**Ideation Phase**

# Brainstorm & Idea Prioritization Template

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**Field**

**Details**

Date

20

July

2025

Team ID

LTVIP2025TMID41443

Project Name

Clean Teach: Transforming Waste Management with Transfer Learning

Maximum Marks

4

Marks

# Brainstorm & Idea Prioritization Template

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

**Reference:**<https://www.mural.co/templates/brainstorm-and-idea-prioritization>

# Step-1: Team Gathering, Collaboration and Select the Problem Statement

**Problem Statement Selection for Clean Teach Project Selected Problem:** Waste Management and Environmental Education **Team Collaboration Points:**

Identify key waste management challenges in educational institutions

Explore how transfer learning can be applied to waste classification

Discuss integration possibilities with educational curricula

Define target user groups (students, teachers, facility managers) **Key Discussion Areas:**

1. **Waste Classification Challenges** Different types of waste materials

Recycling confusion among students

Lack of proper sorting mechanisms

1. **Educational Integration**

Teaching environmental responsibility

Hands-on learning through technology

Real-time feedback systems

1. **Technology Implementation**

Transfer learning models for image recognition

Mobile application development

IoT integration possibilities

*[Image placeholder: Team collaboration and problem statement selection diagram would be displayed here]*

# Step-2: Brainstorm, Idea Listing and Grouping

**Generated Ideas for Clean Teach Project**

**Category 1: Core Technology Solutions**

AI-powered waste classification system

Transfer learning model for different waste types

Real-time image recognition via mobile app

Smart bin integration with sensors

Automated sorting recommendations

**Category 2: Educational Features**

Interactive learning modules about waste types

Gamification elements for student engagement

Progress tracking and achievement systems

Teacher dashboard for monitoring

Environmental impact visualization

**Category 3: Community Integration**

School-wide waste reduction competitions

Parent engagement through reporting

Community recycling center connections

Social sharing of environmental achievements

Partnership with local waste management companies

**Category 4: Advanced Features**

Predictive analytics for waste generation

Carbon footprint calculation

Sustainability reporting

Integration with school management systems

Multi-language support for diverse communities

*[Image placeholder: Idea grouping and categorization diagram would be displayed here]*

# Step-3: Idea Prioritization

**Prioritization Matrix for Clean Teach Project**

**High Impact, High Feasibility (Priority 1 - Immediate Implementation):**

1. **AI-powered waste classification system** - Core functionality
2. **Mobile application for image recognition** - User interface
3. **Basic educational content integration** - Learning component
4. **Simple gamification elements** - Engagement factor

**High Impact, Medium Feasibility (Priority 2 - Phase 2 Implementation):**

1. **Smart bin integration** - Hardware requirements
2. **Teacher dashboard and analytics** - Advanced reporting
3. **School-wide competition features** - Community engagement
4. **Progress tracking systems** - Data management

**Medium Impact, High Feasibility (Priority 3 - Future Enhancements):**

1. **Multi-language support** - Accessibility
2. **Social sharing features** - Community building
3. **Parent engagement tools** - Extended reach
4. **Advanced visualization tools** - Enhanced user experience

**Low Priority (Future Consideration):**

1. **Predictive analytics** - Complex algorithms required
2. **IoT sensor integration** - High infrastructure costs
3. **Third-party API integrations** - Dependency management
4. **Advanced carbon footprint calculations** - Complex environmental modeling

**Selected Final Concept**

**Project Focus:** Clean Teach - AI-Powered Waste Management Education System **Core Components:**

1. Transfer learning-based waste classification model
2. Mobile application for real-time waste identification
3. Educational content integration
4. Basic gamification and progress tracking
5. Teacher dashboard for monitoring student engagement

**Success Metrics:**

Accuracy of waste classification (target: >90%)

Student engagement levels

Waste sorting improvement in pilot schools

Teacher adoption rate

Environmental impact measurement

*[Image placeholder: Prioritization matrix diagram showing the above categories and selections would be displayed here]*

*This document serves as the official brainstorming and idea prioritization template for the Clean Teach: Transforming Waste Management with Transfer Learning project. All ideas and priorities should be updated based on team discussions and stakeholder feedback.*