

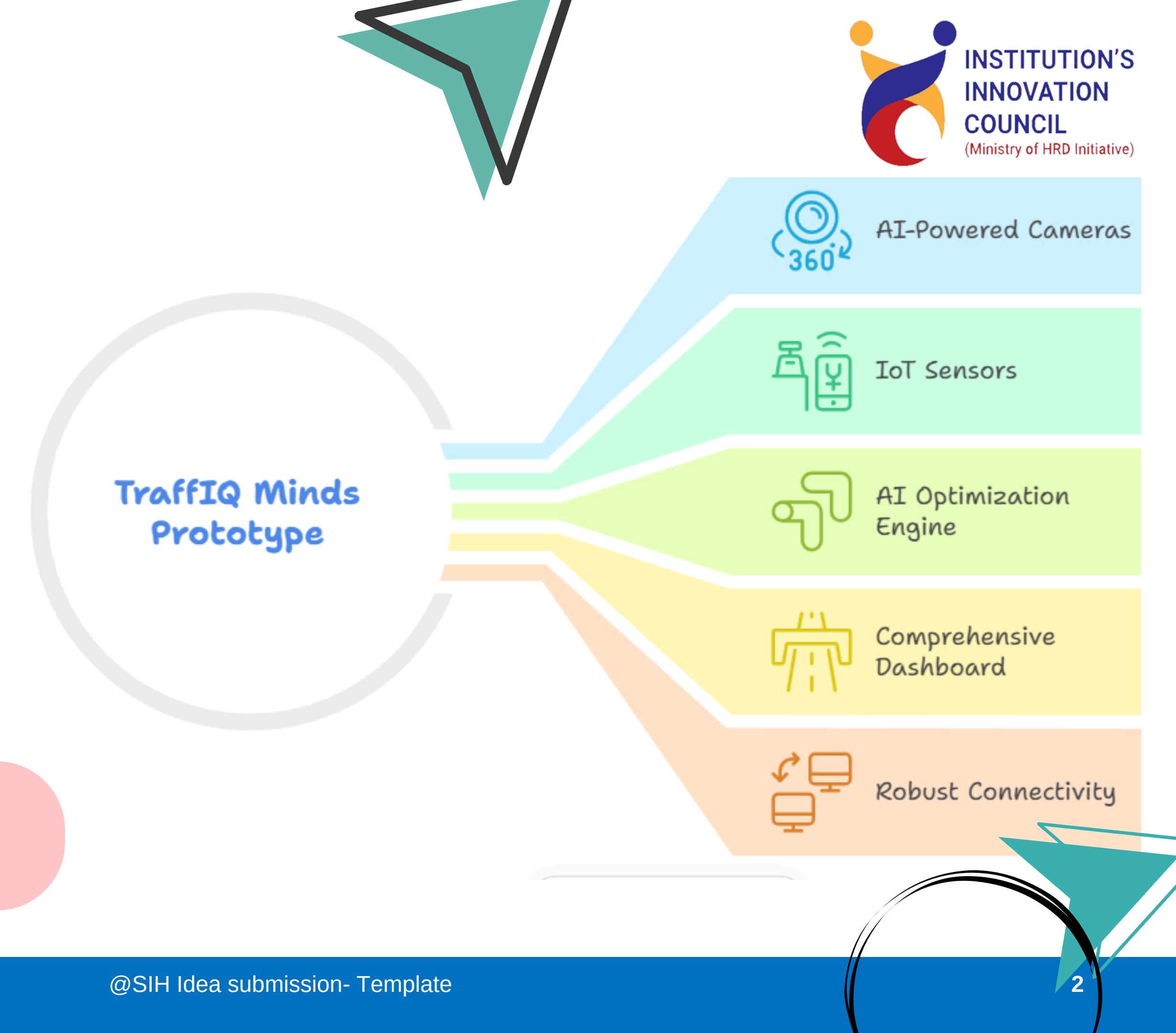


Problem Statement

- Traffic congestion at intersections.
- Long waiting times at signals.
- Fuel wastage & economic loss.
- Increased accidents & poor road discipline.

Uniqueness

- 360° AI Vision
- Dynamic Signal Adjustment
- Centralized Dashboard

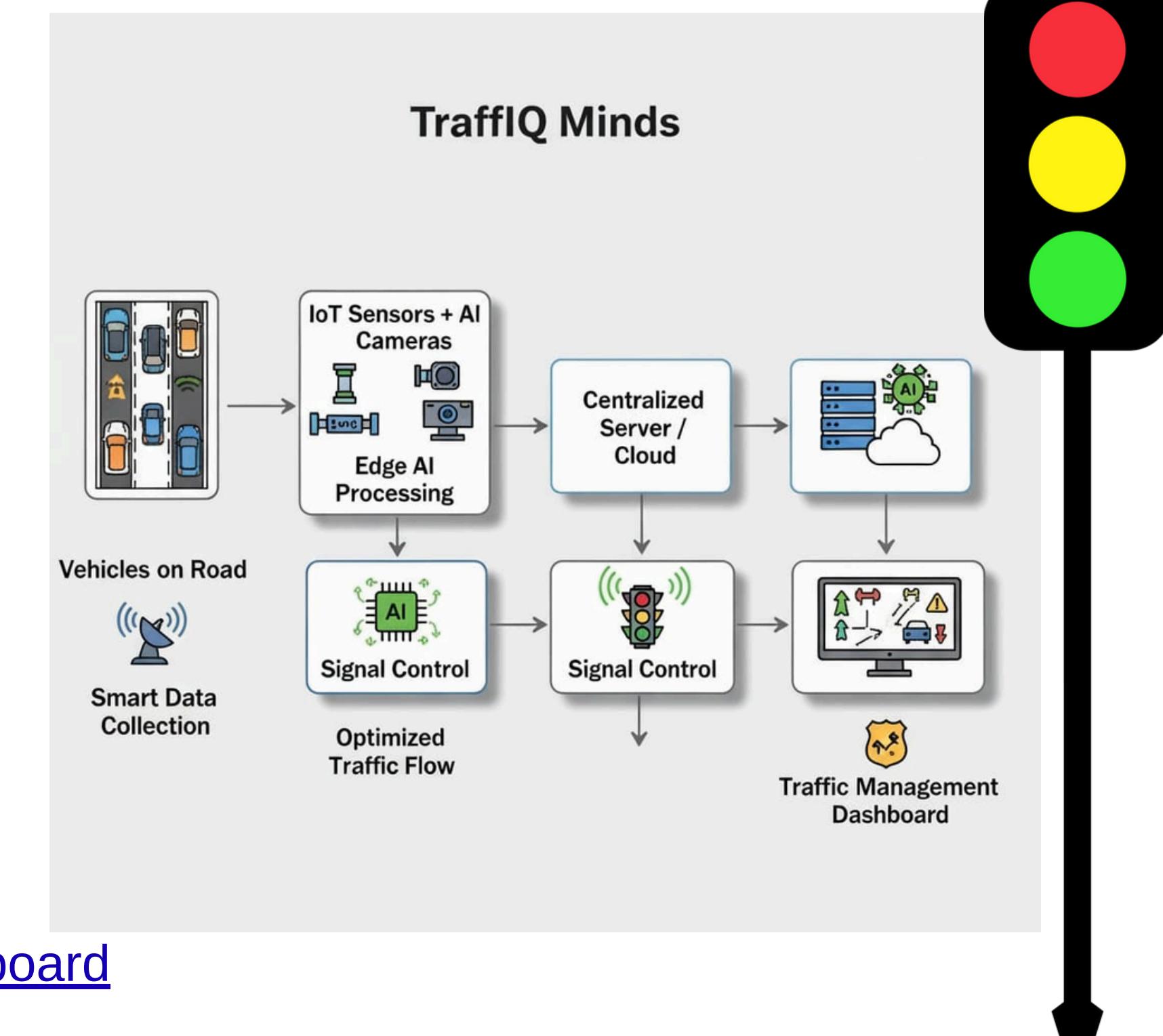


TECHNICAL APPROACH

Technical Approach: TraffIQ Minds

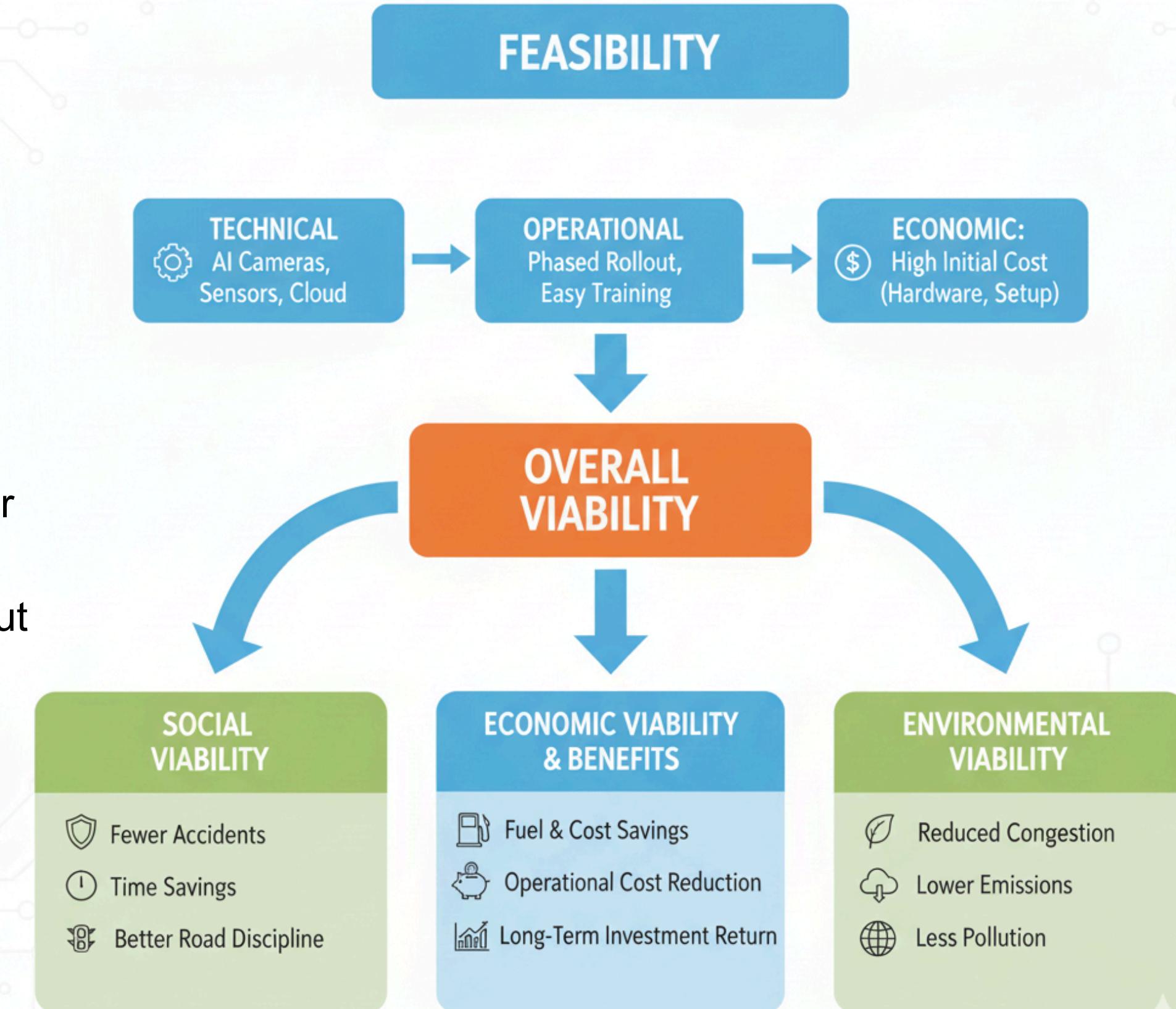
- Data Collection → IoT sensors + AI cameras capture traffic
- Data Processing → Edge AI (real-time) + Cloud (analytics & predictions)
- Communication → 5G/IoT protocols connect signals with control room
- Decision → AI optimizes signal timing & predicts congestion
- Control & Action → Central room + Police dashboard for monitoring & alerts
- Feedback → System learns from patterns, improves over time

Ref. <https://preview--smart-commute-pulse.lovable.app/dashboard>



Feasibility of Idea

- **Technical:** AI cameras, IoT sensors, dashboards already exist; cloud/satellite ensures reliability.
- **Operational:** Start with few intersections, easy training for traffic staff.
- **Economic:** High initial cost, but long-term savings in fuel, manpower & congestion reduction.



Viability

- **Social:** Fewer accidents, time savings.
- **Economic:** fuel & cost savings.
- **Environmental:** Reduced congestion = less pollution.

IMPACT AND BENEFITS

Impacts

- Faster and smoother travel.
- Less waiting time at signals.
- Safer roads with rule enforcement.
- Better city image with smart technology.

Benefit

- Keeps system always online
- Shares data in real time



RESEARCH AND REFERENCES

- 1. Smart India Hackathon (SIH) – Ministry of Education, Govt. of India**
Context: National initiative encouraging innovative digital solutions.

- 2. National Urban Transport Policy (2006, revised 2014, MoHUA)**
Promotes intelligent transport systems for Indian cities.

