



PRESENTATION
ON
SUNDARGARH SMART CITY PROPOSAL

ISSUES ON HIGHWAYS

- **Overweight trucks results in road damage**
- **Pedestrian safety**
- **Death in road accidents**
- **Health hazard due to uncovered mining vehicles**
- **Rash driving**
- **Over speeding**
- **Drunk and drive issues**
- **Vehicle counting for planning**
- **ANPR for vehicle identification**

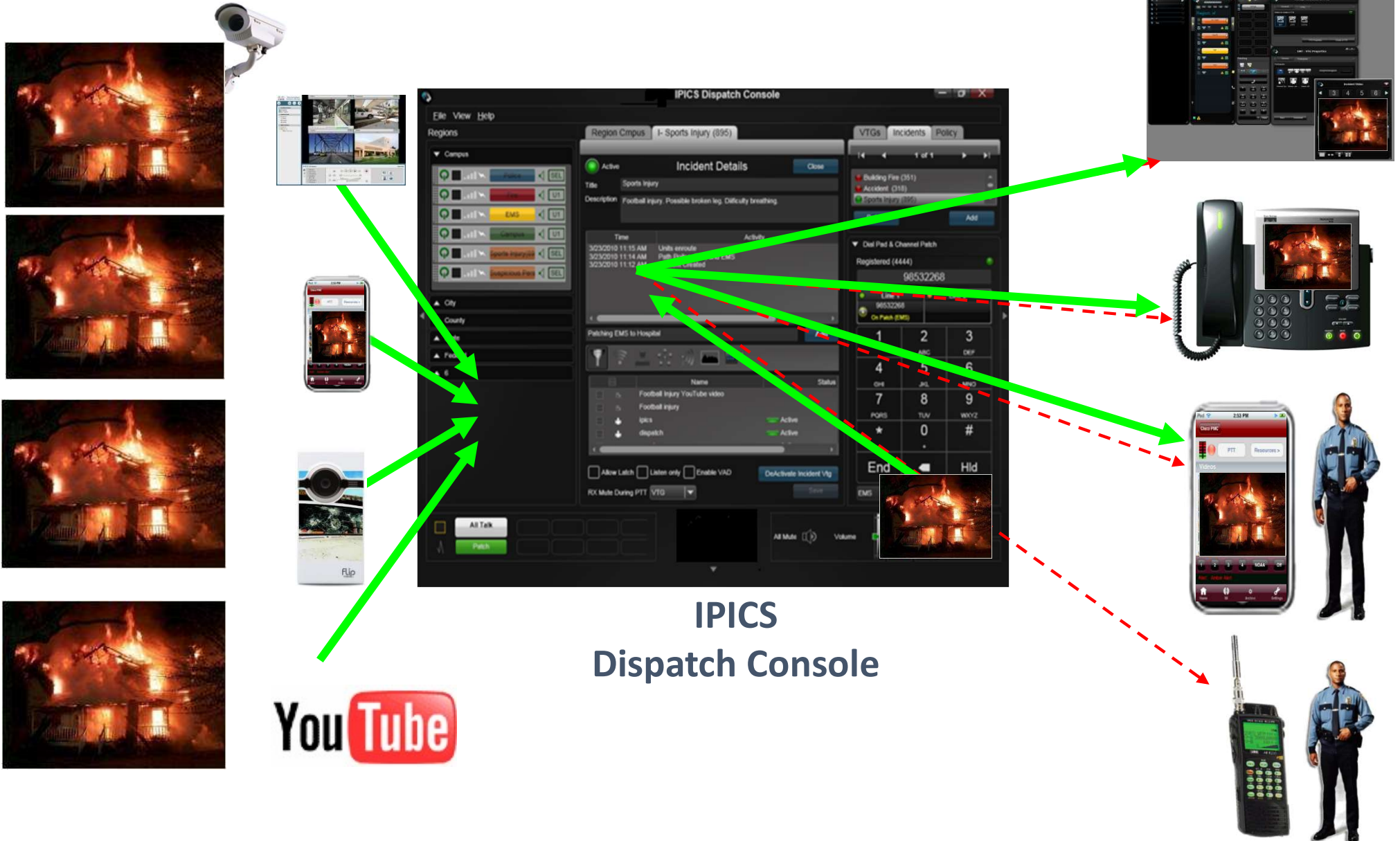
PROPOSED SOLUTION FOR SUNDARGARH

- **DC-On premise / cloud**
- **Surveillance with advanced video analytics like people count, crowd formation, loitering, missing object detection etc.**
- **Traffic flow movement: Vehicle Classification, ANPR,RLVD etc.**
- **AI based solution for traffic, video and data analytics**
- **Robust and full proof solution for violation-Internationally recognized solution.**
- **Benchmarked solution from Gartner, Navigation quadrant and IHS etc.**
- **High level security for smart elements and Data center.**
- **Chat bot based application for seamless coverage and integration with social media and all the vertical of Govt. dept.**
- **Introduction of Smart Object and standardisation**

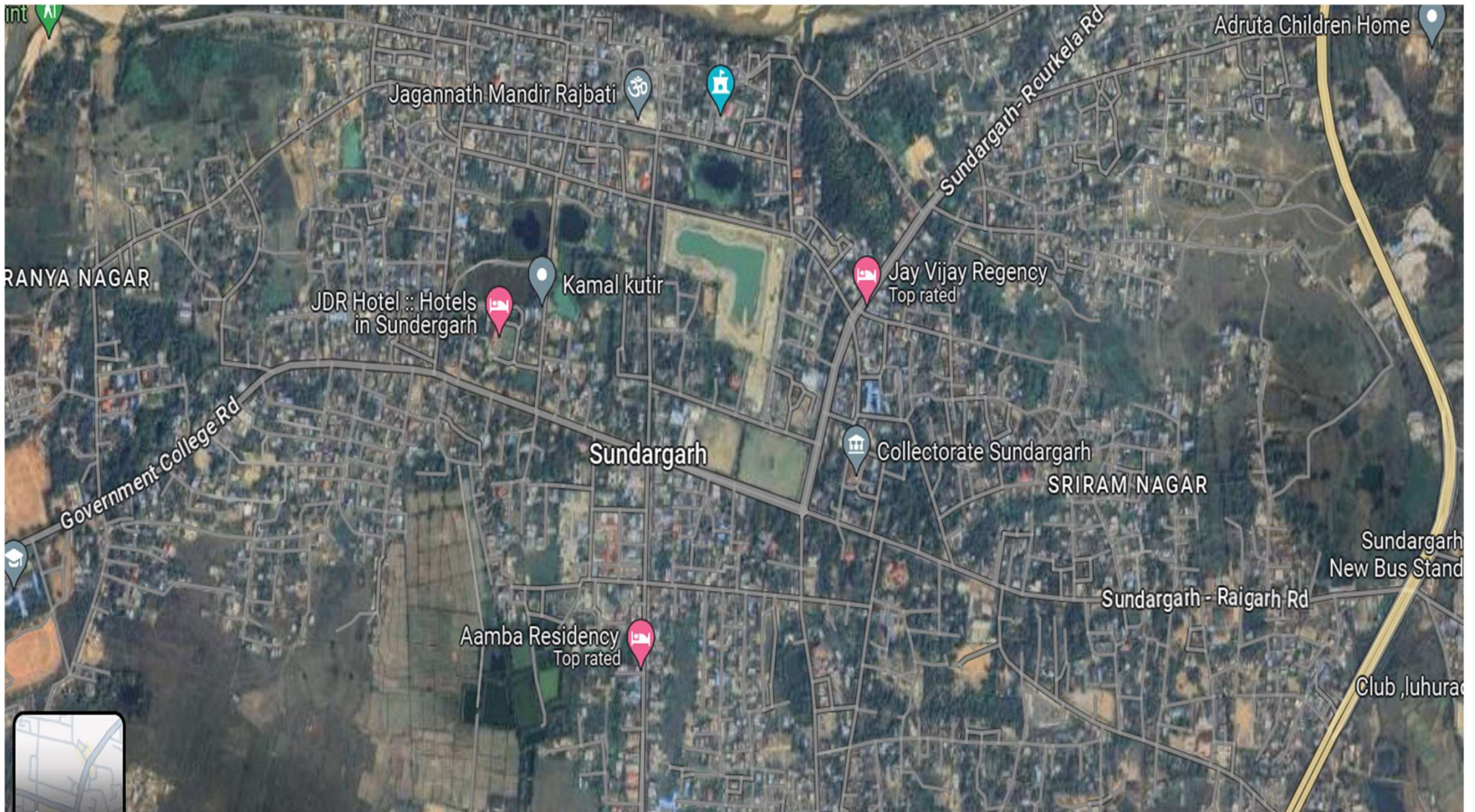
Incident Response and Situation Awareness

Detection and Monitoring

Response



ANPR & Speed Detection Sensors



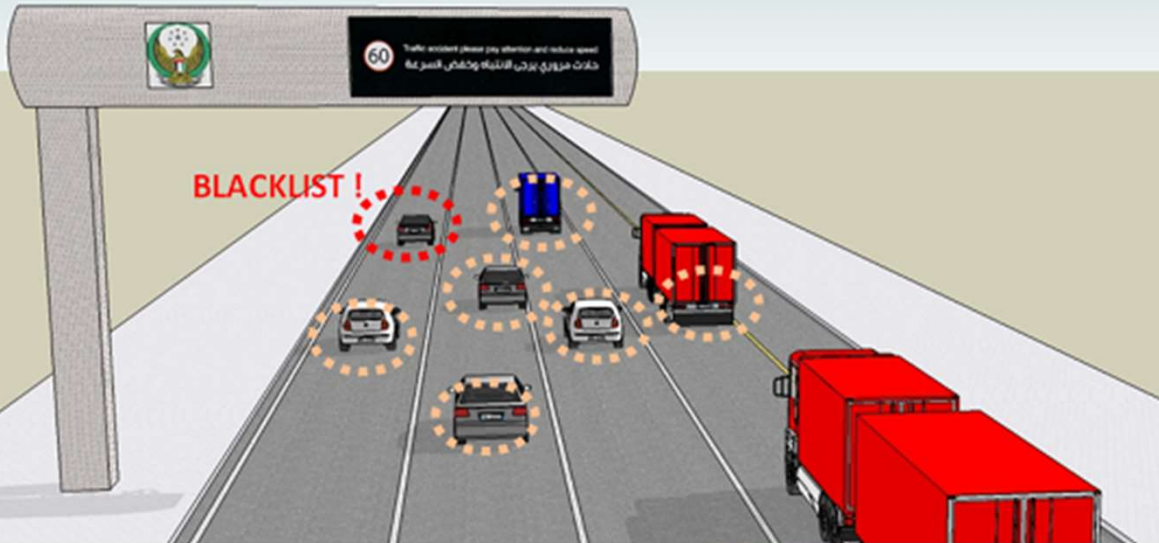
Speed Detection Sensor – 76
ANPR camera -135

ROAD WAYS SENSORS

- **Automatic vehicle identification**
- **Weigh in motion**
- **Speed detection**
- **Journey time monitoring**
- **Environmental sensors**
- **Pedestrian Monitoring LIDAR camera**

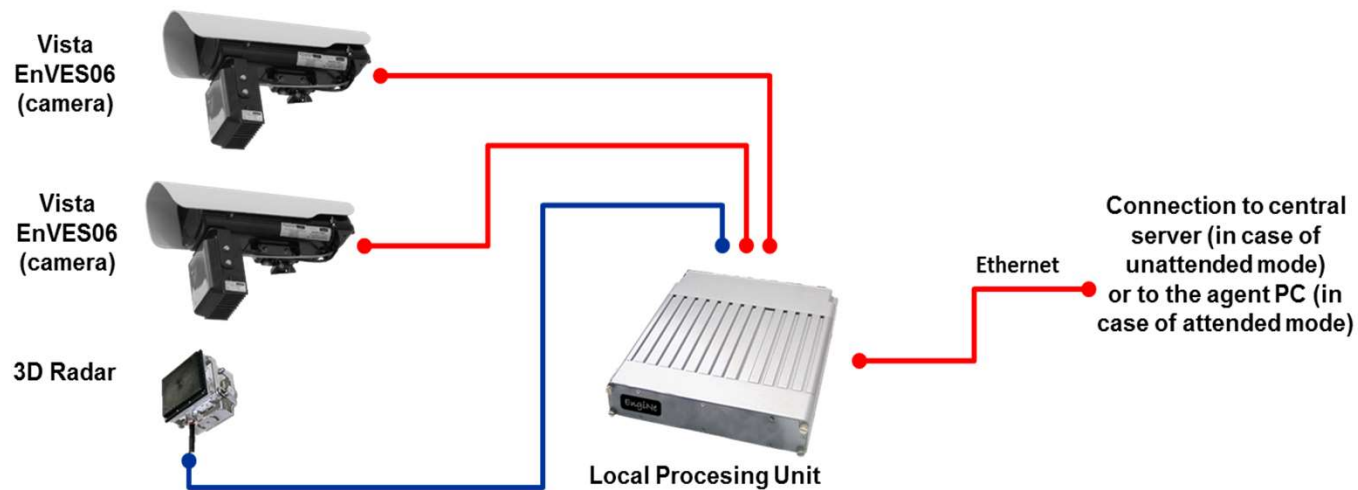
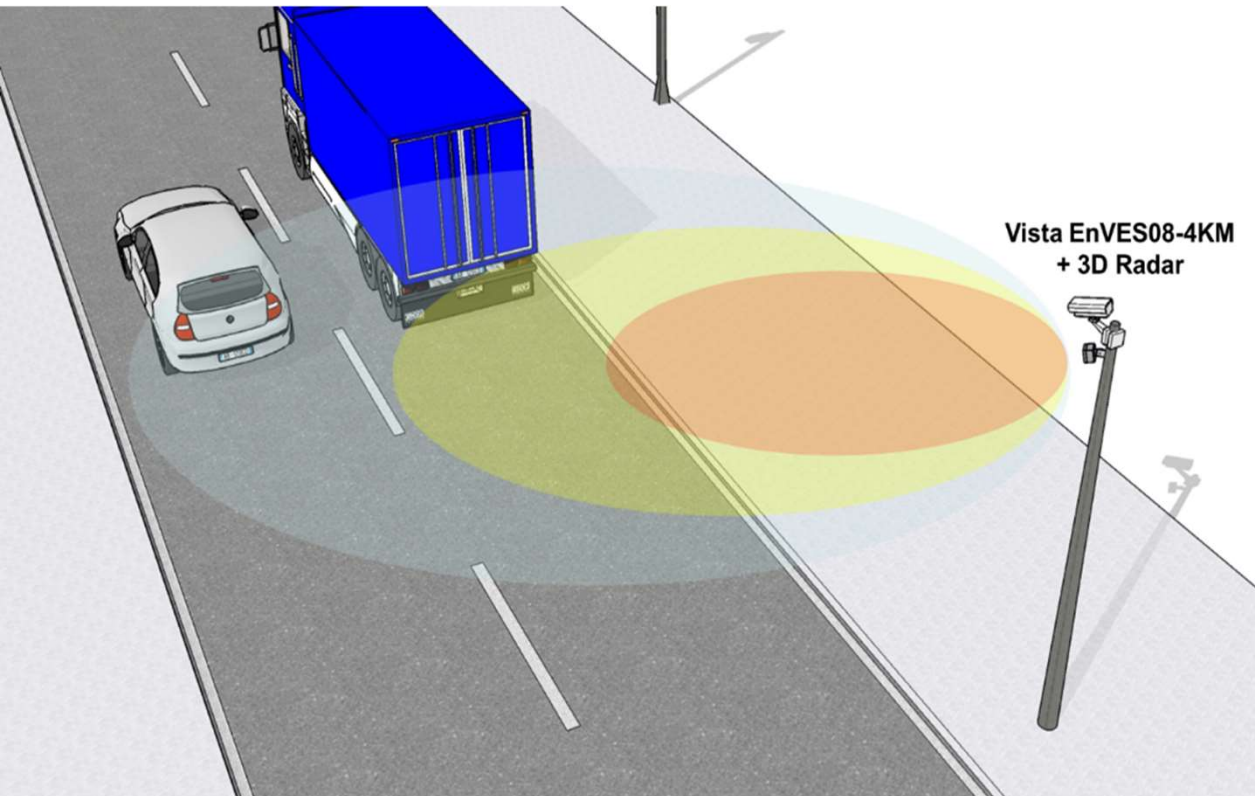
- **OCR**
- **AI based vehicle classification**
- **Vehicle profiling**
- **Vehicle characteristics**
- **Accurate speed detection**
- **Weighing in motion**
- **Lane discipline**
- **Accident detection**
- **Traffic congestion detection**
- **Origin destination matrix (OD matrix)**
- **Pedestrian detection**

ANPR system



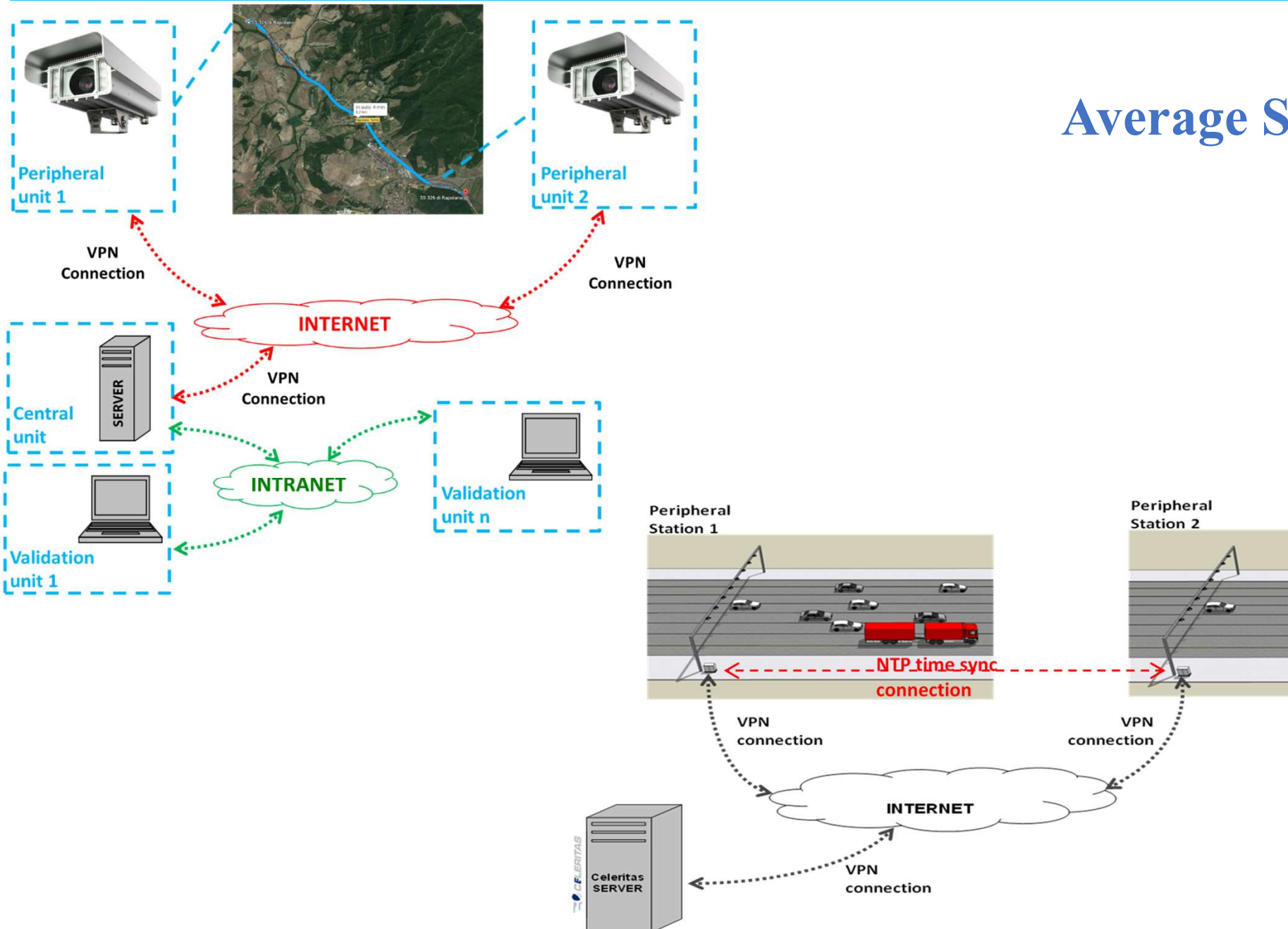
Over Speed Detection System (OSDS)

Instant Speed



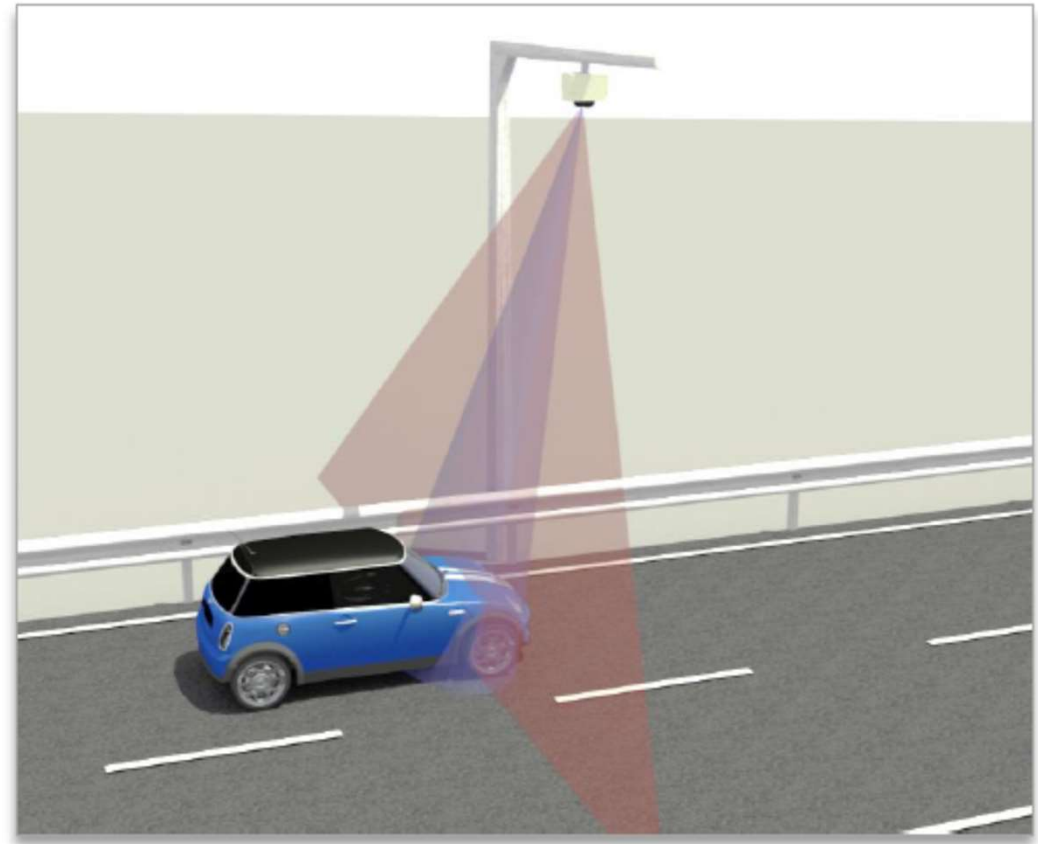
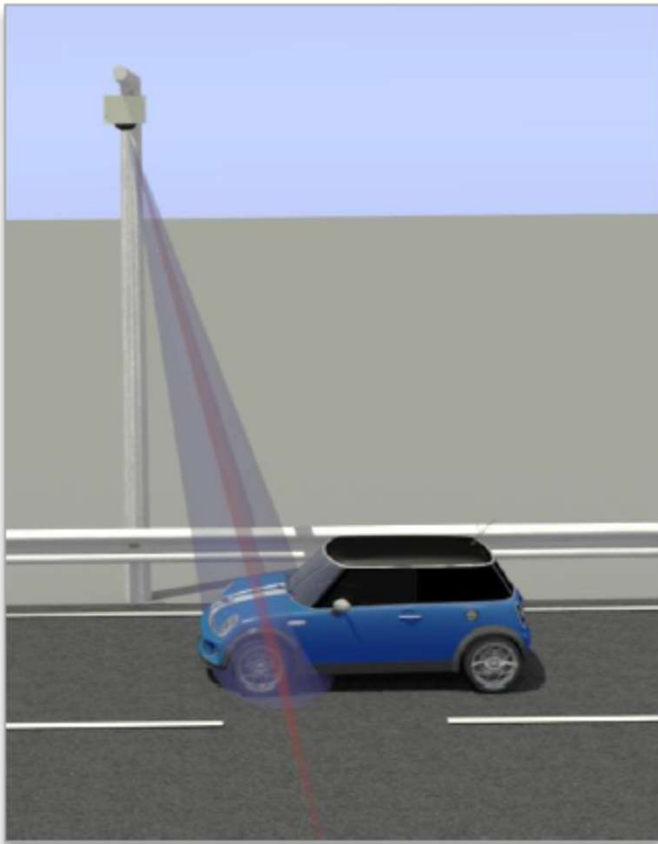
Over Speed Detection System (OSDS)

Average Speed

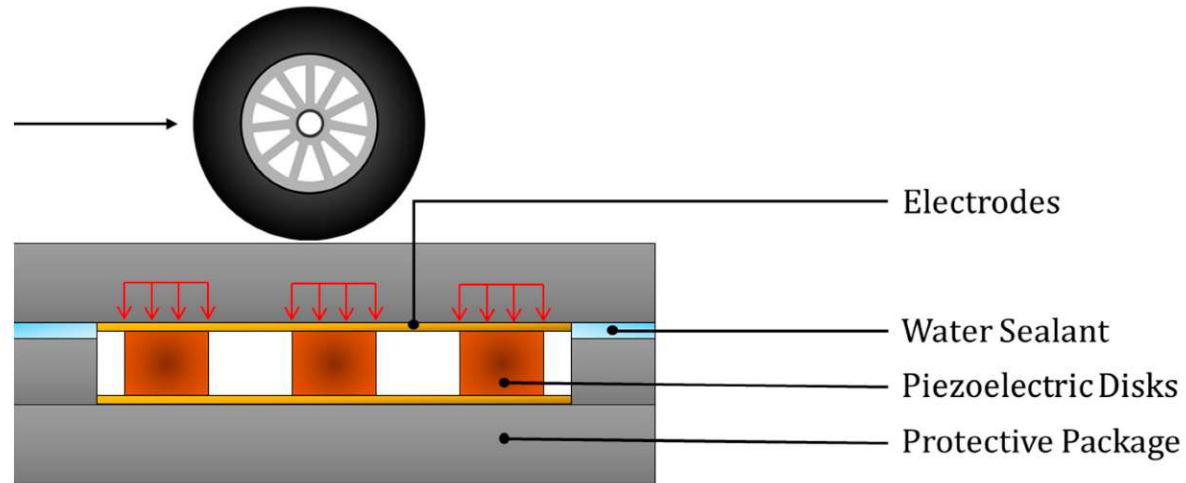


Over Speed Detection System (OSDS)

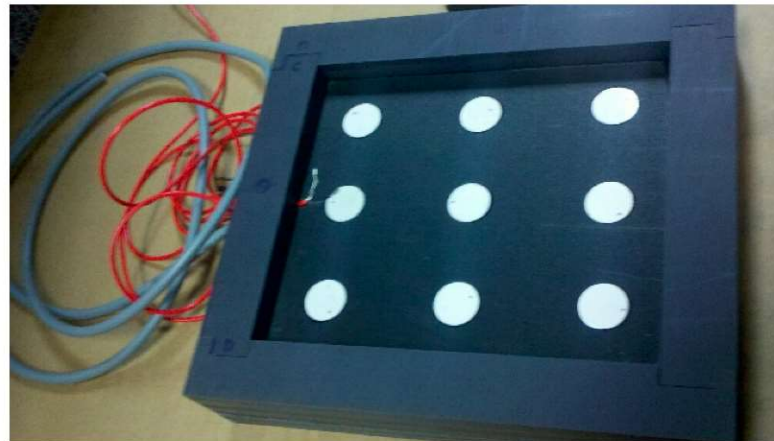
Laser scanner 3D profiler OSDS (2 numbers for technology demonstration)



QUARTZ WEIGH-IN-MOTION TRAFFIC SENSOR



(a)



(b)

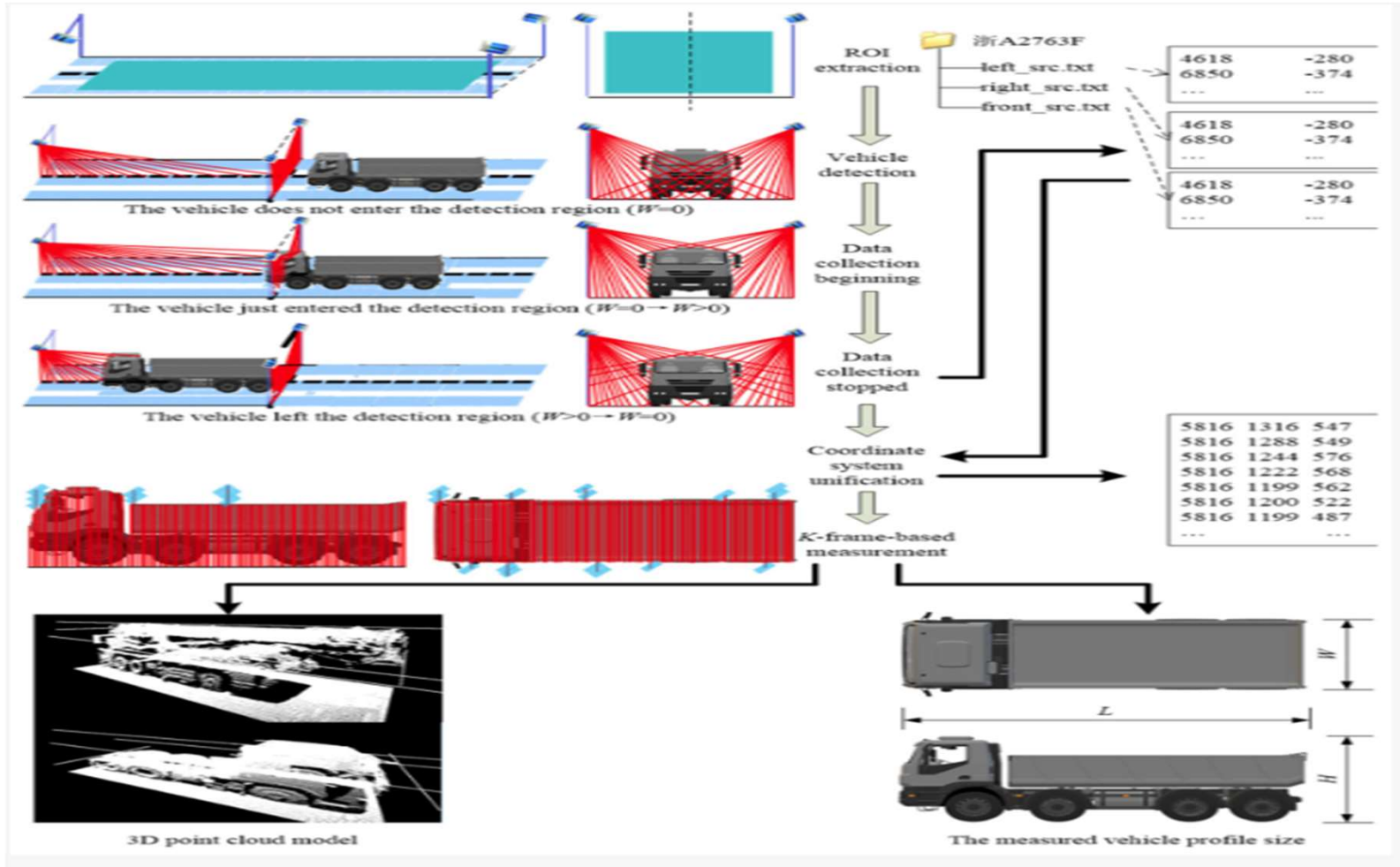
AXLE PROFILER USING LASER



VEHICLE PROFILER



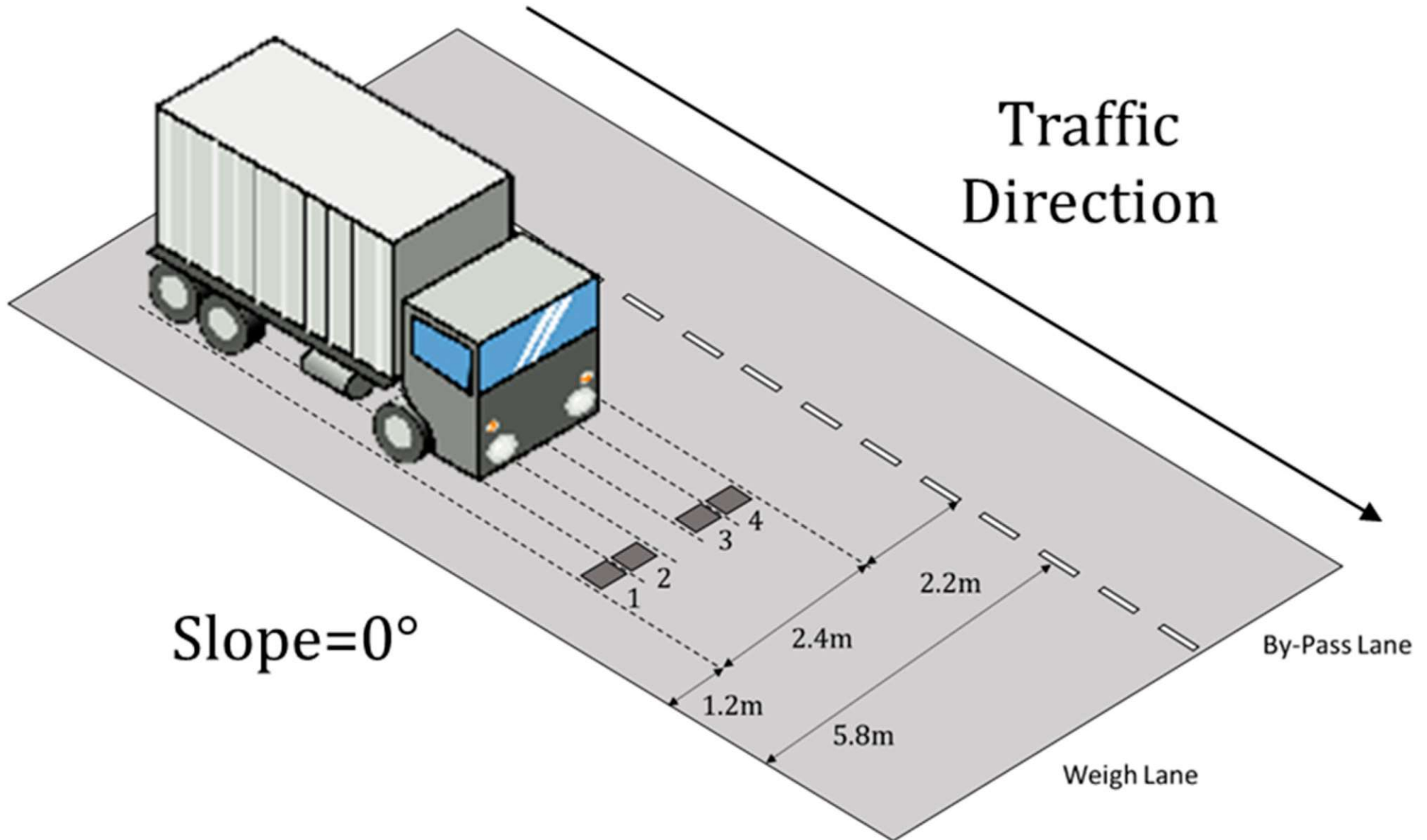
LASER PROFILER



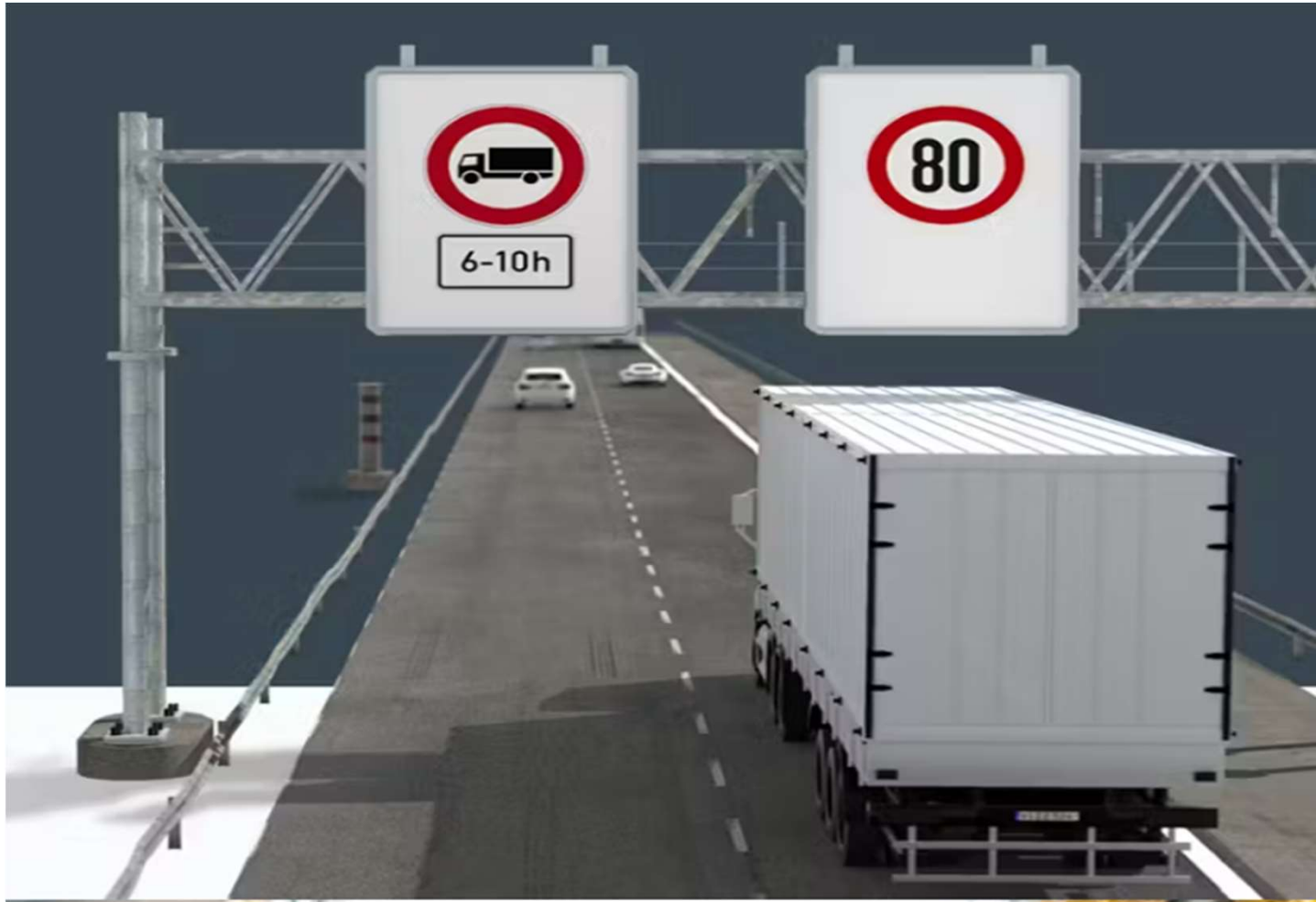
London's 20mph zones reduce collisions with pedestrians by 63%



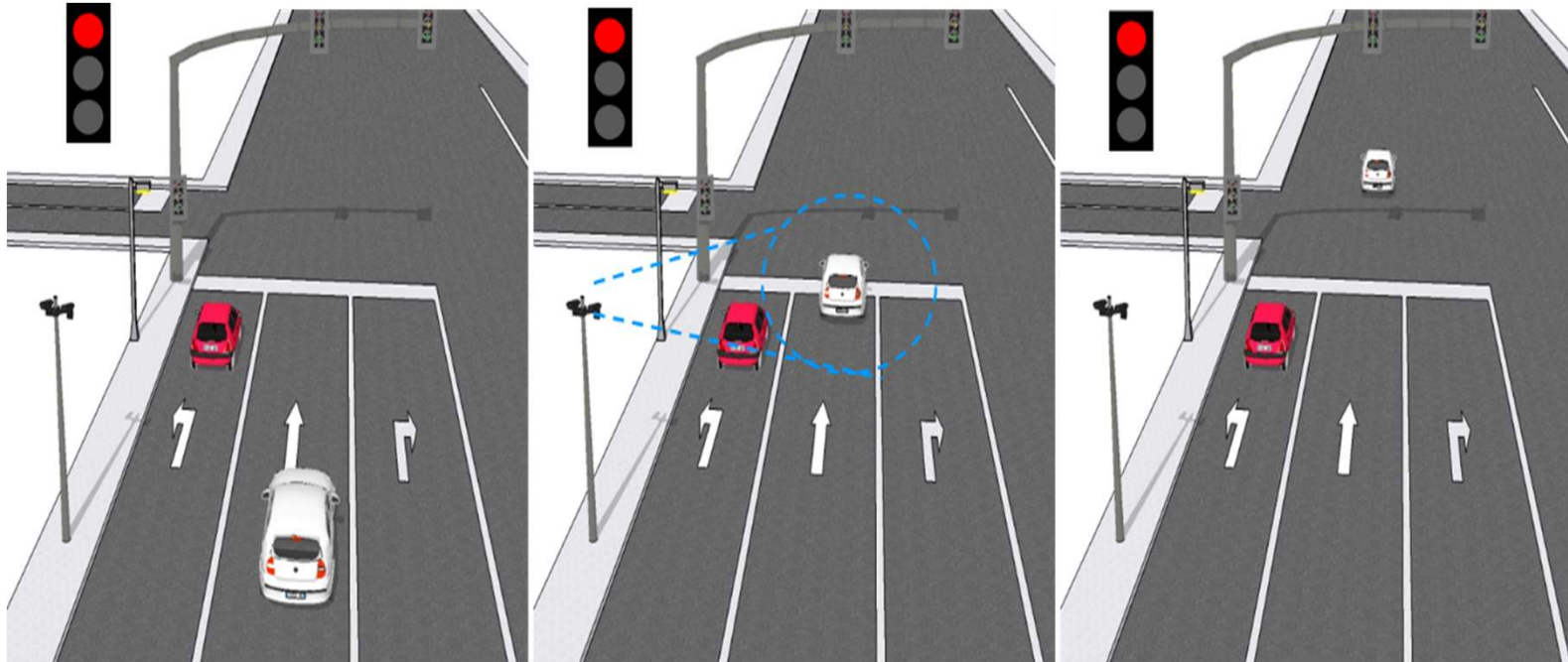
INDUCTIVE LOOP DETECTION



INDICATOR



RLVD System



CHALLENGES

- **Heavy dust due to mining trucks**
- **High temperature**
- **Heavy wind**
- **Drunk and driving**
- **Unmarked road crossing**
- **Unstable power supply and fluctuations**
- **Lightening and surges**
- **Theft issues**
- **Fiber break down due to public works**
- **Poor lighting in night**

OUTCOME

- **After installation of the proposed solution road fatalities have come down**
- **Now improved discipline observed in truck drivers**
- **Truck average speed has come down towards acceptable limit**
- **More improvement and technological intervention should be adapted for stable and enhanced solution**

THANK YOU