



اَوْنُوْزِ سَيِّتِي تِي كُوْلُوْ كِي مَارَا  
UNIVERSITI  
TEKNOLOGI  
MARA

## NEW PRODUCT DEVELOPMENT: INFLATABLE PILLOW FAN

---

<b>FACULTY</b>	FACULTY OF COMPUTER AND MATHEMATICAL SCIENCE
<b>PROGRAMME</b>	BACHELOR OF SCIENCE (HONS.) IN STATISTICS
<b>PROGRAMME CODE</b>	CS241
<b>COURSE</b>	TECHNOLOGY ENTREPRENEURSHIP
<b>COURSE CODE</b>	ENT 600
<b>SEMESTER</b>	6
<b>GROUP NAME</b>	INFLATABLE PILLOW FAN
<b>GROUP MEMBERS</b>	1. HANISAH BINTI NORAZAM (2019158605) 2. NUR ATHIRAH BINTI NOORAZAM (2019728093) 3. NURAZIDA ASYIQIN BINTI ABD AZIZ (2019554923) 4. NURUL ATIKAH BINTI MUHAMAD DAUD (2019317349) 5. RUSYDINA AQILAH BINTI MUHAMMAD RASHDAN (2019913447)
<b>SUBMITTED TO</b>	MADAM YUSRINA HAYATI BINTI NIK MUHAMMAD NAZIMAN
<b>SUBMISSION DATE</b>	7 <sup>TH</sup> JANUARY 2021

## **1.0 TABLE OF CONTENTS**

<b>Contents</b>	<b>Page Number</b>
<b>1.0 Table of Contents</b>	1
<b>2.0 Executive Summary</b>	2
<b>3.0 Introduction</b>	
3.1 Problem Statement	2
3.2 Methodology: Data Collection	3
3.3 Limitations of New Product Development	3
<b>4.0 New Product Development</b>	
4.1 Definition	4
4.2 Classification of New Product Development	5
4.3 New Product Development Process	6
4.3.1 Research and Development	7
4.3.2 Product Design/ Features	8-10
4.3.3 Concept Testing	11-14
4.3.4 Build Prototype	15-16
4.3.5 Test Marketing	17-19
<b>5.0 Conclusion</b>	20
<b>6.0 References</b>	21
<b>7.0 Appendices</b>	22-29

## **2.0 EXECUTIVE SUMMARY**

Our company involve in technology-based industry where we mainly focuses on production with advanced technology that can solve problems. Based on the problem that occurs, we come out with new or innovative idea and invent it by using technology. In order to provide high quality and comfortable appliances that suitable for any age, our company uses high and durable materials. In addition to this, both technical and business skills will be equipped in our business. Mainly, we will focus more on research and development so that new and fresh product can be produced for a better future. Hence, we develop the idea of inflatable pillow fan where it is a combination of pillow neck and neck fan. This product is an efficient appliance because it has more than one operational function. The concept of saving space, pain reliever, and comfort is combined together and inflatable pillow fan is produced. Moreover, this product is unique since it can attach together and detach. This product is easy to bring, cheaper and convenient for every age. Therefore, the inflatable pillow fan is produced to discover the potential of this product in the market as well as to identify the market reaction towards this product.

## **3.0 INTRODUCTION**

### **3.1 Problem Statement**

Nobody likes to be drenched in sweat especially when sleeping. Not even for someone who enjoys traveling, backpacking, and camping. As well all know, Malaysia is categorized as a tropical country that located within the Tropic of Cancer and Capricorn where it is warm and humid (Jamaludin et al., 2015). When camping in a hot season, it is troublesome for the campers to bring small fan and bring pillow while sleeping. Moreover, more space is needed when packing pillow neck and fan during backpacking or camping. This is inconvenient for backpackers or campers who concerned more about saving space.

Travel in a long journey with no functional air conditioner or fan is unpleasant and unfortunate. It became worst when resting or sleeping in the journey with no pillow and in a hot weather. A sleeping posture is important. According to Her et al. In 2014, musculoskeletal discomfort that interrupts sleeping can cause neck pain. The use of a proper pillow can alleviate the neck pain although discomfort sleep postures can make the pain worse (Gordon et al., 2009). So, this product is useful to prevent this unpredictable thing happens. Apart from that, for the people who live in the area where the electricity is unstable, this product may be useful since this product use battery.

### **3.2 Methodology: Data Collections**

All information has been collected through several methods which are:

#### 1. Survey or questionnaire

A survey or questionnaire has been used to collect and gain information in this study. The questionnaires are created in Google Forms and distributed randomly through WhatsApp Messenger application. 101 respondents are randomly selected in order to obtain information that includes the probability of the proposed product to be accepted by the market, features, price, and quality specification.

#### 2. Research

A research has been conducted before the product has invented. Every aspect has been considered to prevent any inconvenience happen before design and produce the product. In order for the company to solve the problem and come out with a better plan, this method which is research method is needed.

### **3.3 Limitations of the New Product Development**

Purchasing inflatable pillow fan will more convenient and cheaper than purchase it separately. Although the inflatable pillow fan is highly efficient, there are still a few limitations that need to be confronted.

Firstly, most of the people may not interest with this product since its target is only focus for traveller. Non-traveller may prefer using either one of the product instead of using inflatable pillow fan which is the combination pillow neck and fan. This is because it is troublesome for the user to inflate the pillow neck and there is no need to use the fan since their house or transportation already has fan or air conditioner.

Other than that, some of the people may not like the features of the product because different people have different preference. For example, some may not like the inflatable air pillow neck because it can puncture and have a plastic smell but for some people they may like it.

Lastly, since the inflatable pillow fan can attach and detach, some self-cleaning for the pillow neck and fan is required to increase the efficiency of the product.

## **4.0 NEW PRODUCT DEVELOPMENT**

### **4.1 Definition**

New product development (NPD) known as the process where the entrepreneur bringing a new idea of design product or creates new products into the marketplace. The business needs to make an engagement with this process since we need to follow the changes in consumer preferences, increasing competition, and the advances in the technology sector or to capitalize on a new opportunity. New product development (NPD) brings an entrepreneur being more innovative in business so that the entrepreneur can understand what the market wants, improving on the products, develop new products to meet the customer expectations.

New product development is one strategy for the companies to survive in the entrepreneur industry and also bring the companies to grow without new product development the business will die or acquired by other companies. There are a few reasons why companies should develop a new product due to the change in a market where the market now keeps on changing because of the variety of customer need and preferences. We can see the market trends are changing where many companies need to compete with each other it gives challenges to them win the customer heart by improving their product or creating a new product. Next, the changes in technology since the technology are growing, the company should take this opportunity to create new development product based on technology to achieve customer needs. Other than that, creating a new product can reduce the seasonal fluctuations in demand where customers can meet the product that matches with their satisfaction in every season. Lastly, to build a company that can adapt to innovation and creativity so that the company can convince the market to meet the customer expectations. The more the new products that have been produced can attract more customer to buy the product.

A new product is slightly different from the previous products that have been produced by the company which this product either the improvement from the existing product or complete a new product. A product has many dimensions which include the names of the product, what features of the product, the product quality specifications, how the packaging of the products and the price of the products, and the target of customer for this product.