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## **BLUEPRINT – EASY CANE**

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## 1.0 EXECUTIVE SUMMARY

*Easy Cane* is designed after thorough research and discussions has been taken into consideration. From the outcome of our research, the standard canes lack important features that can be fully utilized by the visually impaired or blind person. The design of *Easy Cane* takes into consideration the cost, performance, reliability, safety, material, and durability. The technology used in the *Easy Cane* was rather affordable in accordance with the other existing smart cane that is available in the market. For instance, *Easy Cane* helps visually impaired, or blind person to know whenever there are any obstacles around them such as cracks and holes.

To ensure our place in this market, thorough research and market surveys have also been conducted. Our product which is *Easy Cane's* target market is aim for the blind and visually impaired people to allow them easily in navigating outdoor environments. As there are many smart canes in the market, we manage to make our product *Easy Cane* different with additional of other unique features with affordable price as compared to the other canes available in the market. *Easy Cane* has special features as it has been given a unique touch to the product as well as suits the user's preference.

*Easy Cane* uses several approaches to sell the product, which are through e-Commerce platforms such as Shopee and Astro GO Shop. We also sell our product at pharmacies and some selected stores in Malaysia. The company target for the production after the first year will increase to 3 percent for the first year.

The management team is led by the General Manager, Puteri Nur Najihah binti Mohammad Nizam, who manages the top organization's management. Her experience of 5 years in managing Canes Sdn. Bhd. have made the whole team receiving knowledge and guidance based on her working experiences. The team also consisting other partners that are specifically expert in their own field of study such as HR Manager, Marketing Manager, Administrative Manager, etc. Working together with other partners inside the team, the *Easy Cane* company can sustain its competitiveness for much longer period.

## 2.0 PRODUCT DESCRIPTION

One of the most significant identification and mobility aids for persons with limited vision or blindness is canes for the blind and visually impaired. Finding the right mobility cane can assist a blind or visually impaired person in gaining more freedom. The present cane, on the other hand, has a few flaws, one of which is its simplicity. It has no assistive technology for the blind; therefore, they will not be able to detect any impediments above ground level, and the length is manually changed at a fixed length. As a result, the present cane can be unsafe, damaged, risking the user to be injured if it accidentally collides upon the obstacles.

To overcome the current problem, we have introduced a new product which is *Easy Cane*. We designed *Easy Cane* after considering various features and drawbacks of existing products. It has a more helpful and a thorough function and safety that is ideal for someone who is vision impaired or blind. This cane is user-friendly and equipped with innovative technology to assist people in their everyday activities. With the aid of this innovative technology, vision impaired or blind person will be able to lessen their burdens and live a regular life. As a result, several technologies offer by this cane can motivate them to work independently and becoming more self-sufficient individuals.

Some of the technological advancements that have been implemented in our products are sensors, vibration, shock-absorbent spring, and automated length adjustment, as well as a wireless charging cane. The sensor in this cane will benefit blind people or those who are visually impaired, as it will allow them to keep a safe distance from any barriers or even people nearby. In the case of an accident, such as striking a wall, hitting a rock, or tripping, the shock-absorbent spring will bounce the stick, keeping it from being damaged or destroyed. It also has an automatic length adjuster that is connected to an on/off button, and when pressed, the stick extends to the desired length.

Although charging the cane may look challenging for blind individuals, they can ask their caregiver or others in the neighborhood to help them locate a switch to plug in the charger. Even though it lacks a battery, and the system does not work, this cane can be used as an original cane, making it a two-in-one cane. All these features are designed to assist the blind in leading a regular life and interacting with others.

We would also want to know how long it takes for an average blind individual to learn to walk with a cane and the level of difficulty to learn. A few technical advances have been incorporated into our product to boost its functionality. We employ sensors to detect risks in the area around the cane, alerting the user to the impending danger or hazard. In comparison to the traditional walking cane, consumers can simply learn to walk with our device due to technical developments. Our device can quickly open and close with a touch of a button for ease of usage. Because the cane will cease elongating at the appropriate length to follow the user, the addition of an automatic length adjuster makes deploying our device easier and more universal.

An elastic strap also aids the user by securing the cane in the user's hands. Because of the automatic length adjuster, *Easy Cane* can be used by people of different ages and sizes, and it is a simple approach to stimulate. Because of its simplicity of use and familiarity, people will find it more memorable. Because of the shock that happens when the user unexpectedly collides with an obstruction, the conventional cane is not completely safe. The jolt from the stick is delivered straight to the arm, which might result in pain.

However, if the user is unaware of an impending barrier, our *Easy Cane* employs a spring-loaded shock absorber to absorb the impact. Our product will satisfy users since the design is small when collapsed and it is simple to operate. The benefits and features that *Easy Cane* gives to each user are demonstrated via surveys sent to the caregivers of our target consumers. The characteristics of *Easy Cane* get good responses in the survey.

Besides that, each firm must have a concept before embarking on new product development. After many ideas have been generated, the firm selects the most relevant ones. To make the future stages of the new product development process easier, all the ideas generated in the first stage are screened and reviewed to reduce the number of ideas to a manageable quantity, including the most beneficial ones.

The selected product ideas would next be presented as product concepts in a thorough and understandable manner. The opinions of selected customer groups on product concepts will be gathered, and the highest scoring concept will be chosen to build a new product. The last step of testing will be conducted to discover the most effective way to