

Ideation Phase

Define the Problem Statements

Date	30 June 2025
Team ID	LTVIP2025TMID35506
Project Name	CleanTech:Transforming Waste Management with Transfer Learning
Maximum Marks	2 Marks

Customer Problem Statement :

Municipal waste management authorities and sanitation workers are struggling to manage the rising volume and complexity of urban waste. Current systems rely heavily on manual waste segregation, which is time-consuming, error-prone, and often unsafe for workers. These outdated methods lead to poor recycling rates, increased landfill usage, and environmental degradation.

Customers lack access to intelligent, scalable tools that can automate and optimize the classification of waste at the source. The absence of localized AI-driven solutions prevents accurate segregation of region-specific waste types, while also limiting their ability to meet sustainability goals and engage communities in responsible waste disposal practices.

I am	<small>Describe customer with 3-4 key characteristics - who are they?</small>	Describe the customer and their attributes here
I'm trying to	<small>List their outcome or "job" the care about - what are they trying to achieve?</small>	List the thing they are trying to achieve here
but	<small>Describe what problems or barriers stand in the way - what bothers them most?</small>	Describe the problems or barriers that get in the way here
because	<small>Enter the "root cause" of why the problem or barrier exists - what needs to be solved?</small>	Describe the reason the problems or barriers exist
which makes me feel	<small>Describe the emotions from the customer's point of view - how does it impact them emotionally?</small>	Describe the emotions the result from experiencing the problems or barriers

Reference: <https://miro.com/templates/customer-problem-statement/>

Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	a municipal waste manager responsible for keeping the city clean	implement an efficient, safe, and accurate waste segregation system that improves	the current process is manual, unreliable, and doesn't	we lack intelligent, automated tools that can classify waste effectively and support	frustrated, overwhelmed, and unable to meet the city's sustainability goals or the expectations of our citizens.

	and sustainable.	recycling and reduces environmental harm.	adapt well to diverse or region-specific waste types.	our workers in real-time.	
PS-2	a frontline sanitation worker responsible for collecting and sorting municipal waste every day.	quickly identify and separate different types of waste to ensure proper disposal and recycling.	I often face mixed, unlabelled , or confusing waste items and lack tools or guidance to classify them correctly.	the current system is manual, time-consuming, and offers no intelligent assistance or feedback.	uncertain, stressed, and worried that my work isn't helping the environment as much as it should.