



# Panasonic

## COMPANY ANALYSIS PANASONIC MALAYSIA

**TECHNOLOGY ENTREPRENEURSHIP (ENT600) : CASE STUDY**

**FACULTY** : FACULTY OF COMPUTER AND MATHEMATICAL SCIENCES

**PROGRAMME** : BACHELOR OF SCIENCE (HONS.)  
MANAGEMENT MATHEMATICS

**GROUP** : RCS2486C

**NAME** : NURUL HIDAYAH BINTI MANSOR

**STUDENT ID** : 2020997215

**LECTURER** : DR FARAH LINA BINTI AZIZAN

## TABLE OF CONTENT

<b>ACKNOWLEDEMENT</b> .....	i
<b>EXERCUTIVE SUMMARY</b> .....	ii
<b>1.0 INTRODUCTION</b> .....	1
1.1 Background of study .....	2
1.2 Problem Statement .....	2
1.3 Purpose of The Study .....	2
<b>2.0 COMPANY INFORMATION</b> .....	3
2.1 BACKGROUND COMPANY .....	3
2.2 ORGANIZATIONAL STRUCTURE .....	4
2.3 PRODUCT/SERVICE.....	5-7
2.4 BUSINESS, MARKETING, OPERATIONAL STRATEGY .....	7
2.4.1 BUSINESS STRATEGY .....	7-9
2.4.2 MARKETING STRATEGY .....	10-11
2.4.3 OPERATIONAL STRATEGY .....	11-12
<b>3.0 COMPANY ANALYSIS</b> .....	13
3.1 SWOT .....	13
3.2 STRENGTH .....	13-14
3.3 WEAKNESS .....	14
3.4 OPPORTUNITIES .....	14-15
3.5 THREATS .....	15-16

<b>4.0 FINDINGS AND DISCUSSION</b> .....	16
<b>4.1 FINDINGS</b> .....	16
4.1.1 PROBLEM 1 .....	16
4.1.2 PROBLEM 2 .....	16
4.1.3 PROBLEM 3 .....	17
<b>4.2 SUGGESTED SOLUTION FOR PROBLEMS</b> .....	17
4.2.1 SUGGESTED SOLUTION FOR PROBLEM 1.....	17
4.2.2 SUGGESTED SOLUTION FOR PROBLEM 2 .....	17
4.2.3 SUGGESTED SOLUTION FOR PROBLEM 3 .....	18
<b>5.0 RECOMMENDED AND IMPROVEMENT</b> .....	<b>18</b>
<b>6.0 CONCLUSIONS</b> .....	<b>18</b>
<b>7.0 REFERENCES</b> .....	<b>19</b>

## **EXERCUTIVE SUMMARY**

Panasonic is a company that focusing on Appliances, HVAC, Lightings and Electric equipment for living and commercial spaces. In this study, I was given an opportunity to do analysis on this company that have many products. I would like to focusing on fan application by their company. The product that I want to develop is ceiling fan which have many features to ease our daily basis.

Other than that, I have done analysis on Panasonic Company to be able to determine their strength, weakness, opportunities and threats. It can improve the product of the company by doing this study. Besides that, it also looks into and figure out of the problem with the new technology of fan which is fan censored. The solution of the problem can be implemented on this study to have a better understanding. There are number of competitors which are Samsung, LG, Haier, Sony, Phillips, Whirlpool and Canon. In order to compete in the global market, new tactics must be developed. As a result, the blueprint has been subjected to some analysis and implementation. Last but not least, a SWOT analysis was created to highlight the company's strengths while also identifying measures to address the company's weaknesses.

## **1.0 INTRODUCTION**

### **1.1 BACKGROUND OF STUDY**

The introduction of the ceiling fan was a big milestone in the world of electrical appliances. Despite this, practically everyone has disregarded this item when it comes to innovation (Atommberg, 2016). With the evolution of air conditioning and home temperature control equipment, ceiling fans may have even become useless in some areas. However, they remain a simple and inexpensive source of relief from the sweltering conditions of tropical areas. Ceiling fans do not deliver chilled cooling like an air conditioner, which is an essential point to remember. They just move air near the fan instead. Convective cooling is the process of moving air away from an electromechanical device. Folding a sheet of paper and fanning your face are both examples of air movement. Mother Nature provided abundant convective cooling this past winter. You may recall that the weather forecasts warned us about the effects of the wind chill. Air travelling across our skin evaporates the moisture created by our body, making us feel colder, whether it comes from the wind, ceiling fans, or a sheet of paper.

According to Bret Curry (2015), ceiling fans are found in more than 75 percent of all-American houses. They can assist reduce summer cooling expenditures by making the air around the fan seem cooler than it actually is when utilised appropriately. A wind-chill effect is created within the house by using ceiling fans in combination with air conditioner. Run the ceiling fan at preferred speed and adjust the thermostat's set point by 3 to 5 degrees to save electricity. Keep in mind that comfort is a personal preference, thus the suggested fan speed and thermostat settings are not written in stone. Because of the ceiling fan's economic success, they faced stiff competition almost immediately. Then, it continued to refine the idea and designed a light kit that could be attached to a ceiling fan to integrate the two functions into a single item. Most ceiling fans had four blades instead of the original two by World War I, which made them quieter and allowed them to circulate more air. Since then, ceiling fans have steadily gained traction in the residential market, attracting customers with their energy-saving capabilities and more fashionable designs.

## **1.2 PROBLEM STATEMENT**

Every home should have a fan. There are many different types of fans available in the globe, ranging in price from the lowest to the costliest, depending on the qualities of the fan. Air conditioners are also a form of fan since they keep people comfortable in their homes. Sellers of various sorts of fans take advantage of the chance to recruit clients for their products, since market share is growing as more people buy new houses, and at least one fan must be purchased. There are several issues that can be recognised when individuals utilise ceiling fans in their homes. Firstly, it is inconvenient to have to modify the fan's speed constantly due to fluctuations in the surrounding temperature. Some individuals are too busy to change the fan's speed because they are working on something essential. They simply want to go into bed, and the fan speed automatically adjusts. Next, the cost of power rises as a result of forgetting to switch off the fan. Electricity has always been the primary source of energy for all structures. It is necessary for all of our everyday activities, whether pleasure or business. To avoid a power outage, we must pay close attention to the cost of electricity. Other than that, the break-in occurred because the residence lacked a safety and security system. Risks to someone's safety and security are unavoidable, but there's a lot ways that can do to reduce the chances. According to Rebecca (2021), residential fires occur for more than 27 percent of all recorded fires.

## **1.3 PURPOSE OF THE STUDY**

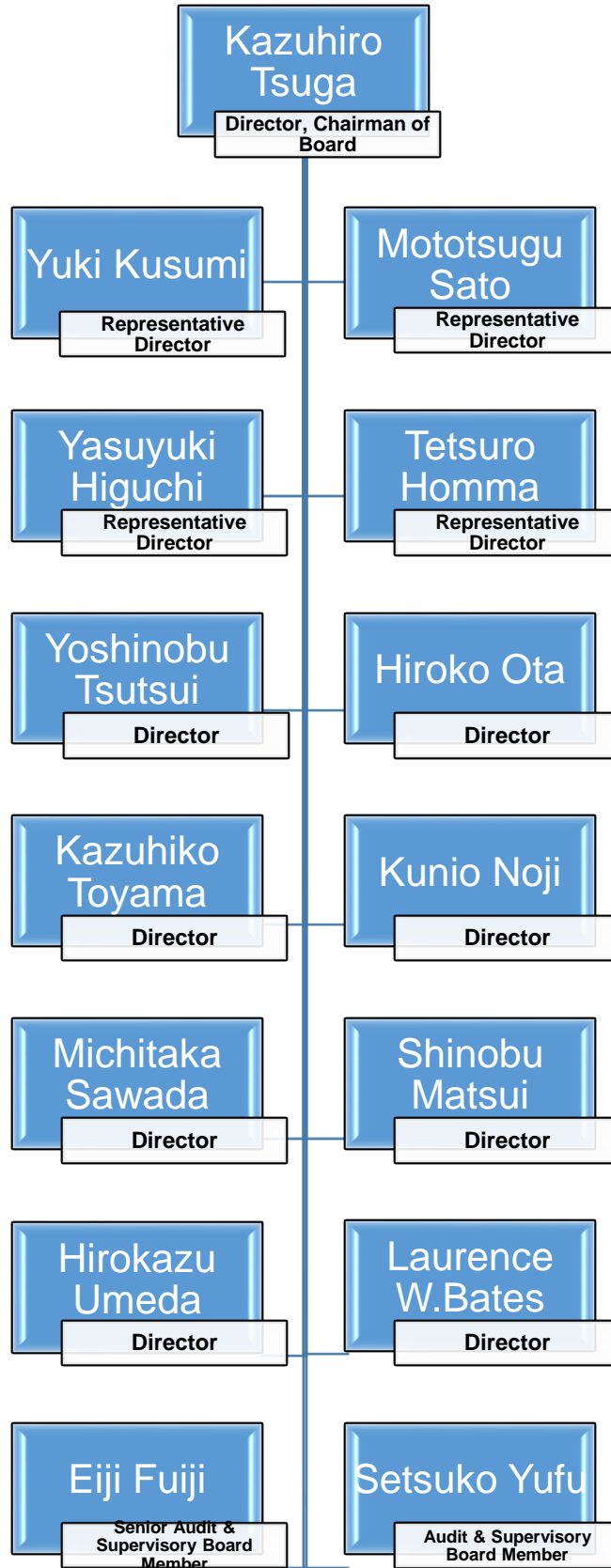
The purpose of this case study is to analyze Panasonic Malaysia company as based product. Other than that, I can identify the problem of the product and provide better solution to overcome the problem. Next, I can suggest some recommendation to the company and new development product in order to improve them in the future. By doing so, I will be able to learn more about the window of opportunity for exploiting markets with new innovation products, as well as whether or not the new product can be launched.

## **2.0 COMPANY INFORMATION**

### **2.1 BACKGROUND COMPANY**

Panasonic is a major Japanese brand company for electric products manufactured by Panasonic Corporation. It was founded by Konosuke Matsushita in 1918 as a light bulb sockets manufacturer. Panasonic Corporation, formerly known as Matsushita Electric Industrial Co. Ltd., and headquartered in Kadoma, Osaka, Japan. Matsushita, founded the company to manufacture an electric plug that he had invented in the 1920s. Guided by his great business management and philosophy, the company grew to become the largest Japanese producer of electronics. In 2007, Panasonic is one of the Worldwide Top 20 Semiconductor Sales Leader and was ranked the 59th company in the world by Forbes Global 500 (Panasonic, 2019). The company changed its corporate name from Matsushita Electric Industrial Co. Ltd. to Panasonic Corporation on January 10, 2008. The Panasonic brand name was used for the first time in 1955 for audio speakers and lamps. Before, the company has sold products under several other brand names such as “National” and “Technics” during its history. Panasonic’s first global tagline which is “Panasonic ideas for life” was launched in May 2003. The brand slogan had changed to “A Better Life, A Better World” in September 2013 for a better illustration of the company vision. Panasonic offers a wide range of products and services including electronic components, telecommunications equipment, automotive systems, industrial equipment, and also non-electric products such as home renovation and construction. Nowadays, Panasonic’s operations are organised into seven domain companies such as Appliances, Automotive, Life Solutions, Connected Solutions, Industrial Solutions, and two overseas branches superintend the businesses in the Asia and United States.



## 2.2 ORGANIZATIONAL STRUCTURE








## 2.3 PRODUCT/SERVICE

Panasonic produce variety of products which can be classify into 8 type of product. In every type, they consist more than 40 products. Here are some examples of every type of products.

Type of Product	Name of Product	Description
<p>1. TV &amp; AV</p> <ul style="list-style-type: none"> <li>▪ Television</li> <li>▪ Audio</li> <li>▪ Blu-ray &amp; DVD Player</li> <li>▪ Headphone</li> </ul>	 <p>Epic OLED Movie Performance with Elegant Design TH-65HZ1000K</p>	<p>65" / 4K ULTRA HD OLED / Ultra Bright Panel / Hexa Chroma Drive PRO / HDR 10+ / Dolby Vision™ / Dolby Atmos® / Cinema Surround Pro / Smart Features - Netflix, YouTube, Alexa, Mirroring</p>
<p>2. AIR SOLUTIONS</p> <ul style="list-style-type: none"> <li>▪ Air Conditioner</li> <li>▪ Air Purifier</li> <li>▪ Ceiling Fan</li> <li>▪ Ventilating Fan</li> <li>▪ Stand &amp; Table Fan</li> <li>▪ Wall &amp; Ceiling Fan</li> <li>▪ Air Curtain</li> <li>▪ Accessory</li> </ul>	 <p><b>3.0HP Premium Inverter R32 AERO Series Air Conditioner with nanoe-GCS-U28VKH-1 (3.0HP)</b></p>	<p>Wall-Mounted Premium Inverter Aero Series: Inverter, iAutoX, AEROWINGS, nanoe-G, R32 Refrigerant, 5-Star Rating.</p>
<p>3. HOME APPLIANCES</p> <ul style="list-style-type: none"> <li>▪ Refrigerator / Fridge</li> <li>▪ Washers &amp; Dryer</li> <li>▪ Vacuum Cleaner</li> <li>▪ Iron &amp; Garment Steamer</li> <li>▪ Home Shower</li> <li>▪ Water Purifiers &amp; Alkaline Ionizer</li> </ul>	 <p><b>Made in Japan Multi-door Refrigerator NR-F503GT-T7</b></p>	<p>Prime Fresh -3°C technology provides extra freshness of food and convenient cooking experience. Prime Fresh / nanoe™ X / ECONAVI / INVERTER / Double Moisture Control Filter / Fresh Freezing</p>

<ul style="list-style-type: none"> <li>▪ Panasonic Lighting</li> <li>▪ Bidet &amp; Water Pump</li> </ul>		
<p>4. KITCHEN APPLIANCES</p> <ul style="list-style-type: none"> <li>▪ Cubie, Microwave &amp; Electric Oven</li> <li>▪ Rice Cooker &amp; Slow Cooker</li> <li>▪ Blender &amp; Hand Blender</li> <li>▪ Juicer &amp; Slower Juicer</li> <li>▪ Thermo Pot</li> <li>▪ Food Preparation</li> <li>▪ Breakfast Appliance</li> <li>▪ Built-In Appliance &amp; Others</li> </ul>	 <p>1.8L Made In Japan IH Rice CookerSR-HB184KSK</p>	<p>1.8L IH Jar Rice Cooker. Short Grain &amp; Long Grain (Regular, Quick, delicious, 1-2 person, Congee, Casserole), Brown Rice, Multi Grains, Soup, Cake, Steam, Keep Warm. 7-Layer Diamond Kamado Pan.</p>
<p>5. BEAUTY &amp; HEALTH CARE</p> <ul style="list-style-type: none"> <li>▪ Hair Care</li> <li>▪ Hair Dryer</li> <li>▪ Hair Styler, Straightener &amp; Brush Iron</li> <li>▪ Face Care</li> <li>▪ Epilators &amp; Lady's Shaver</li> <li>▪ Mobile Beauty</li> <li>▪ Men's Shaver</li> <li>▪ Men's Trimmer</li> <li>▪ Oral Care</li> <li>▪ Scalp Head &amp; Eyes Massager</li> <li>▪ Hygiene Care</li> </ul>	 <p><b>nanoe™ and Double Mineral Ions Hair DryerEH-NA98RP655/K655</b></p>	<p>Moisture-rich nano hydrates hair and scalp, while nano &amp; Double Mineral Ions prevent damage from brushing and protect from UV rays. Four special modes for hair, skin and scalp.</p>

<p>6. CAMERAS &amp; CAMCORDER</p> <ul style="list-style-type: none"> <li>▪ LUMIX G Mirrorless (DSLM) Camera</li> <li>▪ LUMIX G Lense</li> <li>▪ Camcorder</li> <li>▪ Accessory</li> </ul>	 <p style="text-align: center;"><b>DC-GH5M2GA</b></p>	<p>LUMIX G mirrorless camera featuring 20.3MP MOS sensor, C4K 60p/50p 10-bit video recording and wireless live streaming capability.</p>
<p>7. PHONE, FAX &amp; VIDEO INTERCOM</p> <ul style="list-style-type: none"> <li>▪ Home Network System</li> <li>▪ Cordless Phone</li> <li>▪ Single Line Phone</li> <li>▪ Home Fax</li> <li>▪ Video Intercom System</li> <li>▪ Wireless Door Camera</li> </ul>	 <p style="text-align: center;"><b>VL-SWD501</b></p>	<p>Stylish Wireless Video Intercom System</p> <ul style="list-style-type: none"> <li>• 6 Wireless Monitors connectable</li> <li>• Touch Panel (5-inch wide screen)</li> <li>• SD card Recording</li> </ul>
<p>8. BATTERY &amp; TORCHLIGHT</p> <ul style="list-style-type: none"> <li>▪ Battery</li> <li>▪ Battery Appliance</li> <li>▪ eneloop Solar Storage</li> </ul>	 <p style="text-align: center;"><b>BF-BG20FT-W</b></p>	<p>Perfect for lighting up your campsite or for emergency home use, this standard flashlight features a 7.5 mm <math>\phi</math> white LED light source for bright, long-lasting illumination.</p>

## 2.4 BUSINESS, MARKETING, OPERATIONAL STRATEGY

### 2.4.1 BUSINESS STRATEGY

A business strategy are known as the plan of action to achieve the vision and set objectives of an organization and guides the decision-making processes to improve the company’s financial stability in a competing market (Heubel, 2021). Every company that established around the

world will have their own vision and mission. Same goes to the Panasonic Corporation also have their own specific of the vision and mission. The vision of Panasonic company they want to be a top global company by pursuing the management objectives of realizing a ubiquitous networking society and coexisting with the global environment through cutting edge technologies. Hence, Panasonic company stated that their mission is they want to strive for the creation of new values, by pursuing user-friendliness and accomplishing high-tech mindset, driven by challenging spirits and full speed of actions (*Panasonic Vision: A Top Global Visions & Missions of Fortune Global 100*, 2010).

Measures taken so far, 3-year Midterm Plan and long-term vision of the growth strategy are the three points of business strategy in the Panasonic Corporation. Tsuga (2013) mentioned in fiscal 2013, Panasonic had the significance losses for the two consecutive years and increased financial risk. As the president of Panasonic Corporation, Kazuhiro Tsuga had taken the four measures. Firstly, reorganizing ‘corporate structure’. They considerably reduced the function of the head office and implemented the business division system. Each Business Division (BD) is in charge of global Research and Development (R&D), production and sales as well as maintaining a steady increase in cash and profit. They also introduced the 4 Divisional Company system at that time. Each divisional company is made up of several BDs. It can handles large scale business development that would be difficult for BDs to handle on a stand-alone basis, creation of new businesses and strengthening key devices and more. Secondly, guidelines for unprofitable businesses. They reviewed the direction of the major unprofitable businesses and have been proceeding with radical forms. They also formulated strategies for “transferring” (changing business directions or customers) and growth at the same time. Following on that, they started the mid-term management plan “CV2015” in April that year. Furthermore, for escape from financial crisis a group-wide are generate cash activities, which was an urgent issue. In the result of these measures, the financial position has been improving steadily (Tsuga, 2013).

Next, 3-year Midterm Plan which is mid-term plan “CV2015” until fiscal 2016 which started in April 2013. Tsuga (2013) said in fiscal 2014, they aim for “over 250 billion yen of operating profit and over 50 billion yen of net income attributable to Panasonic Corporation”. The minimum level for restoring a dividend is 50 billion yen of net income. They are eliminate unprofitable businesses and complete the large scale restructuring without any delay in the next two years leading up to fiscal 2015. In the meantime, each BD aims to achieve “over 5%

Operating Profit (OP) margin” and improve profitability continuously. Through these measures, they aim to achieve “over 350 billion yen of operating profit and over 5% OP margin” as well as “over 600 billion yen of 3-year accumulated free cash flow” in fiscal 2016. Regarding to “eliminate unprofitable businesses”, they are focusing on 3 types which are TV or Panel, semiconductor and mobile phone. For the TV or Panel point, they are focus on major market and expand non-TV business. In semiconductor area, they transfer businesses, promote business alliances and asset reduction. While in mobile phone area, they transfer to BtoB and improve R&D efficiency in BtoC. They also have restricted other businesses. In portable rechargeable battery business, an ICT area are dramatically expand their business for engine and storage. To expand the Panasonic’s production in Japan, they established their sales forces to meet increasing demand of Electric Vehicle (EV). They also started to ship the first storage systems for mobile phones base stations in India (Tsuga, 2013).



Figure 2.5.1 Panasonic in future

Last but not least, long-term vision of the growth strategy from the customers’ viewpoint. On the chart above shows that Panasonic in future. With their ‘DNA of consumer electronics’, Panasonic company will pursue ‘better life’ for each individual customer in various spaces and fields, such as home, community, business, journey and car. Panasonic are having a strong relationship with their industrial partners closely related to each area to further contribute customers with their four Divisional Companies. They believe that ‘better life’ established with their industrial partners will be a driver to create the new electronics (Tsuga, 2013).

## **2.4.2 MARKETING STRATEGY**

The Audio Visual (AV) and Home Appliances (HA) industries in Malaysia fluctuate like a roller-coaster in response to the constantly shifting business environment. Panasonic Malaysia (PM) is Panasonic's sole authorised sales and marketing firm in Malaysia, where the Panasonic brand has been a market leader for decades. However, the current increase in oil prices, as well as the economic crisis, have put pressure on the AV and HA business and created numerous uncertainties. Panasonic Malaysia was up against stiff competition from its industry rivals, in addition of a poor and lethargic economy. As a result, Panasonic Malaysia must adapt its strategy in order to thrive in this competitive industry and achieve a larger market share. It would be difficult for Panasonic to compete with local, Korean, Japanese, Chinese, and other up-and-coming ASEAN manufacturers without creative services and marketing initiatives and tactics.

Panasonic began its adventure by producing National-branded bicycle lighting. It then began manufacturing electrical products and components such as electric irons and light fixtures. Panasonic began selling radios and related equipment, as well as bicycles, after World War II. The firm began manufacturing television sets in 1961 and is currently the world's fourth largest television maker. Panasonic's current portfolio includes electronic goods, semi-conductors, home appliances, and non-electronic services such as house remodelling. Panasonic's product portfolio is divided into these business units: Appliance Company (TVs, air conditioners, and refrigerators), Eco Solution Company (Industrial Lighting and Wiring, Energy Solutions), AVC Networks Company (Professional Cameras and Broadcasting recording devices), and Automotive & Industrial Systems Company (Automotive Spares, Infotainment Systems).

Besides that, Panasonic began its adventure in Japan and expanded its operations across Asia during World War II. It began producing televisions for the US market in 1961 and eventually extended to Europe. Panasonic began business in India in 1972. Panasonic now has over 580 subsidiary firms across the world. With the help of its 9 Domain Companies, such as Eco Solutions, AVC Networks, Systems & Communications, Energy, Industrial devices, Automotive systems, Appliances, Healthcare, and Manufacturing Solutions, the company's operations are organised broadly into three business fields: Consumer, Solutions, and

Components & Devices. Automotive Systems provides audio equipment to numerous vehicle manufacturers as a subcontractor. In Ireland and the United Kingdom, Panasonic has a chain of stores that sell just Panasonic products. Panasonic products are available for purchase in official outlets, shopping malls, franchised shops, merchants, and online shopping sites, which have become the company's primary selling outlet.

Panasonic is a worldwide brand that believes in producing high-quality goods for a global audience. It has always had fairly straightforward pricing practises. Because the firm made its products for the typical family, it kept its pricing low. Because of its reasonable price methods, the corporation ensures that its products are accessible to people from all walks of life. As a result, the brand has adopted a fair Price Policy, with prices that are reasonable rather than fixed. The corporation has explored a variety of cost-cutting measures in order to access as much of the market as feasible. The brand has maintained a low profit margin, which has resulted in better sales and profits for the corporation. Various special occasion discounts have also aided in cutting product prices and increasing revenues while attracting new customers.

Panasonic has long believed in large-scale campaigns to promote its many goods and services, and has hired a number of celebrities as brand ambassadors to help with advertising and brand awareness. The firm has also taken part in the "Greener Electronics" campaign, which promotes the manufacture of environmentally friendly goods. The Panasonic marketing mix's promotional approach focuses on 360-degree branding across all media. Panasonic has a number of sponsorship agreements in place to keep its brand visible in the international market, including sporting events, football teams, events and forums, and so on. This brings the Panasonic marketing mix to a close.

### **2.4.3 OPERATIONAL STRATEGY**

A business operational strategy is a decision-making process that determines an organization's long-term strategy to meet the mission statement's objectives. It entails the particular activities that management intends to take in order to attain a given goal in the company's operations. Operational strategies link the company's programmes, rules, guidelines and employees so that each branch may help the others achieve a similar goal. Panasonic Corporation has unveiled a three-pronged plan to grow its electrical components and housing materials

business in Southeast Asia. Panasonic's Life Solutions Company will launch the goal in the new fiscal year to reach 100 billion yen in sales in the region by March 2022.

The first strategy is to increase product variety and enhance human resources to become a fully integrated manufacturer of electrical components. As well as having a strong sales network, Panasonic has been leading Japan's electric component sector. Panasonic intends to be a full electric component provider in Southeast Asia by applying Japanese techniques and knowledge, boosting sales through local partnerships, increasing product variety and developing human resources. This includes a "learning environment" for successful learning and reading, as well as a "pleasant sleeping place" that helps people wake up more refreshed.

Besides, the company wants to enter the kitchen and housing materials markets through local partners. Panasonic's Housing Systems Business Division will aggressively enter Southeast Asian home appliance markets, leveraging Japan's cutting-edge technology, skills and experiences. The organization is committed to helping develop living space in Southeast Asia by partnering with local businesses. The company will design and introduce packaged housing solutions, such as modular kitchens and bathrooms, to ensure quality and ease of installation. An IoT-enabled "Smart Box" parcel delivery box that can be operated remotely via a smartphone is tested in Thailand.

Moreover, the company wants to grow prefabricated home and water purifier sectors. Southeast Asia's societal challenges include health, labour shortages and ageing. Panasonic has been developing solutions to these issues. Therefore, the business created air and water purifiers in health, including a Central Water Purifier. With labour shortages, the company will launch prefabricated apartments and homes throughout Southeast Asia, reducing building time and improving quality. These prefabricated dwellings were introduced in China last year to great reviews. Panasonic also proposes a robotic bed to increase geriatric autonomy and independence. Both products are already available in Japan. Panasonic, a leader in electric components and housing materials, continues to deliver solutions that enhance living space by integrating engineering, production, and sales expertise.



### 3.0 COMPANY ANALYSIS

#### 3.1 SWOT

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"><li>• Reasonable cost</li><li>• Easy to control</li><li>• Beautiful design</li></ul>	<ul style="list-style-type: none"><li>• Limited range</li><li>• Noise and loud issue</li><li>• Wobbling issue</li></ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"><li>• A cooling mechanism</li><li>• High in demand</li><li>• Spacious</li></ul>	<ul style="list-style-type: none"><li>• Threats of new strong competitors</li><li>• Increased in prices of raw materials</li><li>• Rapid change in technology and demand</li></ul>

#### 3.2 STRENGTHS

One of the strengths is the price of the ceiling fan is affordable for most of the people. People that come from middle-class income can purchase this without trouble because the price range is RM150 to RM300. In the aspects of payment method, customers can pay cash or online banking. There is another option if we cannot afford to pay in cash which is, we can make an installment. Furthermore, there is another cooling system such as air-conditioner but this system is pricier than the ceiling fan. Hence, the ceiling fan is having more advantages in the aspects of price than any other cooling system.

Another strength is the ceiling fan is easy to control. This is because it included a remote to control the fan in a certain distance. With this remote, users can get better experience while using the ceiling fan. For instance, the users do not have to go through the hassle to switch on or off the fan. Bonus point is, the users also can increase and decrease the speed of the fan through the remote without having to go to the wall controller. This will make things be less complicated and convenient for the users.

In purchasing something valuable, people naturally desire something beautiful. So, the Panasonic creates various exquisite design for the ceiling fan to show more their creativity towards the customers. Besides that, this matter will make the ceiling fan more interesting and

attractive in the eye of customers. For instance, there is a satin brass-finished ceiling fan that has clear acrylic blades and LED illumination, making it one of the sleekest fans you will ever see. You would not be able to see the blades when they are rotating. Hence, this is one of the best features in the ceiling fan that customers that have been looked for which is the beautiful design.

### **3.3 WEAKNESSES**

Every creation must have their own flaws, same goes to the ceiling fan. The first weakness about ceiling fan is it is hard to clean because the height of the ceiling. It is hard to reach by the users unless they have ladder to climb up. Other than that, the blades of the fan are quite sharp, hence, it will be dangerous for the users to touch and clean it up close. Even when they success in cleaning the fan, it will be messed up with dust spread on the floor.

Another weakness in ceiling fan is noise or loud issue. This is because it is an electrical appliance with moving parts, so, practically every ceiling fan will produce some level of noise. A ceiling fan is made up of dozens of elements that helps to maintain it all together. Typically, a roof support beam is situated in a primary location on the ceiling. To keep all of the fan parts together, tiny screws are required. They are not very successful in keeping tight unless they are fresh new. Due to micro-vibrations, older screws may begin to loosen. This can cause noise problems due to rattling components.

Lastly, the ceiling fan have a wobbling issue from time to time. A wobble problem can occur in any ceiling fan as a result of something being off-center. The reason for this is usually related to the balancing of the fan blades. The entire fan can waver if these blades are not correctly spaced or have been accidently bent. Hence, it will become a problem to the users eventually after using this ceiling fan for a certain time.

### **3.4 OPPORTUNITIES**

Generally, the ceiling fan is a cooling mechanism because it creates a powerful airflow around the nearby area. However, this fan has another potential which is becoming a dryer mechanism. During the rainy season, the users usually have no option but to hang their clothes in the house.

Within the presence of ceiling fan, it can help the process of drying the clothes faster. In conclusion, the ceiling fan can become multifunctional device because it is not only having a cooling purpose but also a dryer mechanism.

Another opportunity of the ceiling fan is that it is in high demand. It is because of the cheap and easy to use. It is good to put at one's house since it can help to save four to eight percent on cooling costs when combined with air conditioner. Plus, Ceiling fans might be a very useful purchase if you live in a location where you can use fans instead of air conditioning on mildly hot days. Because there are much more pros rather than cons, people tend to install the ceiling fan at their home. So, with people choice to use ceiling fan it will give more benefits to the company and the market demand.

Ceiling fans now come in a variety of sizes that are better suited to broad open floor layouts. It is being considered as large ceiling fans to have at least a 60" blade spread these days, but even that isn't enough for many of today's vast great spaces. Plus, it also not makes space crowded since it on the ceiling and not disturbing others space that can be filled with furniture to make the room more attractive and beautiful. Thus, people tend to install ceiling fan other than another fan.

### **3.5 THREATS**

In a business world, there will always be threats that we have to face eventually. The first thing is in the threats of new strong competitors. Existing firms are continually threatened by new industry participants. The severity of the threat, on the other hand, will be determined by entry obstacles and the behavior of incumbent rivals in the market. New competitors can harm the position of established enterprises in the market if the barriers to entry are low. For example, it costs little to enter the sector which there are minimal economies of scale in place.

Other threats are increase in price of raw materials. The increase in commodity prices resulted in an increase in product shortages due to a lack of supply. Substitute demand has the potential to lower demand for industrial products and services. Customers are more inclined to move to cheaper alternatives if a firm raises its costs. If a corporation is not well-established or makes a move that customers see as ill-willed, this might dramatically weaken its strength within the sector.

Rapid changes in technology and demand. Both of this aspect also could get us in threaten state. The world is evolving every day and so is the technology and demand. The development of technology is growing faster every day without us realizing it. There are so many talented people that involve themselves in this electronic industry. Hence, they could do remarkable thing far better than us. In the future, there will be chances that ceiling fan will be improvise by others or will be forgotten because they have found substitute for this product. Thus, the demand will change significantly in the market.

## **4.0 FINDINGS AND DISCUSSION**

### **4.1 Findings**

#### **4.1.1 Problem 1: Changing the fan's speed takes an excessive amount of time**

The speed of a fan, as we all know, is controlled by a switch or a remote control. Many individuals are voicing out since moving only to regulate the speed or open the switch is inconvenient. For instance, it is such a hassle when you are already sitting on the couch and forget to switch on the fan. Hence, you have to stand up again to switch it on or you cannot find the remote because you forget where you put it in the first place. So, we need to create a fan that can help the customers to solve this issue.

#### **4.1.2 Problem 2: The majority of people usually uses too much electricity**

As we know, most of people in the household are unable to manage their electricity well because they cannot see where the energy flows. Almost anything that cools will take a significant amount of electricity. Not only does it consume a lot of power, but it'll also be on for several hours a day, if not all day. The climate in which you live has a significant impact on how much this will cost. Not to mention, the weather in Malaysia is hot and humid all year round so basically people will consume considerably more cooling than people who live in a lower temperature zone.

### **4.1.3 Problem 3: The majority of houses lack the necessary equipment to defend themselves against fires**

Nowadays, some automatic fans can identify whether or not humans are present. As a result, there is still no automatic fan that can detect the temperature of the environment and is regulated by the sensor. When the temperature is at its lowest, the fans will turn on faster, and vice versa. For instance, a fire alarm or fire protection system is not found in every home which it is only found in major structures such as retail malls and hotels. Those who are trapped in a blazing house have no time to seek for water and try to save themselves. If there is a sensor fan that can also be a fire detector, then it would be beneficial to the customers.

## **4.2 DISCUSSION**

### **4.2.1 Suggested solution for Problem 1: Application for fan sensor**

Our invention, which is a fan sensor comes with this special application. From the first problem, we can see that customers have issue with controlling the speed of the fan. Hence, we create this application hoping it to be useful to the customers. As we can see, usually fans have remotes to control the speed but with this fan sensor, customers do not need it anymore. They just have to install the application for this fan sensor and the controlling speed is at the tip of their finger. They no longer have to find the remote if it goes missing.

### **4.2.2 Suggested solution for Problem 2: Fan sensor**

Referring from the problem number 2 which is about the waste of electricity, as a solution we create this fan that has a unique feature which is the smart sensor on it. We included this sensor because its function is it can detect the temperature of the environment of its surrounding. Hence, this will be convenient and less hassle for customers to save their electricity because it can detect if there are human or not around it. People do not have to bother about whether to switch off or on the fan and sometimes we forget to switch it off which will lead to higher electricity bill. To conclude, this fan sensor is more efficient than an ordinary fan.

### **4.2.3 Suggested solution for Problem 3: Fire detection**

The majority of homes are not equipped with a fire alarm system that can detect elevated temperatures generated by a fire. As a result, our device has a fire detection mechanism that detects temperatures greater than those specified for the fan. The fan will then revolve counter-clockwise, acting as a smoke inhaler. Because the fire system reduces smoke, this function can lessen the chance of people being injured by the fire.

## **5.0 RECOMMENDATION AND IMPROVEMENT**

The multifunction ceiling fan is a user-friendly product because it is easy to use, comfortable and favourable. During the Covid-19 pandemic that ravaged our country, body temperature was crucial in determining whether or not our bodies were in proper operating conditions. To return to the product's characteristics, it can include an infrared technology system for detecting body temperature in the product. The fan will turn on automatically after that, and the user of the fan will be notified via their mobile device. The fan will turn off and send a notice to the mobile device if the occupants in the room leave the room. In comparison to a standard ceiling fan, the fan censored saves time in everyday living simply by automating the changeover. Every time turn on and off a fan, it will be wasting time with friends. By automating the changeover, users save time that may be spent on other vital tasks like as getting ready for work or caring for their children.

## **6.0 CONCLUSION**

To conclude this study, the automated switch is one of the key reasons why fan censored is such a simple device to use. Consumers only need to be present in the room for the device to turn on. Fan censored is also convenient since it can automatically adjust the fan speed according on the current room temperature. This provides consumers with comfort and convenience, especially after a long day at work. Because of its features, people with children, working adults, and elderly couples will find it convenient to utilise our product.

## 7.0 REFERENCES

- A.E.T. (2016). *CEILING FANS: A BRIEF HISTORY*. Ceiling Fan. <https://atomberg.com/ceiling-fans-a-brief-history/>
- Curry, B. (2015). *A few facts about ceiling fans*. Carolina Country. <https://www.carolinacountry.com/departments/more-power-to-you/a-few-facts-about-ceiling-fans>
- Garg, V., & Bansal, N. (2000). Smart occupancy sensors to reduce energy consumption. *Energy and Buildings*, 32(1), 81–87. [https://doi.org/10.1016/s0378-7788\(99\)00040-7](https://doi.org/10.1016/s0378-7788(99)00040-7)
- Heubel, M. (2021). What is strategy? Definiton, components & examples explained. <https://consulterce.com/business-strategy/>
- Tsuga, K. (2013). Panasonic business strategy. [https://www.panasonic.com/global/corporate/ir/pdf/20130918\\_vision\\_note\\_e.pdf](https://www.panasonic.com/global/corporate/ir/pdf/20130918_vision_note_e.pdf)
- R.T. (2019). *Panasonic - New World Encyclopedia*. Panasonic. <https://www.newworldencyclopedia.org/p/index.php?title=Panasonic&oldid=1017145>