



PRESENTATION ON ZERO FATALITY CORRIDOR 15 DEC 2021

"WE WILL EITHER FIND A WAY OR MAKE ONE"



PREVIEW



- **Road Safety – Concerns and Imperatives**
- **Zero Fatality Corridor – A Case Study**
- **Way Ahead**
- **Good Practices – Arunank**

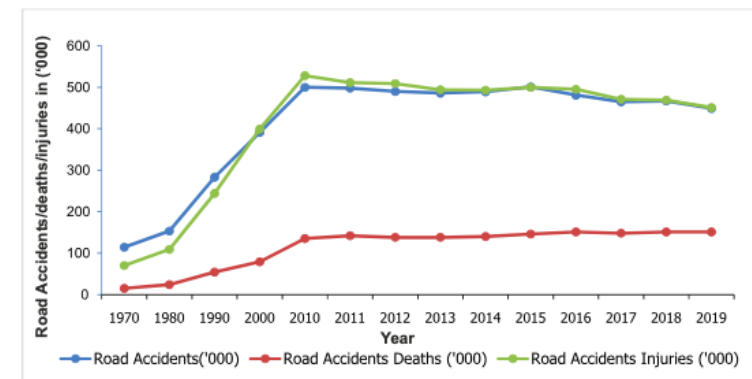
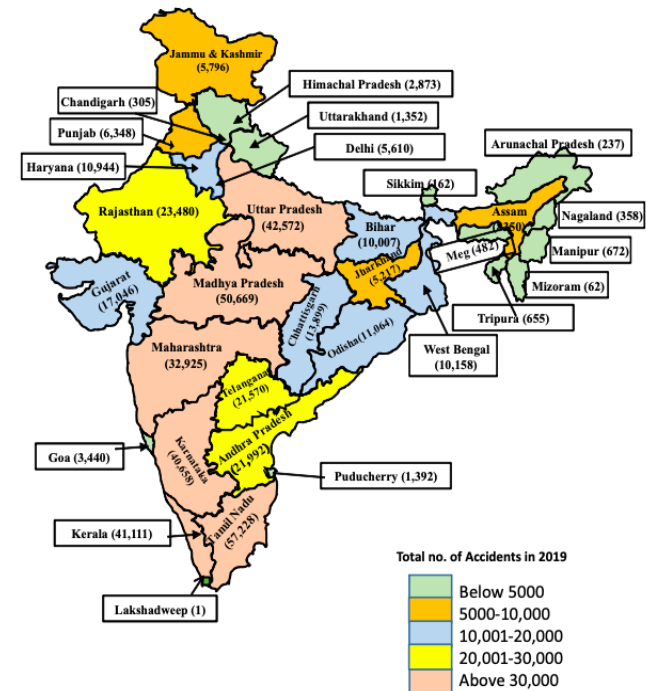
ROAD SAFETY – CONCERNS & IMPERATIVES



STATISTICS.....



- India – No 1 in world for Road Accident deaths (11% deaths, 1 % of total vehicles in World)
- National Highways comprise only 15% of the total length of roads in India but account for 33% of the fatalities
- Fatality rate per km of the road is the highest on NH with 0.67 deaths per km annually
- 61% of accident related deaths are of states with max length of National and State Highways





FACTORS : ROAD ACCIDENTS



- **Human Error**
- **Road Environment**
- **Vehicular Conditions**



REASONS FOR ACCIDENTS - PLAINS



➤ **Distracted driving**

➤ **Speeding/ reckless driving**

➤ **Drunk driving**

➤ **Not wearing seat belt**

➤ **Rain or wet roads**

➤ **Potholes and bad road conditions**

➤ **Breaking traffic rules**

➤ **Tailgating**

➤ **Animal infringement**





REASONS FOR ACCIDENTS - HILLS



- **Improper road geometry**
- **Less number of passing places**
- **Blind turns**
- **Inappropriate gradients**
- **Wet and slippery roads**
- **Poor lighting**
- **Lack of road furniture**
- **Negligent parking**
- **Natural obstacles**
- **Landslides/natural disasters**





ROAD ENVIRONMENT



- **Geographical area**
- **Road Features.**
 - Improper geometrics
 - Lack of passing places
 - Blind curves
 - Inappropriate gradients
 - Improper design of curves
 - Poor drainage
 - Land slides
 - Lack of road safety furniture
- **Type of junctions**
- **Weather conditions**



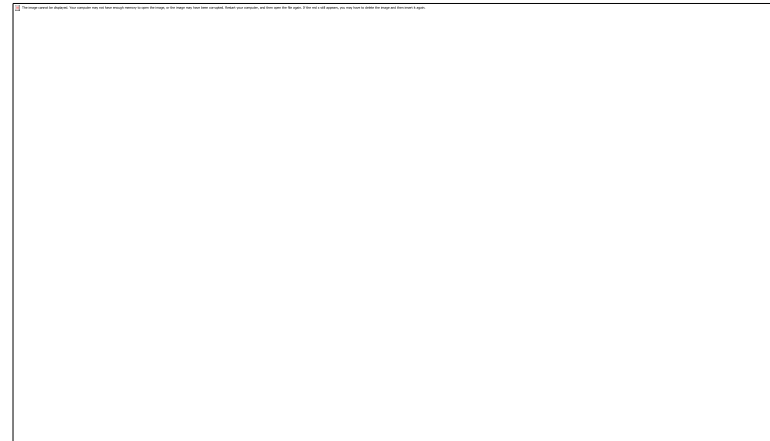
ZERO FATALITY CORRIDOR – A CASE STUDY



MUMBAI – PUNE EXPRESSWAY



- From 2011 to 2015 - 941 recorded road crashes (641 fatalities and 1,098 injuries)
- Between 2011 and 2014, number of road crash fatalities increased by 20%
- Annual average - 2.5 fatalities per two km, higher than national average of 1 death in every two km
- Making it one of the most dangerous roads in the country





HIGHWAY IN A BOX



- **Highway-in-a-Box is a one-stop comprehensive toolkit for decision makers to reduce the fatalities on a highway or expressway**
- **Developed by SaveLIFE Foundation**
- **Six-step solution to ensure Zero Fatality Corridor**
 - **Coalition Building**
 - **Evidence based Approach**
 - **On Site Audit**
 - **Solution Determination**
 - **Solution Deployment**
 - **Measurement & Replication**



PROJECT IMPLEMENTATION



➤ **Engineering**

➤ **Emergency Care**

➤ **Enforcement**

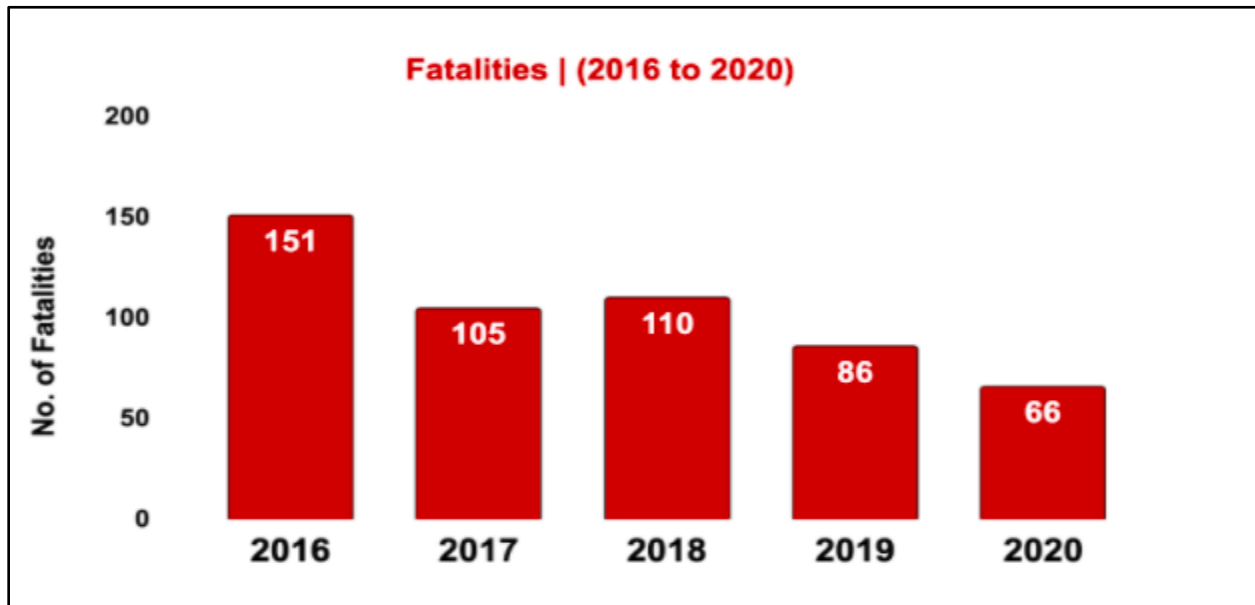
➤ **Engagement**

➤ **Research**

➤ **Intervention**

➤ **Implementation**

➤ **Evaluation**



WAY AHEAD



PROJECT : SAVE LIVES



Speed
management



Infrastructure design
and improvement



Enforcement of
traffic laws



Leadership on
road safety



Vehicle safety
standards



Survival after a
crash



INFRA DESIGN & IMPROVEMENT



Structural

Organisational

Road Design

Emphasis on Design
of Bends and Curves

Road Side Furniture

Identification of
Black Spots

Road Safety Audits

Campaigns

Banner and
Hoardings





INFRA DESIGN



Safe Crossings/
Junctions

Collapsible Barriers –
Safe Road Sides

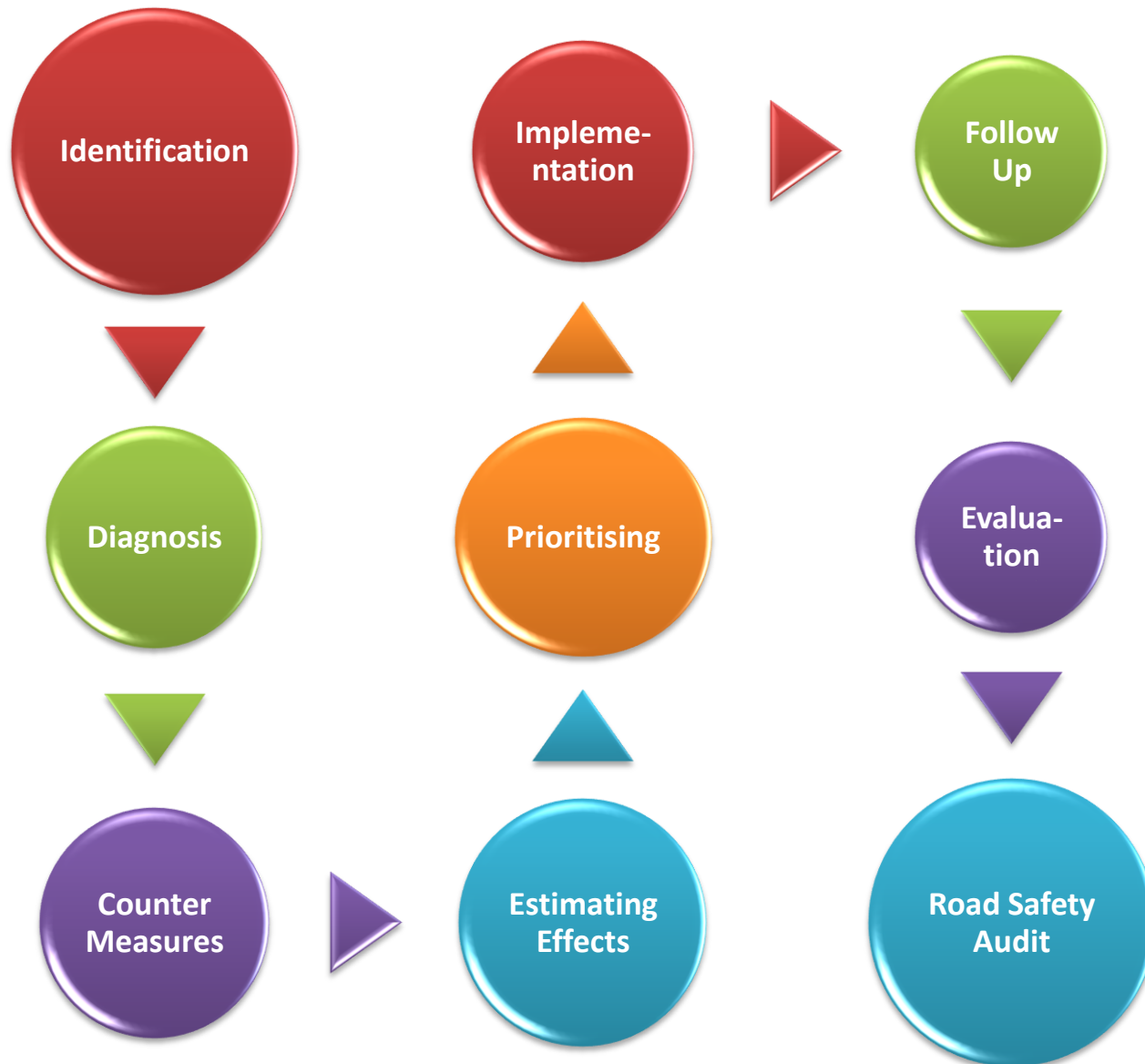
5 Star Rating
Roads

Gradients, Bends and
Curves

Speed Control
Measures



BLACK SPOTS





BLACK SPOTS - DATA COLLECTION



☐ Accident Data

Roadway Width

Shoulder Width

Sight Distance

Radii at Horizontal Curve

Width of Bridge (If Any)

Number of Lanes

Traffic Volume

Pavement Characteristics



BLACK SPOTS - FACTORS



➤ **Road Width**

➤ **Divided/ Undivided**

➤ **Gradient**

➤ **Shoulder**

➤ **Verge**

➤ **Median and Openings**

➤ **Footpath**

➤ **Kerbs, Ramps**

➤ **Drainage or**

➤ **Combination of above factors**

➤ **Absence of Signs and Markings**

➤ **Bad Lighting Like**

➤ **Inappropriate Type of Light at Improper Height or**

➤ **Less Intensity or**

➤ **With Obstruction or**

➤ **Combination of above factors**



BLACK SPOTS - FACTORS



➤ Presence of Roadside Friction

- **Poles, Posts etc**
- **Horizontal Railings**
- **Rocks and Landslides**
- **Construction Material**
- **Parked Vehicles**
 - **On-street Parking**
 - **Off-street Parking**
 - **Loading Facilities**
 - **Bus Stops**
 - **Taxi Stand**

➤ Road Surface

- **Type**
- **Roughness**
- **Friction**
- **Intersection**
 - **Type**
 - **Number of Legs**
 - **Channelisation**
 - **Turn Lanes**
 - **Turning Radius**



BLACK SPOTS - FACTORS



➤ Pedestrians & Cyclists

- **Numbers and Types**
- **Crossing Facilities**
- **Pedestrian Barriers**
- **Pedestrian Refuges**
- **Speed**
 - **Hazardous Driving**
 - **Speed Limit**
 - **Late Braking**

➤ Environment

- **Stray Animals**
- **School Children**
- **Heavy Vehicles**
- **Ambient Noise**
- **Ingress/ Egress Problems**

GOOD PRACTICES - ARUNANK



ZERO FATALITY CORRIDOR



- **Identification of Black Spots on Kimin – Potin, TCC - Takxing axes**
- **Smoothing/ widening of curves**
- **Speed Management**
 - **Sign Boards**
 - **Slogans**
 - **Speed Bumps**
- **Inclusion of Crash Barriers in scope of all ongoing works**
- **Road Safety Campaigns in remote areas**
- **Continuous liaison with Civil Adm for enforcement of traffic rules**



JAI HIND

“Connecting Places – Connecting People – Connecting Lives”