Ideation Phase
Define the Problem Statements

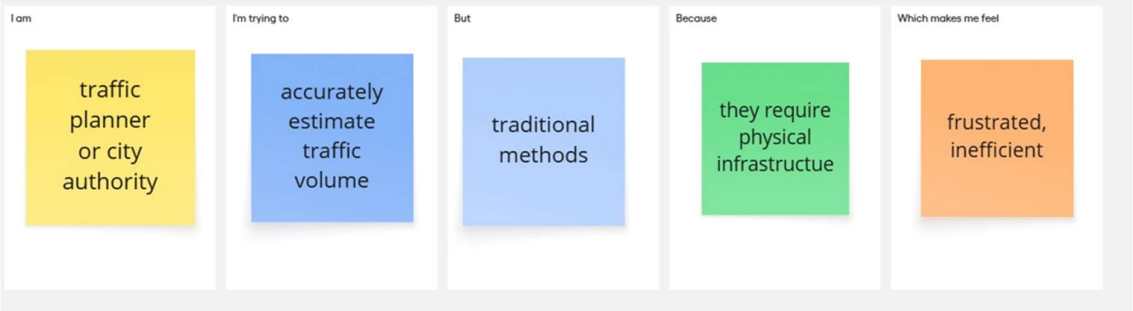
Date	26 June 2025
Team ID	LTVIP2025TMID32654
Project Name	**TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning**
Maximum Marks	2 Marks

Customer Problem Statement :

Problem Statement:

Accurate traffic volume estimation is vital for efficient urban planning, congestion management, and environmental monitoring. Traditional methods like manual counting or inductive loop detectors are costly, labor-intensive, and often lack scalability. *TrafficTelligence* proposes an advanced machine learning-based solution to estimate traffic volume using data from cameras, sensors, and contextual features (e.g., time, weather, location). The challenge lies in integrating heterogeneous data sources, handling noisy inputs, and achieving real-time predictions with high accuracy. This project aims to build a robust, scalable model that adapts to dynamic traffic conditions and offers actionable insights for smart city traffic management systems.

I am	a traffic planner or city authority	responsible for managing urban congestion and transportation efficiency.
I'm trying to	accurately estimate and monitor real-time traffic volume	accurately estimate and monitor real-time traffic volume
But	traditional methods	like manual counting and fixed sensors are costly, inflexible, and often produce delayed or incomplete data.
Because	they require physical infrastructure, frequent maintenance	cannot adapt well to changing traffic patterns or environments.
Which makes me feel	frustrated, inefficient, and underprepared	to make timely traffic management decisions.



Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Traffic Planner	Accurately estimate traffic volume	Traditional methods	They require physical infrastructure	Frustrated, inefficient