



**NAA TECH COMPANY SDN. BHD**



**Naa Tech Co.**

**LOVE THE NATURE**

**THE BINBIN SORTING WASTE MACHINE**

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## 1.0 EXECUTIVE SUMMARY

NAA Company product a new invention product from manual recycle bin to new automatic sorting waste machine called BinBin. The idea generated from the observation and market survey was done to identify what the problem arise in the current global situation and unsolved problem. The problem exists such as global warming, air and water pollution are one of the cause from waste we produce every day. This is due to usage of non-biodegradable that cannot be disposing due to unawareness of people nowadays. Thus, this provides opportunities for our company to produce more efficiencies product to user to ease them in practicing recycled activities. We also capable to invent new product as a result of support from government and waste management parties. Therefore, we assure that the company will be successful to gain entry and get into market penetration with the help from them since they also provide a great effort to spread awareness in preserve the environmental and suggesting to use waste sorting machine. The product is introduce to all people for purchasing especially to whom those are busy working and has limited time. The price affordable, worth and it is suitable for middle wages which is only RM200. The unique concept of this product than other competitors is it using technology and automatic waste sorting. The management team that contributed in the production of BinBin including the head of manager in all department , the Chief Executive Officer, the Statistician, Marketing Manager, Operation Engineer, Financial Manager and others employers. The product is occupied with good features, durables, high resistance and provide with great value for customer. Customer are a responsible user beside contributes a lot in protect and preserve our world. Thus, the concept of 3R which 'Reuse, Reduce, Recycle' can be achieved .

## 2.0 PRODUCT OR SERVICE DESCRIPTION

Product or service of BinBin Sorting Waste Machine introduced from the Naa technology company as a reason of observation and concerns toward the environmental pollution, support the waste management parties plus give encouragement and awareness to peoples. Wastes are generated increasing year by year as population growth; these caused air, water, extinction of landfill and other environmental pollution. This issue has been an idea generating and screening to improve the manual recycle bin to an effective automatic machine bin.

BinBin Sorting Waste Machine is compatible to be use for all peoples to make easier to practice recycle item especially for working and busy people and also waste management parties at the landfill. The recyclable will be sorted and collect to product new item and product. Therefore, it should be reducing new plastic production activities, forestry logging, less pollution. The product functions are effective to sort recyclable items into its type respectively which equipped with high quality materials to function well. It is used to solve the unmet customer problem to practice sorting waste even though there are busy.

The BinBin Sorting Waste machine features consist of LED light, DC power supply, odour absorber, rotator, automatic processing, metallic waste sensor and ultrasonic sensor which are unique feature of the product that will create or add significant value better than order product. First of all, component chosen to produce this product are based on is unique, reasonable price and good quality. There are many benefit using the LED light as an indicator to show whether the machine is full and ready for recycle because of some advantages of LED light such as average rated lifetime hours are long lasting, energy efficiency and low radiated heat. Its lifespan is long than using other light such as incandescent, fluorescent, CFL and Halogen. It is also has low heat levels which can withstand in any temperature so it is not easy to burn out.

DC power supply for the product used is battery. It comes with compact size but powerful DC batteries that suit the mini size of the machine. The usage of battery for BinBin sorting machine makes it easy to control, mobility and can put it everywhere we want rather than use to plug in. Advantages of DC batteries offer are simpler installation and maintenance, high startup power and torque, fast response times to starting, stopping and acceleration and availability in several standard voltages.

In order for the machine to process waste for sorting, after performing rotating waste sorter the recyclable is equipped with metallic waste sensor to detect the metallic item through it. The metallic item such as tin, cans, foil paper, steel, wrapper and other item fall into metal container by rotation separation which the sensor pass the signal to controller to take action. The other sensor used is Ultrasonic Sensor Module HC-SR04 that which detects the item such as glass. The recyclable item that cannot be recognized is categorized under paper. Both of the sensors are mini size but play important role and powerful in separating the item. The differences between BinBin machine and what is currently on the market is there do already exist the waste separator bin but it is manually usage and currently place at the recreational areas supermarket. In additional, BinBin Sorting Waste machine can be place anywhere because it is mobility with its mini size.

The NAA company performs will take the best steps in marketing this product that will account for market penetration and the product life cycle to develop and lasts a long time such as make plan and strategies on the customer relationship, the distribution channel and revenue stream. Customer relationship is important to maintain customer churn which company can offer special feature of product, free gift, promotion, more years of warranty, discount for maintenance and also protect the right and safety citizen to ensure the delivery good and services. Besides, it is quite difficult for market penetration if the company do not plan the best for the distribution channel. BinBin should be distributed to all 20 retail store of company, advertise through television and internet and also promote through the social media such as facebook, Instagram, tweeter, shopee, and lazada as an third party wholesales. BinBin also provide affordable price that worth it its quality. To increase the revenue, we suggested to the customer to frequently performing maintenance (service) on the machine two times a year.

Thus, the function and how the BinBin machine operates in sorting the waste material from household item into its separate type are explained. Consumer opens the lid and recycles waste including paper, plastic, tin and glass is load into the machine. Close the lid and push the button 'start' and the machine will perform waste separation process by itself. When the waste is put into the machine, its start to rotating to make the waste separate each other. The BinBin machine contain programmable logic controller(PLC) which an industrial digital computer for adapting manufacturing process. It collect signal from every sensor and transmit into output control for sorting process to microcontroller.