suitable scent to stimulate the user sense of relax or even to sharpen their mind.

3.2 Classification of NPD

- The product is not a completely new product but it is an improvement on existing product.
- Emotional Intelligence Sensor used to detect and sense user emotional and also people surrounding through changes in body temperature.
- Parameter can be set up for user profiles by using phone application.

- Highly coverage area by the diffuser where sensor sense emotional changes within entire house.
- Wireless charging pod used to charge smartphones giving it 2in1 concept asides from smart diffuser.
- Wifi compactible diffuser which is used a radio frequency signal instead of wires to connect *Le Calme* Smart Diffuser.

3.3 New Product Development Process

3.3.1 Research and Development

3.3.1.1 Idea Generation

The new product development process starts by improving existing humidifier product. The team members used two sources to generate new ideas:

- Internal idea sources: the new ideas internally obtained from research and development, but also contributions from employees.
- External idea sources: the company finds new ideas externally. The ideas attained from all kinds of external sources, such as distributors and suppliers, but also competitors. The most important external source are customers, because the new product development process should focus on creating customer value.

3.3.1.2 Idea Screening

The team members have conducted a survey from social media. In the survey has described the few unique features modified from existing humidifier. The team members have intended to invite people who tend to be exposed with busy lifestyle. The features of smart diffuser are described to the respondents to vote based on their preferences. The two version of smart diffuser are described as below:

Version 1: