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UNIVERSITI  
TEKNOLOGI  
MARA

## **AN AUTOMATIC RECYCLE BIN BLUEPRINT** **REPORT**



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STATISTICS

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## **1.0 EXECUTIVE SUMMARY**

The automatic recycle bin is a product that will be very helpful, useful and affordable product for people nowadays. This product will make our daily life become more easier and can save more time. This product also come with a few advanced technologies that are very pleasant for the customer to used. The technology used in this product are the sensor to detect the materials type, the compressor to compress the material in order to save space and also lastly is the heating rod that will help in changing the food waste into fertilizers.

This is the first product that will be released and sold in market in Malaysia. This will be an added value for this product to attract more customers to buy this useful product. The other existing product nowadays do not come in with the technology to make people's work easier.

The management team for this product targeted housewives to be the customers who will buy this product when it released. The team also have done all the calculation for the market size and the market share. They also have predicted the total sales for this product.

This product will be a very successful product when it released. It is undoubtful that this product will help in making our daily life easier also can helps in making our environment clearer and in a good condition.

## **2.0 PRODUCT DESCRIPTION**

The product developed is an automatic recycle bin. This product is an automatically operated recycle bin which will help in saving time while recycling. The main purpose of this automatic recycle bin is to separate the recyclables based on their material types. After the waste were already detected and the material type identified, the waste will be channelled into their respective compartment in the recycle bin. Inside of each compartment, there will have a compressor. The compressor will help to compress the recyclables in order to increase the volume of materials can be entered. This will make this product become more efficient.

Apart from the main purpose, there are also other functions that this product offers. There is also a small compartment that was attached to the side of the product which is specially made for the food waste. The food waste such as fruit peels and the uneaten part from vegetables can be thrown into this compartment. This compartment is specialized in transforming the food waste into fertilizers. This fertilizer can be used for plants. This will help in reducing the amount of food waste that just being thrown away without proper way.

There is not existing product that used advanced technology. The existing product is still does not undergoes major innovations. The product which are sold in the market at this point is mostly similar to each other although different company sells them.

This new product is still in development process. At this moment, the product is still not finish therefore, the finishing time was predicted to be around the corner. When the product is fish, it is then ready to be purchased by the customer.

### 3.0 TECHNOLOGY DESCRIPTION

Technology is a must in developing any device that aimed to makes people work easier. Technology is an application of scientific knowledge for practical purposes, especially in industry. In order to make people interested in this new product, the technology used need to be included. With the aid of technology, the innovation made will attract more people to buy the product.

There are a few technologies included in this product in order to make it more effective and usable. The main technology involves is the sensor which is used to detected and identify the material type of the recyclables. This type of technology is widely used in identifying the type of materials such as paper, plastic and many other types. The sensor is used at the upper part of the product. The sensor will detect the type of material of the recyclables that were put into this product.

There is also a compressor that used to compress the recyclables in each compartment. This is intending to help in increasing the space inside the compartment and the volume of the recyclables that can be put into. Other than that, there are also alarm system that included in onto this product. The main reason for the alarm to be put into this product is to make sure that all compartment in the recycle bin can be emptied when it is already reach it limit. This is useful for the customer who always forgot to emptied the compartment. This also very helpful in order to maintain the cleanliness of the product.

Last but not least, the technology used in the food waste compartment is the heating rod. The heating rod will be in the inside of the compartment. This is for heating the food waste and change it into fertilizers. The high temperature can help in combusting the food waste and tuns it into useful fertilizers. After the food waste completely changed into fertilizers, the fertilizers will be mixed with soil. The soil can be used for plant.