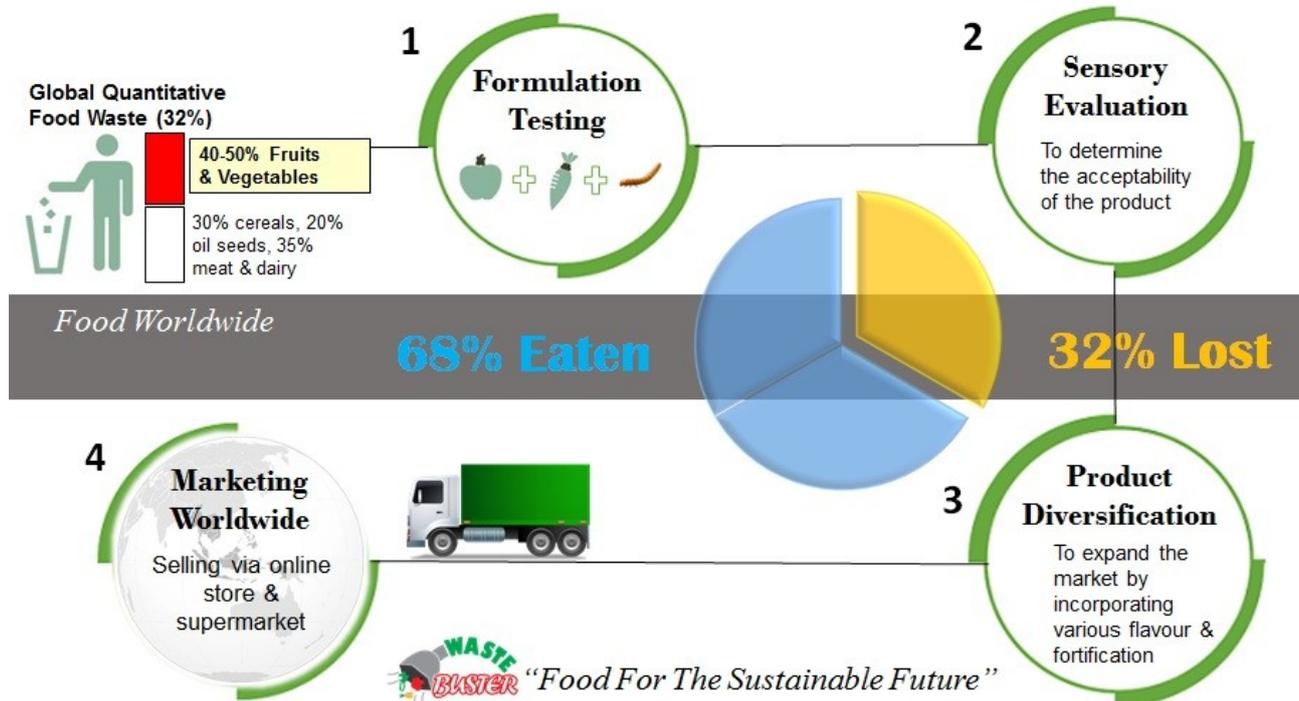


# WasteBuster



Food for the sustainable future!  
Serdang, Malaysia

[labs.tffchallenge.com/team/2016/wastebuster/](http://labs.tffchallenge.com/team/2016/wastebuster/)



## Mission

Transformation of food wastage through established technological methods into sources of sustenance.

## Objectives:

- Reducing food waste by utilizing discarded fruits and vegetables and further saving more dumping sites for other purposes.
- Expanding extruded snack market by producing an affordable well-diversified health-based snack with fruits and vegetables mix.
- Aiming to cope with disaster relief assistance as a source of nutrient-rich emergency food and/ or a cheap carbon-based solid fuel.

## Team

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## Use Case

On a global scale, approximately 40 to 50% fruits and vegetables end up lost or wasted along the food supply chain. Fruits and vegetables wastes are often disposed at landfill, or heat-treated and used as compost. These wastes will produce greenhouse gas (eg:methane) and will contribute to global warming. Global warming has been increasing

the temperatures of the Earth's oceans and atmosphere. The number of natural disasters related to global warming, ranging from mild to absolutely destructive, is noticeably skyrocketing. This is putting a massive strain on the federal budget and immediate sources of food, especially in 2050, when food is predicted to be insufficient to feed the huge population. The enormous demand of food by 2050 requires immediate intervention in increasing food supply.

## Potential

Snacks are common food suitable for all ages and are typically designed to be portable and satisfying on-the-go food. This will be the first ever “waste-snack” which will satisfy hunger and at the same time, provide life-saving nutrition whilst reducing food wastage. To enhance the protein content, mealworm powder is incorporated as one of the ingredients. Other than alleviating the increasing demand for food by 2050, this calorie-dense snack also comes in handy especially during disaster. In times of emergency, this low cost snack can also be used as a sustainable carbon-based fuel. Utilising the fruits and vegetables wastes will greatly improve global food security and availability, mitigate the wastes' environmental impact and reduce resources required from the food supply chain.

## Business Case

Extruded snack has revolutionized the snack market and is projected to grow to USD 31 billion by 2019, associated with 4% of CAGR by 2020. Using something recognisable and fun helps reduce the negative perception of consuming food waste-based products. Solidifying WasteBuster's venture into health-based extruded snack incorporated with fruits and vegetables mix provides general public an opportunity to stay satiated through healthy snacking. In addition, our product is affordable at 0.05 USD per pack (200 g). This makes our product affordable even to the poorest region in the world; Democratic Republic of Congo (DRC) with citizens earning on average USD 1.08 per day. Our snack will be sold via online store and supermarket which accounted to more than 53% of overall market revenue globally.

### Processing Flow Chart

