

Tshwane University Innovation Challenge #4

## **Waste collection and management**

N.B. reclaimers/ informal waste pickers are used interchangeably

### **Problem Statement**

The City of Tshwane (CoT) waste management division would like students to propose innovative idea/solutions that will address the following challenges:

Formalisation of informal waste pickers in the waste management value chain

Reducing the travel time and distance of collection to reach to processing plants

Enhance the process of informal waste management to be efficient, economical, sustainable and environmentally friendly

### **Background**

CoT waste management division seeks to adopt a new and more sustainable policy-based paradigm, where the dependency on landfilling is reduced and energy generation, recycling, composting, reuse and reduction of waste recyclable material are encouraged.

It is estimated that there are more than 150 000 reclaimers/ informal waste pickers estimated to be active in the South African integrated waste system and working parallel with the formal waste management system. The approval of this proposed model will assist in enhancing and improving the waste management systems of the City, whilst also empowering, eradicating poverty and creating green sustainable jobs in a coordinated manner.

“Informal recyclers collect 80 – 90% of post-consumer packaging and paper recycled in South Africa and save municipalities up to R750 million in landfill airspace each year”. “For many years waste pickers have been the ‘missing link’ who remove recyclables from the waste stream and supply them to the recycling industry” Rekord, Pretoria East, April 11, 2019.

The City of Tshwane has started a platform of trying to understand the informal sector operations conducted by waste pickers with a view of coming up with concrete action points that can be implemented in order to facilitate the growth of the recycling sector.

**Preferred solutions:**

Current models that have been established to formalise informal recycling have not been effective. Therefore, the proposed solution must be socially acceptable and capable of creating humane and sustainable economic opportunities for the current informal waste pickers. The solutions are expected to address challenges that are outlined in the problem statement by providing the following:

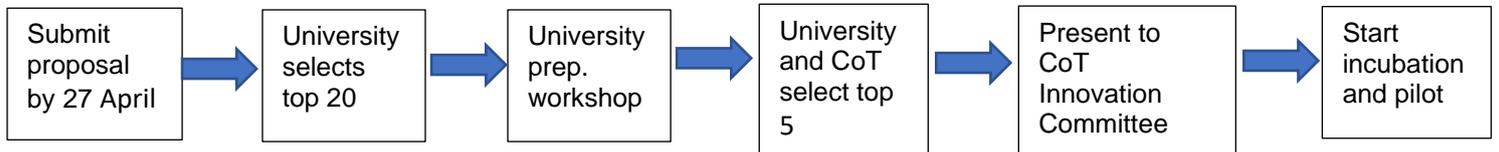
The use and implementation of technology to reduce travel time and distance

Development of an effective process for waste collection and storage for informal waste pickers

The solution must also reduce the rate of accident on the roads as well as promote Health and Safety

Application of design thinking and 4IR principles

**Challenge Process**



**Evaluation Criteria**

| Novelty                                 | Feasibility  | Team  | Impact  |
|---|--|---|---|
| Is it something we haven't seen before? | Can it be implemented within reasonable time and cost? | Do you and your team have the right mix of skills to do this? | What is the potential impact on City service delivery or revenue? |