**Project Design Phase**

**Problem – Solution Fit Template**

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| 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:**

