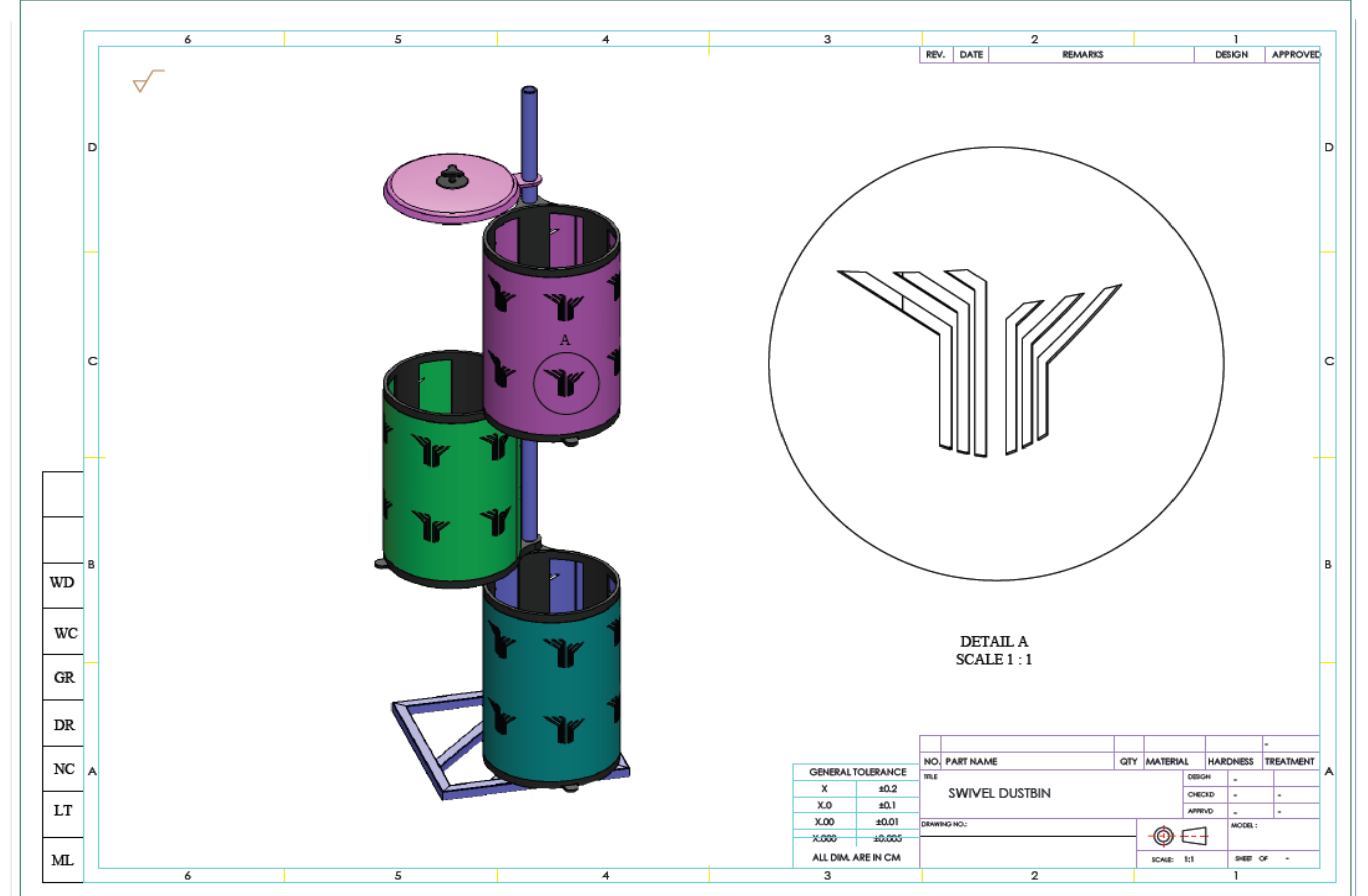
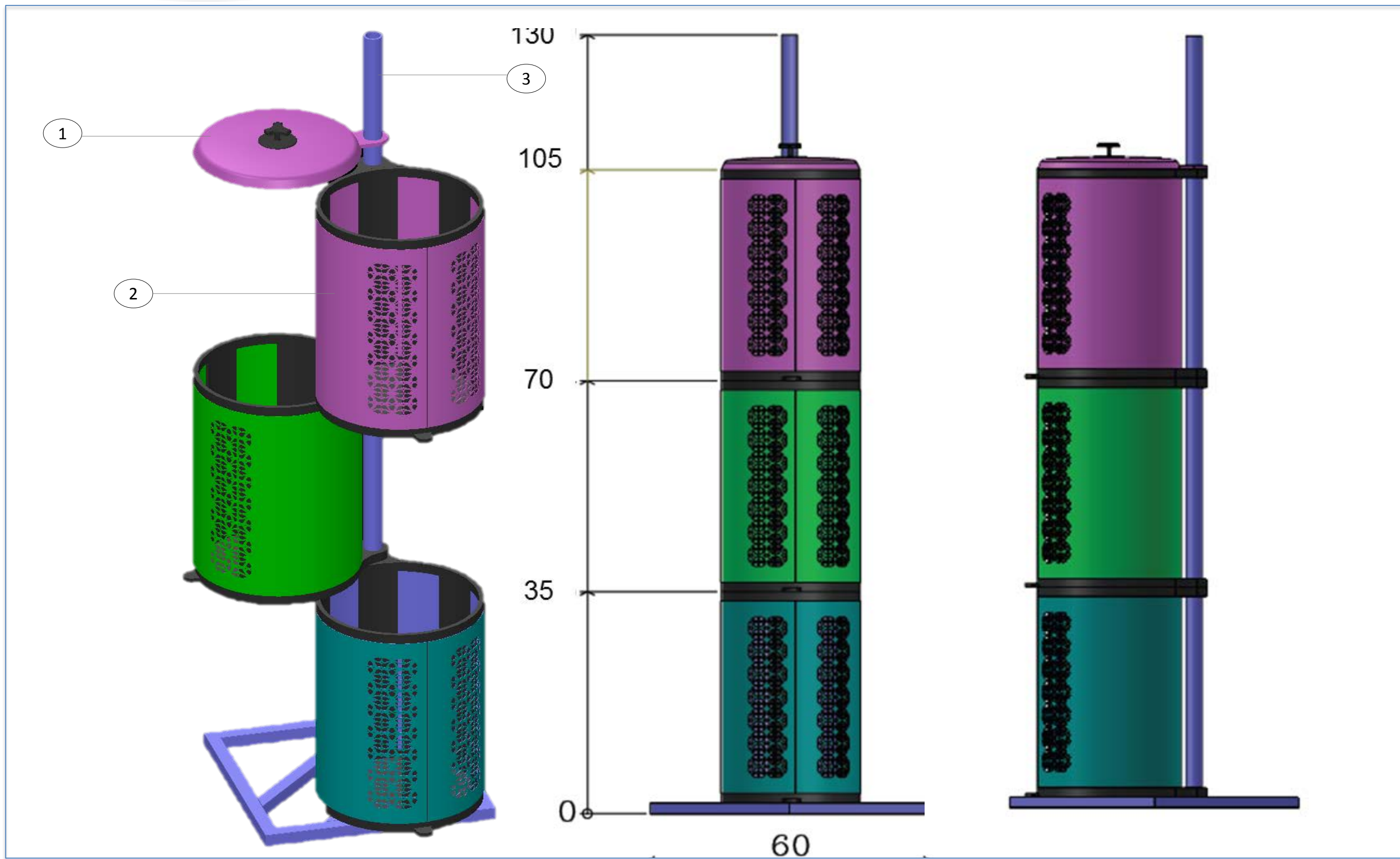


# PERFORATED SWIVEL DUSTBIN (PSD)

IPR (PATENT/ID/C) NO. AR2017004148



## INTRODUCTION OF TECHNOLOGY

In average, 33,000 tones of solid waste was generated per day in the country, mostly from households which at least **22% of the waste** can be **recycled**. The National Solid Waste Department (NSWD) has aimed to **divert 40% of the waste** disposal from landfill by encouraging **waste segregation approach** to the public.

However, relatively **low recycling rate (10.5%)** at present was observed due to several key factors and one of the factor is the **characteristic of the available waste bin** (Norsyahira et al., 2015). Several reasons that discourage waste segregation such as **no systematic waste separation unit (94.1%)**, **unsuitable waste bin for waste separation (86.8%)**, **more than one bin is needed (88.2%)**, and **lack of space to keep the segregation waste (80.9%)**.

## INVENTION

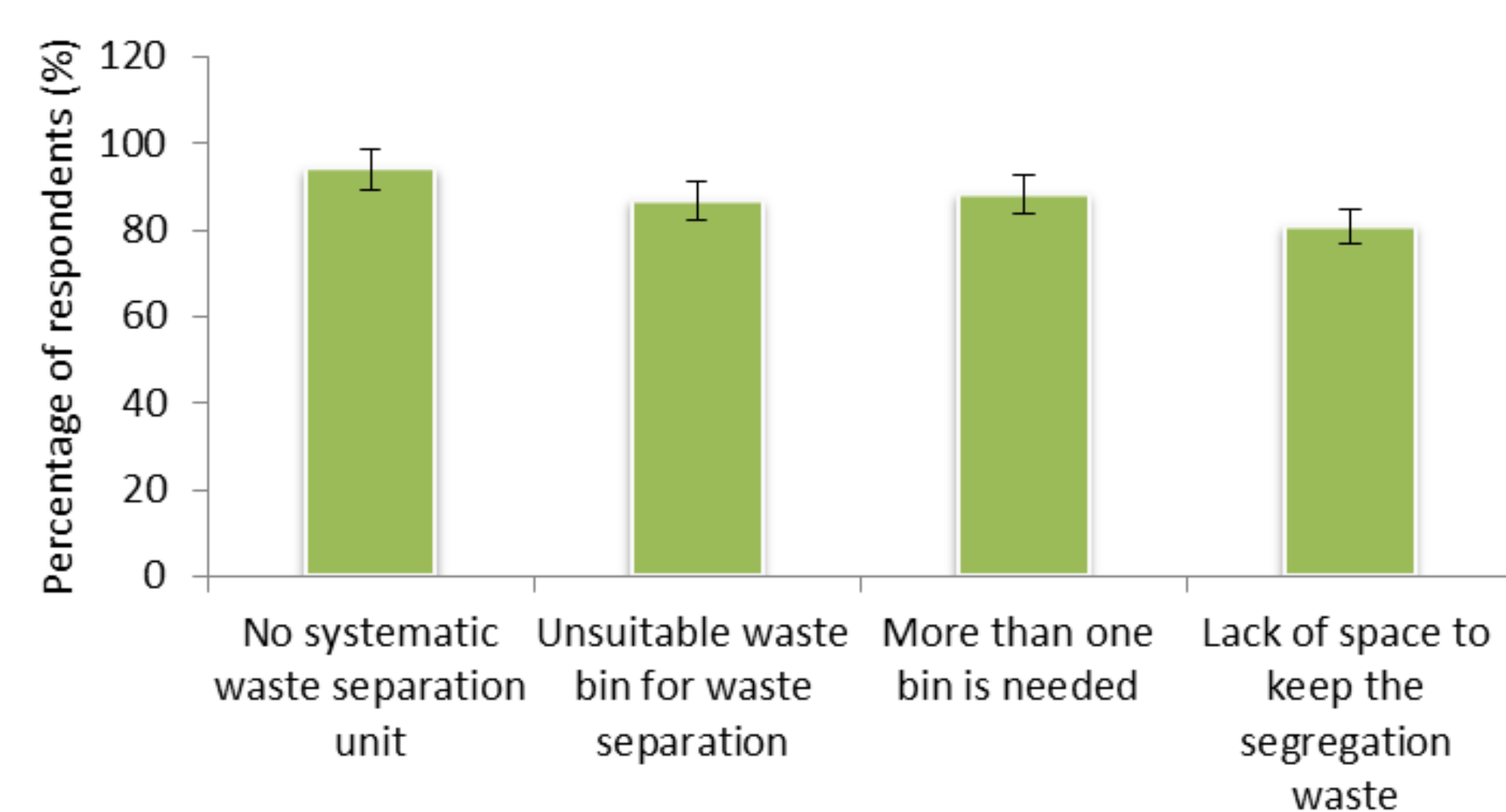
"**Perforated Swivel Dustbin (PSD)**" provides a solution to waste separation activity at home.

The invention is a stackable, swivel perforated waste bin unit with the unique characteristics of a **rigid frame, stackable** (vertical) and **swivel** (360 degree). It has **perforated surface** with three **colour coded compartments**. It is a **detachable unit** with a **safe height** (105 cm).

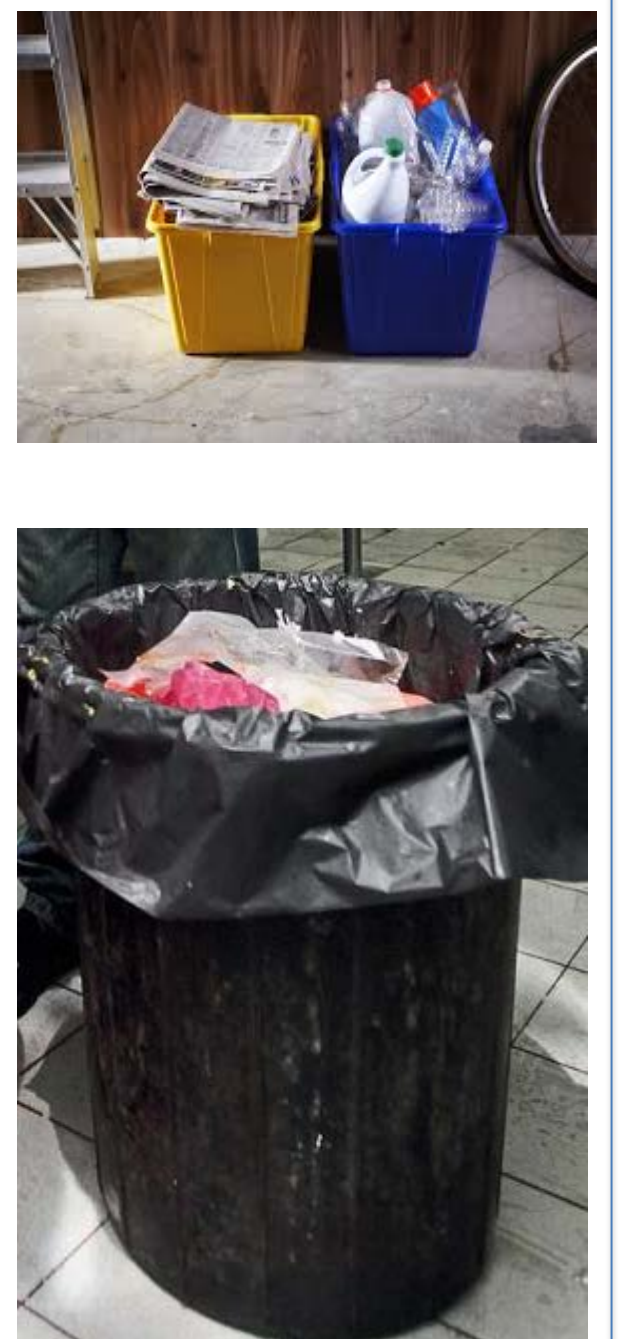
## ADVANTAGES

- **Occupied less space** compared to separate bin unit.
- It can be **used in a tiny house** (i.e. apartments, flats).
- Allows **flexibility** to the user to place the waste at any angle as it swivel.
- The **perforated surface** provided **less retention** to the plastic bag so that it can easily pull out to throw out the rubbish.
- Adequate **colour coded compartments** for easy **waste categorization** and to **educate the kids**.
- It is **easy to dismantle** for cleaning and **safe height** and it can **encourage waste segregation at home**

## Issues related to the current waste bin



Response of 140 household in Klang valley, on a survey of the current waste facilities characteristics that influence waste segregation behavior (Norsyahira et al., 2015)



## MARKET POTENTIAL

The product has market potential as needed household items. The waste management agencies can use this technique to increase recycling rate.

### Consumer/End User

- Potential to be used as waste dustbin and encourage waste segregation
- Potential to be used to store other household items such as onions and fruits.

### Industry

- Potential to be market widely for variety used in variety of size. It potentially to be redesign to a smaller size, as a stationary items.



Project Leader : Sharifah Norkhadijah Syed Ismail  
 Dept./Faculty : Environmental and Occupational Health / Faculty of Medicine and Health Sciences UPM  
 Email : [norkhadijah@upm.edu.my](mailto:norkhadijah@upm.edu.my)  
 Phone : + 6012 2646 712  
 Expertise : Environmental Sc. (Waste Management)

[www.sciencepark.upm.edu.my](http://www.sciencepark.upm.edu.my)