

**Project Design Phase**  
**Proposed Solution Template**

Date	23 June 2025
Team ID	LTVIP2025TMID35506
Project Name	CleanTech:Transforming Waste Management with Transfer Learning
Maximum Marks	2 Marks

**Proposed Solution Template:**

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Municipal solid waste (MSW) management remains a critical urban challenge, especially in rapidly urbanizing regions.
2.	Idea / Solution description	CleanTech uses <b>transfer learning</b> to classify waste images into biodegradable, recyclable, or hazardous categories.
3.	Novelty / Uniqueness	<ul style="list-style-type: none"><li>• Fine-tuned AI models using local data</li><li>• Voice-based multilingual support</li></ul>
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"><li>• Empowers sanitation workers</li><li>• Improves waste segregation</li></ul>
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"><li>• <b>B2G SaaS</b> for municipalities</li><li>• <b>Smart bin hardware sales</b></li></ul>
6.	Scalability of the Solution	<ul style="list-style-type: none"><li>• Modular, cloud-ready architecture</li><li>• Easy replication across cities</li></ul>