

## Project Design Phase

### Problem – Solution Fit Template

Date	9 June 2025
Team ID	CleanTech: Transforming Waste Management with Transfer Learning
Project Name	LTVIP2025TMID38840
Maximum Marks	2 Marks

#### Problem – Solution Fit Template:

The CleanTech system addresses the issue of improper waste segregation, which impacts environmental health and recycling efforts. Many people are unsure how to sort waste correctly, leading to errors or neglect. CleanTech offers a simple web platform where users upload waste images, and a VGG16-based deep learning model classifies them as recyclable, organic, or hazardous. This fast, automated solution aligns with user behavior, making waste disposal easier, more accurate, and environmentally responsible.

#### Purpose:

- Solves a real problem by helping users correctly identify waste types through simple image uploads.
- Fits user behavior by integrating into existing habits—people already take photos or use mobile/web tools regularly.
- Encourages faster adoption by requiring no technical knowledge; users receive instant, clear results.
- Improves sustainability efforts by reducing improper disposal and contamination in the waste stream.

#### Template:

<b>CUSTOMER SEGMENT(S)</b> <small>Users looking to improve their waste disposal habits</small>	<b>6. CUSTOMER CONSTRAINTS</b> <small>What makes it necessary to address waste disposal habits</small>	<b>5. AVAILABLE SOLUTIONS</b> <small>Which solutions are available to the customer then approving easy to use waste matter's typing waste</small>
<b>JOBS TO-TO-BE-DONE / PROBLEMS</b> <small>Helping users accurately classify waste types</small>	<b>9. PROBLEM ROOT CAUSE</b> <small>How does your customer to kickstart that action? People don't know how to do it</small>	<b>8. BEHAVIOUR</b> <small>How does your customer? to address the job/job done? People do not know how to dispose waste consistently</small>
<b>E. TRIGGERS</b> <small>Want to classify waste right and fast</small>	<b>YOUR SOLUTION</b> <small>CLEANTECH WEB software predict</small>	<b>4. CHANNELS OF BEHAVIOUR</b> <small>0.1 ONLINE</small>  <small>0.2 OFFLINE</small>
<b>EMOTIONS: BEFORE / AFTER</b> <small>Worried vs assured      Proud vs forward</small>		