





## **Case Study**

In last few decades India has seen growth in road and highway infrastructure as well as number of vehicles travelling on roads. This has increased the need of advance road safety measures. Authorities, state and federal agencies have been putting their best efforts with available technologies to address these issues.

To address similar challenges with more advance technology and create an effective solution our team has accessed different real time scenarios like:

- 1. Traffic Jam scenarios in urban, sub urban, state and national highways.
- 2. Vehicle movement on hilly terrains.
- 3. Various accident scenarios.
- 4. Accidents on curvy hilly roads.
- 5. Blind Intersections.
- 6. Weather conditions and impact on traffic movement.

Based on the research results we have designed and developed an indigenous solution "WAIT System (Warning Ahead of Intersection and Turns)" which can help to effectively

- 1. Manage road traffic.
- 2. Ensure road safety.
- 3. Early warning and alarming.
- 4. Analytics of data.
- 5. Contingency planning.
- 6. Integration with other smart infrastructure solution like ANPR, Smart City, Command & Control Centre (CCC) etc.



4<sup>th</sup> December 2021: Family of three people died on Mohand range with car crashes with bus in blind turn [Source: AmarUjala]



<u>June 14, 2021:</u> Nearly 5,000 vehicles entered Shimla in the last 36 hours resulting into heavy iam. [india.com]



21st Dec 2021: Delhi Dehradun Highway passengers faced 10 km long jam that took almost 3 hours per vehicle to cover this distance [Source: HT]

### **Deployment Scenarios**





**Blind Turns in Hill Terrain** 



**Blind Turns in Downtown City Areas** 



Blind Intersections in Rural Roads with Highways



Blind Intersection of Public Parking in Downtown City Areas

- More than 700 blind spots identified on national highways
- BLIND SPOTS REASON:
  - Hill Terrain
  - Three-way or a four-way intersections without appropriate warning signs.
  - Monsoons and thick winter fogs
- > DANGER
  - Compromised visibility
  - Compromised risk estimation

# PREVENTIVE MEASURES THROUGH TECHNOLOGY



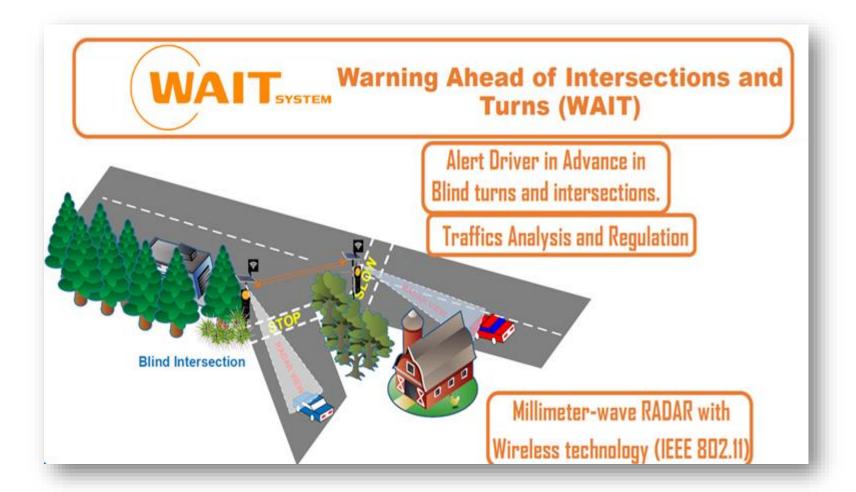
Infrastructure Based
Driver Assistance System



## **Proposed Solution**









## **Unique Product Values**





Solution is based on RF Radar Technology:

- ✓ RF is not affected by fog and make system resilient
- √ Fast in Response
- ✓ Low computational for Outdoor Units



Law Enforcement & Traffic Regulation

Integrating Traffic
Monitoring Camera will
Provide:

- ✓ Vehicle Counting & Priority
- ✓ Automatic Number Plate Detection



**Data Analytics** 

Connectivity to Cloud with 4G/5G Network for:

- ✓ Machine Learning
- ✓ Traffic Control Strategies
- ✓ Identifying Traffic Jam hot-spots and their mitigation

#### **Other Salient Features**

1. Solar Power enabled.

2. Compact Design

3. Robust structure for all weather conditions







EXBI GLOBAL PRIVATE LIMITED 174/4 Marla, Model Town Gurgaon-122001 Haryana, India



EXBI GLOBAL PRIVATE LIMITED
7A Ekta Vihar
Sahastradhara Road
Dehradun – 248001
Uttarakhand, India



