

Industry	Retail
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## **Challenge 1**

### **A. Challenge Statement/Title:**

Cost effective alternative packaging material for top crust bread.

### **B. Background of the Problem:**

The Sri Lankan retail company currently utilizes polythene packaging for its top-crust bread products. In alignment with its sustainability objectives, the company aims to find an alternative compostable packaging solution that can replace polythene while maintaining the necessary functionality and quality for top-crust bread.

- **Environmental Impact:** The use of polythene packaging contributes to plastic pollution, adversely affecting the environment and posing a threat to ecosystems and wildlife. The company aims to reduce its plastic footprint and minimize its impact on the environment.
- **Compostability and cost effectiveness:** Identifying suitable compostable materials that can effectively replace polythene without affecting the unit cost of the top-crust bread is a key challenge. The new packaging should be capable of breaking down naturally without causing harm to the environment. The cost of the new packaging should not significantly impact the overall product pricing or profit margins.
- **Functional Requirements:** The packaging for top-crust bread must meet specific functional requirements, such as ensuring the product's freshness, protection from contamination, and ease of use for consumers. The alternative compostable material must fulfill these functional needs.

### **C. Technical Requirements / Performance Criteria:**

#### **Current plastic packaging used**

Top crust bread bag:

Dimensions : Width - 12 inches. (8+4) Height – 16 inches

Material : Linear Low Density Poly Ethylene (LLDPE)

Thickness: 80 GSM (grams per square meter)

## **Challenge 2**

### **A. Challenge Statement/Title:**

Recyclable or compostable alternative for fruit juice cups.

### **B. Background of the Problem:**

A Sri Lankan retail company currently employs transparent Polypropylene (PP) cups for selling fruit juice products. In line with its sustainability objectives, the company aims to find an alternative packaging solution that is either recyclable or compostable, reducing its environmental impact and promoting a more sustainable approach to packaging.

- **Environmental Impact:** The use of transparent PP cups contributes to plastic waste, posing a significant environmental concern due to their limited recyclability and potential to end up as litter, polluting ecosystems and harming wildlife.
- **Recyclable or Compostable Alternatives:** Identifying suitable recyclable or compostable materials for packaging fruit juice is a key challenge. The alternative packaging must be compatible with the product's requirements and have a minimal ecological footprint.
- **Functional Requirements:** The packaging for fruit juice must meet specific functional requirements, such as maintaining product freshness, preventing leakage, and ensuring ease of consumption for customers, and ease of operational use for outlet team members when displaying, serving or storing the product. It should also have the ability to be stored/displayed in an environment where it would come into direct contact with moisture and ice. The new packaging solution should fulfil these essential functional criteria.
- **Cost-Effectiveness:** The company needs to find an economically viable and cost-effective alternative to transparent PP cups that does not significantly impact the overall production costs, pricing or margins

### **C. Technical Requirements / Performance Criteria:**

#### **Current plastic packaging used**

Size of the cup : 350 ML

Material : Poly Propylene (PP)

### **Challenge 3**

#### **A. Challenge Statement/Title:**

Finding a compostable alternative for cling wraps.

#### **B. Background of the Problem:**

A Sri Lankan retail company currently utilizes polythene clingfilm for packaging and wrapping purposes. In pursuit of its sustainability goals, the company is actively seeking a viable and effective compostable alternative to replace polythene clingfilm and reduce its environmental impact.

- **Environmental Impact:** The use of polythene clingfilm contributes to plastic waste, causing significant environmental harm through pollution and potential harm to ecosystems and wildlife. The company aims to minimize its plastic footprint and adopt more eco-friendly packaging options.
- **Compostable Material Identification:** Identifying suitable compostable materials for clingfilm that can effectively preserve and protect products while being eco-friendly is a critical challenge. The alternative material must exhibit similar performance characteristics to polythene clingfilm.
- **Functional Requirements:** The compostable alternative must meet specific functional requirements, such as sealing properties, barrier protection, and ease of use, to ensure it is a practical replacement for polythene clingfilm. The product also needs to be food grade as it will come into contact with items such as pizza, fruits etc.
- **Cost and Feasibility:** The company needs to find a compostable alternative that is economically feasible and does not significantly impact the overall production costs, margins or the final pricing of products.

#### **C. Technical Requirements / Performance Criteria:**

##### **Current plastic packaging used.**

- Cling Film (width 30 CM X Length 300 M) Net weight of the product excluding the core 1.3 KG. Material: Polyethylene (PE)

Cling Film (width 45 CM X 300 M) Net weight of the product excluding the core 1.95 KG. Material: Polyethylene(PE)