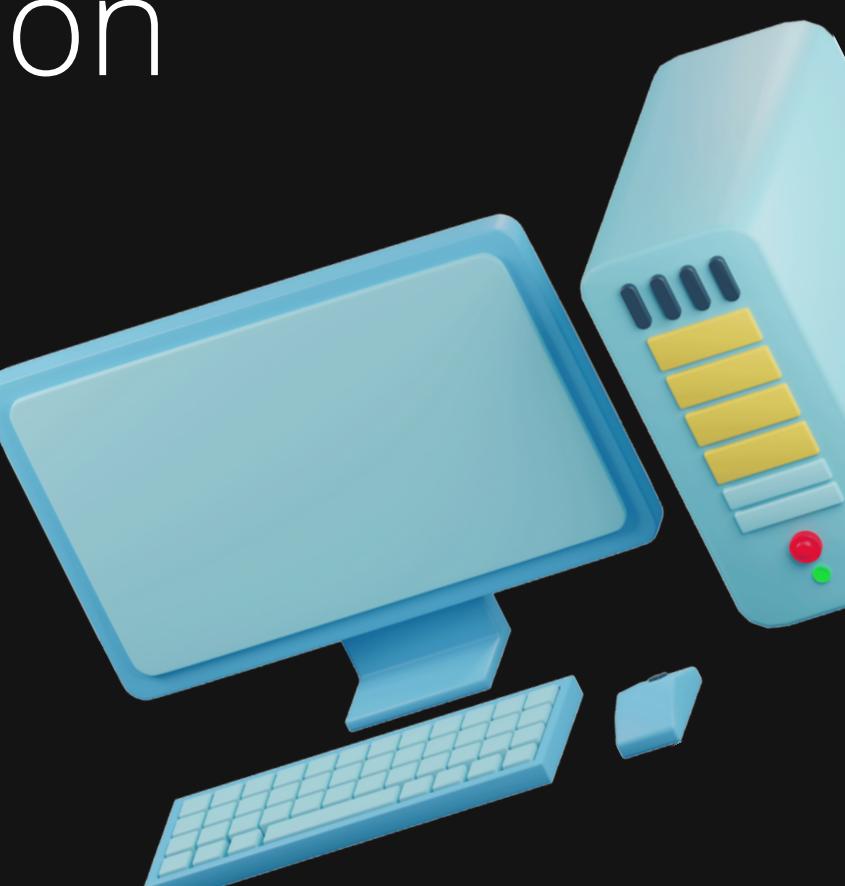




A Project by Vagneta

Road Accident Prevention Solution



RAPS - Future of Road Safety Audit

# RAPS Explained

What you need to know



[Need of RAPS Software](#)

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[About RAPS Software](#)

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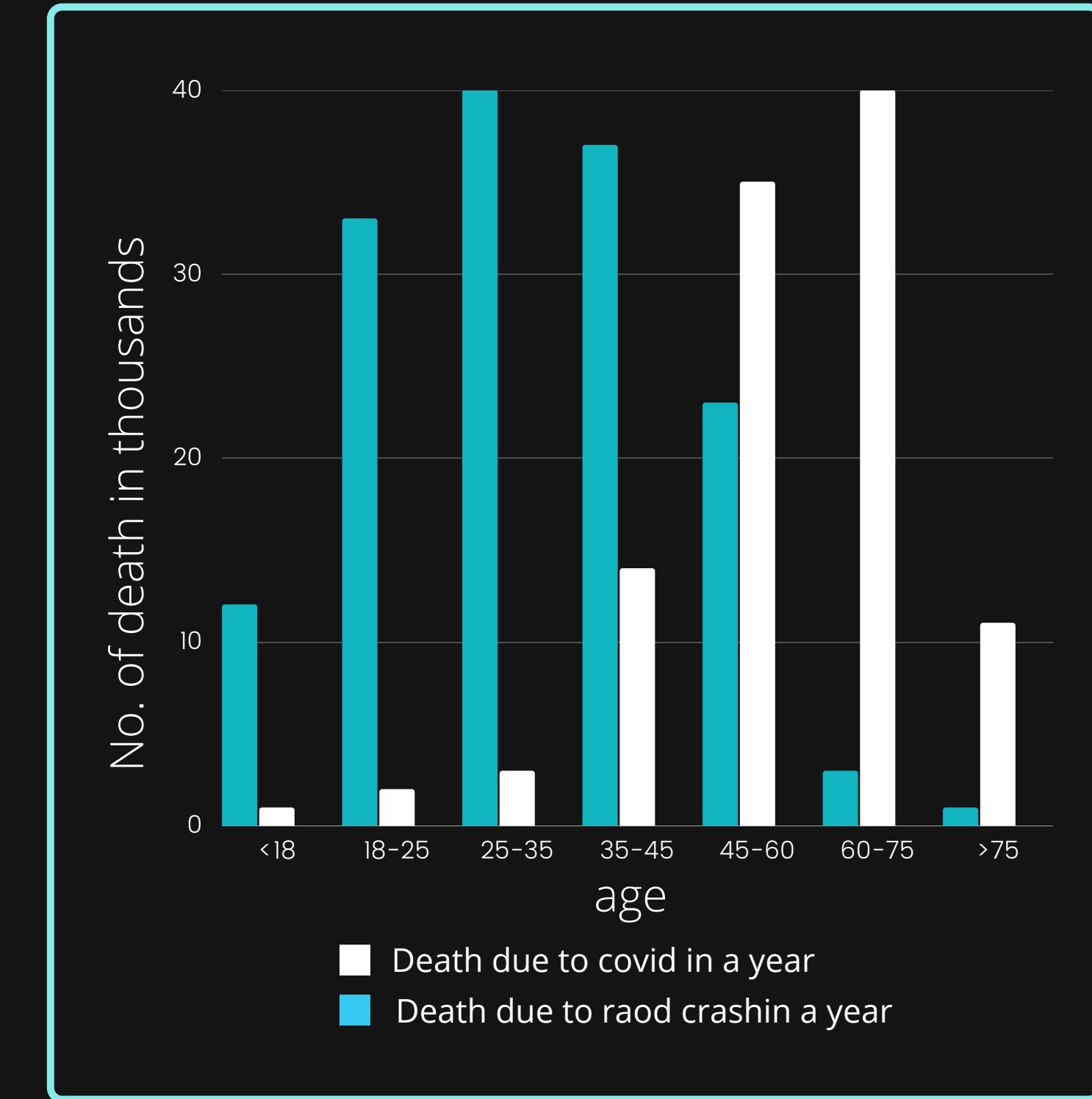
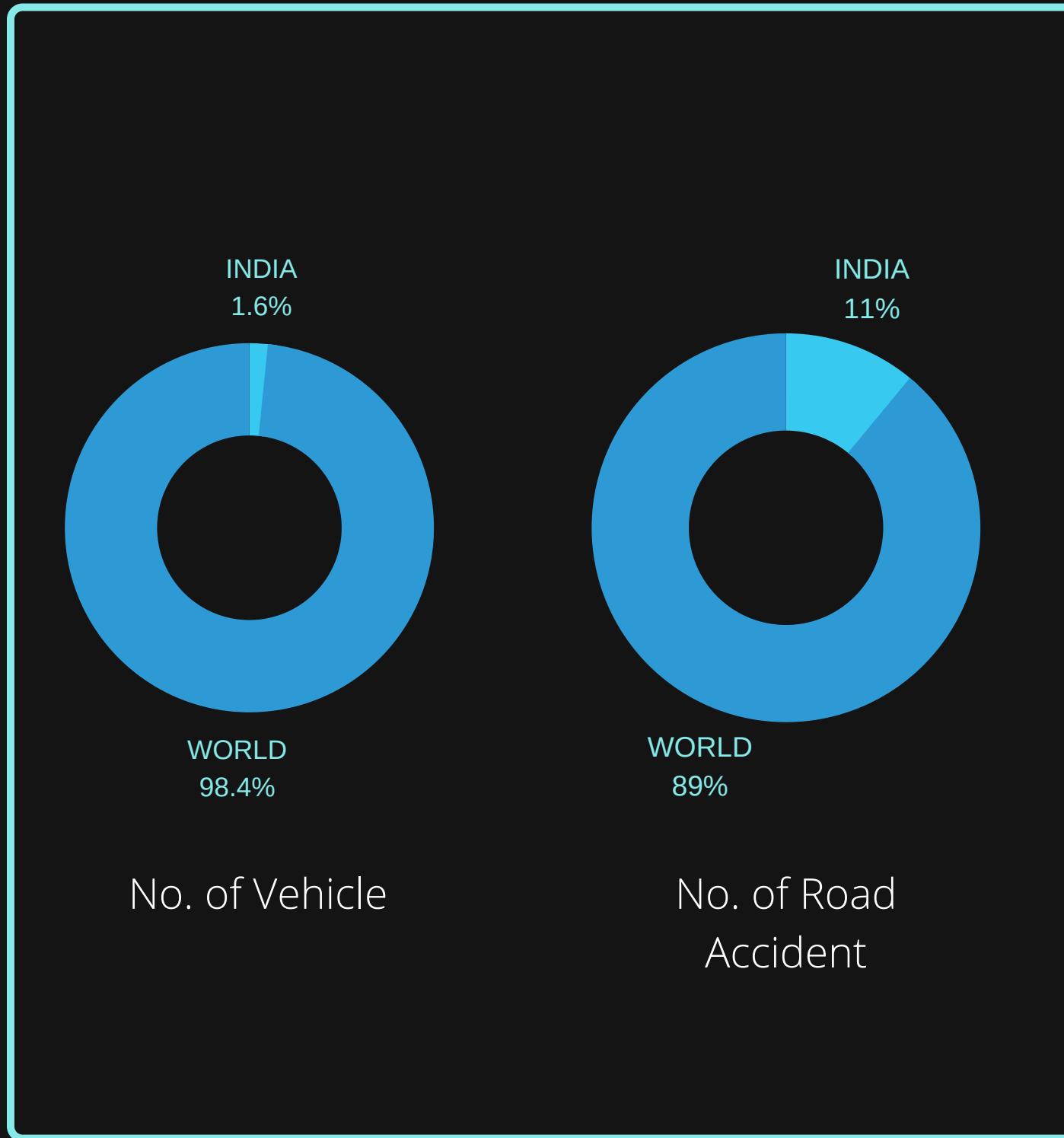
[Benefit of RAPS Software](#)

# ROAD ACCIDENT SCENARIO WORLDWIDE

- Approximately 1.3 million people die each year as a result of road traffic crashes.
- Road traffic injuries are the leading cause of death for children and young adults aged 5-29 years.
- Road traffic crashes cost most countries 3% of their gross domestic product.
- every 23 seconds 1 person dies in road accident world wide
  - count down

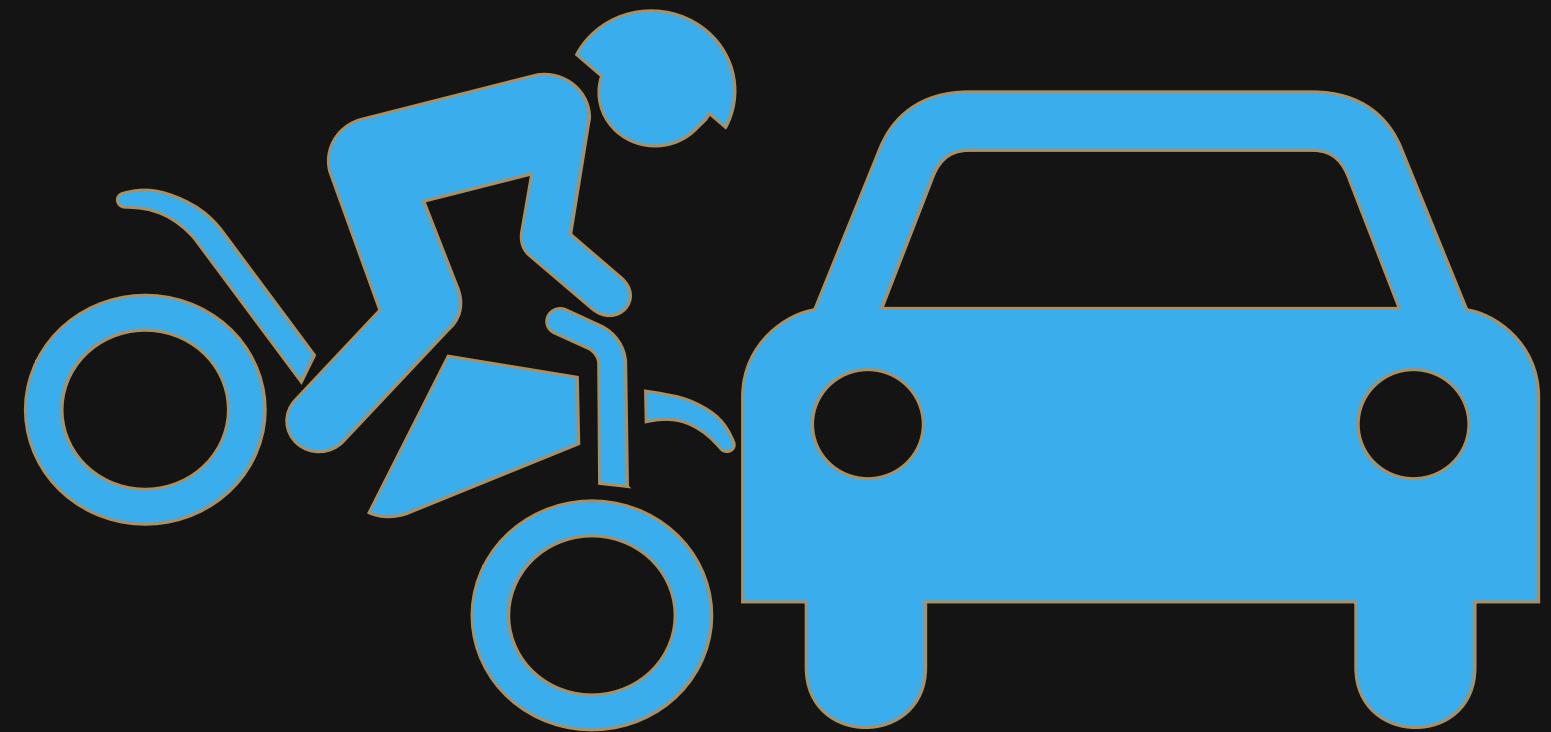


# ROAD ACCIDENT SCENARIO IN INDIA



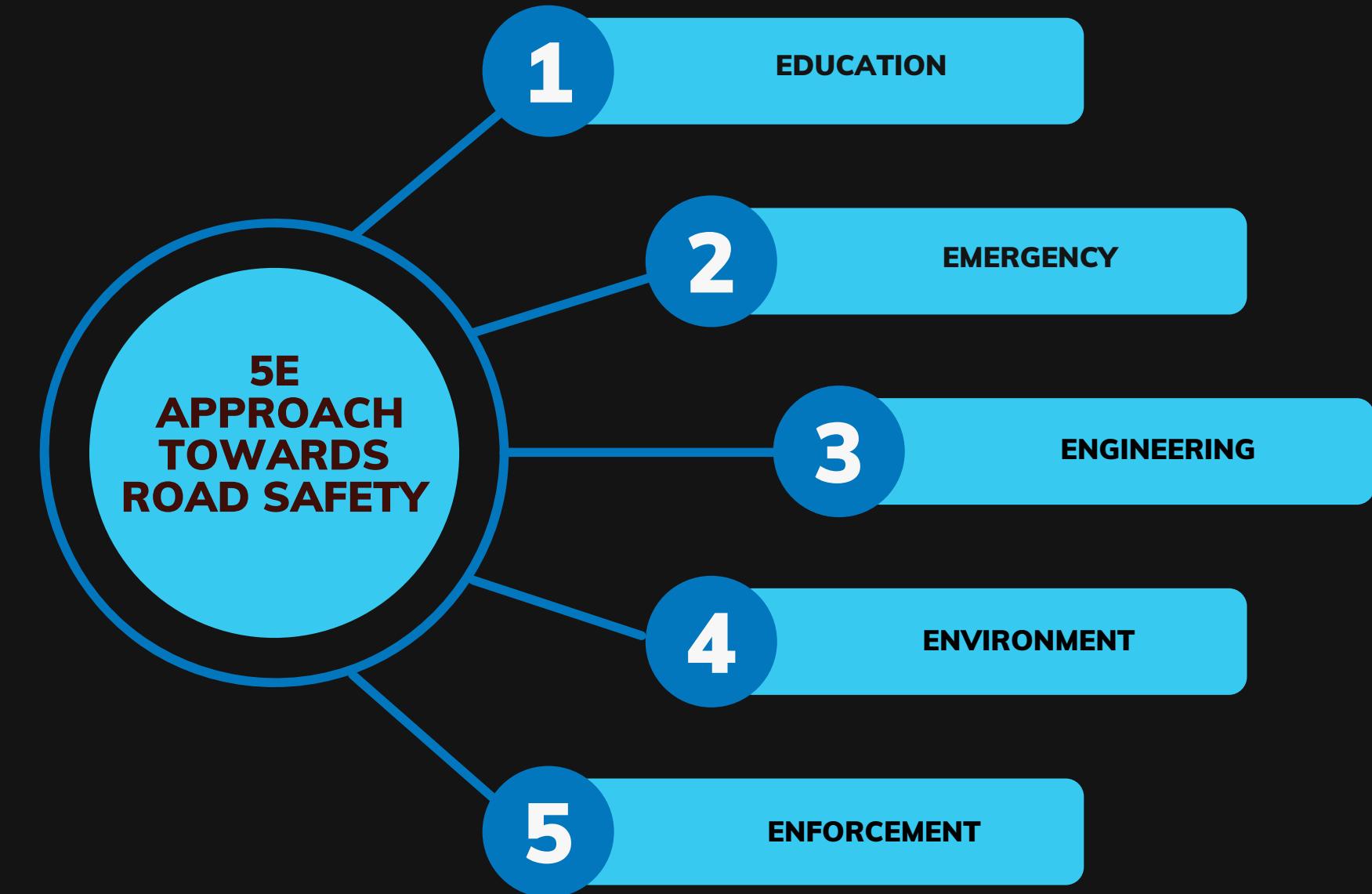
# ROAD ACCIDENT SCENARIO IN INDIA

- Every Minute one Accident takes place; every 4 Minutes 1 person dies in a road accident
- Putting this into perspective the number of people who died due to road crash in India in a single year are far more than the number of people killed in all of our wars put together.
- In India, every year, more people die due to road accidents than people instantly died in Hiroshima and Nagasaki combined because of Atomic Bomb
- UN study has found that India's GDP takes a 3% hit every year due to road accidents, equivalent to over \$58 billion in terms of value in the year 2016.
- 3% Of GDP Loss is equivalent to 7 times of budget allocated to the development of national highways yearly.



# Agenda

India has committed at the third global high-level conference of UN General Assembly on Road Safety in Stockholm held in 2020 to halving deaths and injuries from accidents by 2030.



# WHAT IS ROAD SAFETY AUDIT?

RSA can save millions of people's lives

## A PROACTIVE APPROACH

RSA, which is a proactive approach, ensures that safety steps are taken before an accident scenario becomes critical and hence saves a life.

## TECHNICAL ANALYSIS

A Road will be assessed by field experts with profound knowledge of IRC codes (Safety standard code for road design, furniture, and environment), traffic engineering, psychology of road user, and highway engineering.

## ROBUST SAFE ROAD NETWORK

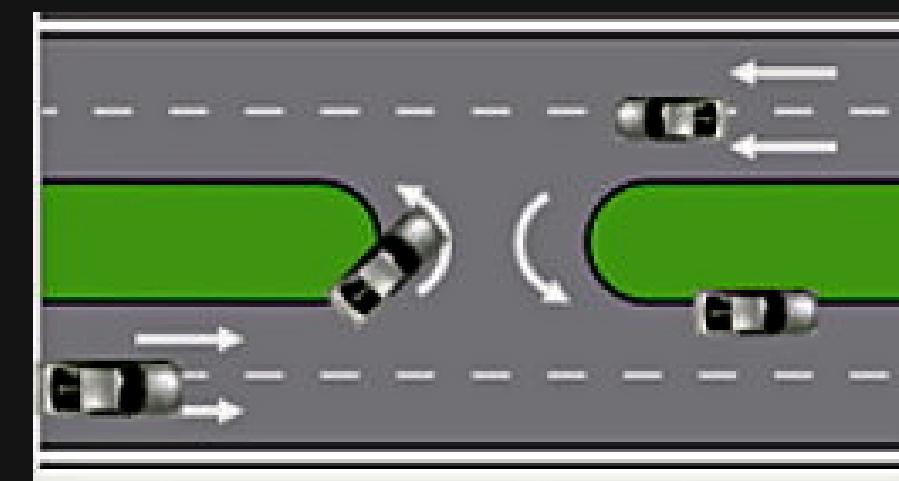
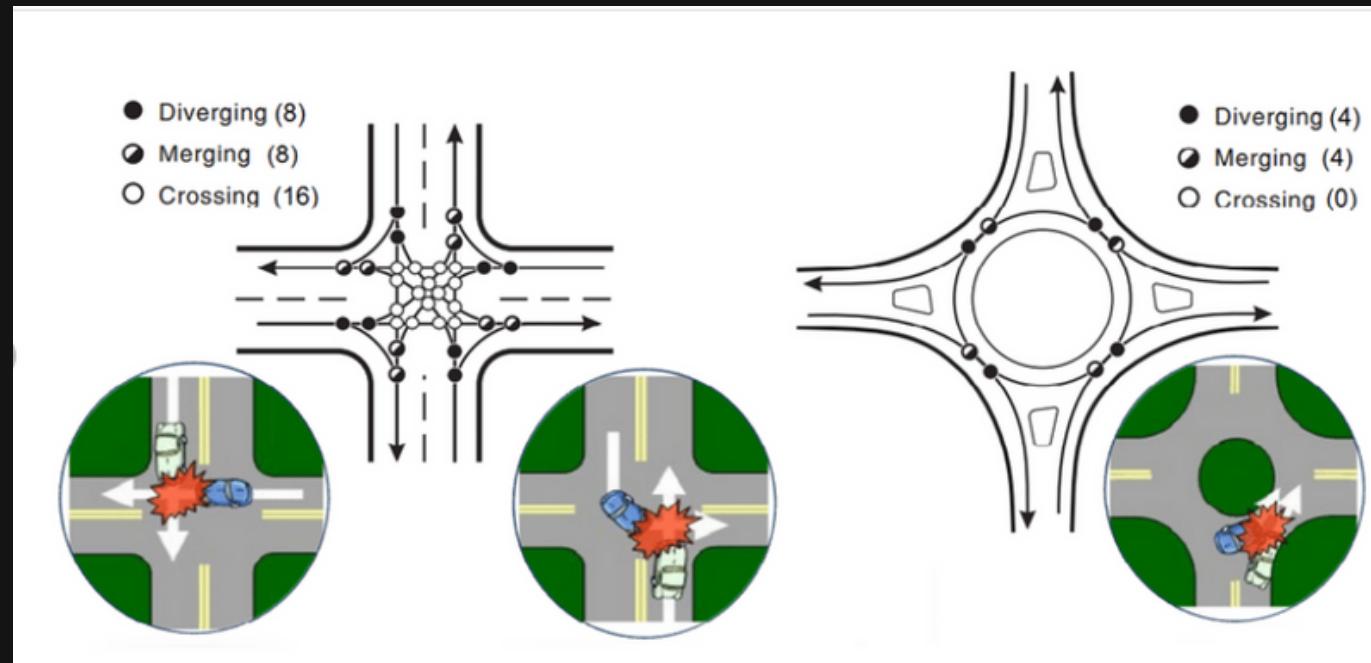
In the concept of the road safety audit, the given system is developed so that even if road users make any mistakes, casualties and fatalities will be minimum.



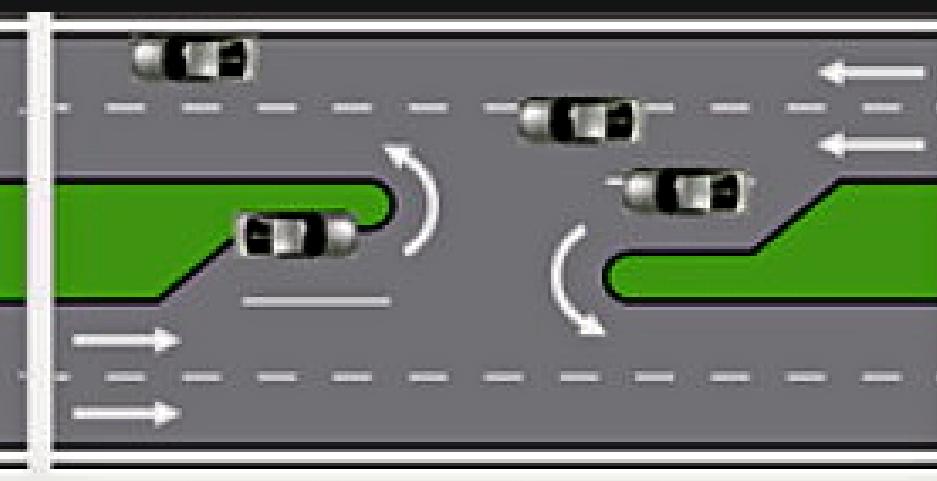
- Steep down gradient with curvature and narrow bridge
- Insufficient radius
- lack of crash barrier
- Inadequate shoulder
- No pavement markings(hatches),hazard markings.
- No Traffic calming measures

- No shoulder and Crash barrier
- Sharp turn
- No proper signage's
- No speed limit board

- Sharp turn
- No extra widening at curvature
- No proper cautionary signages

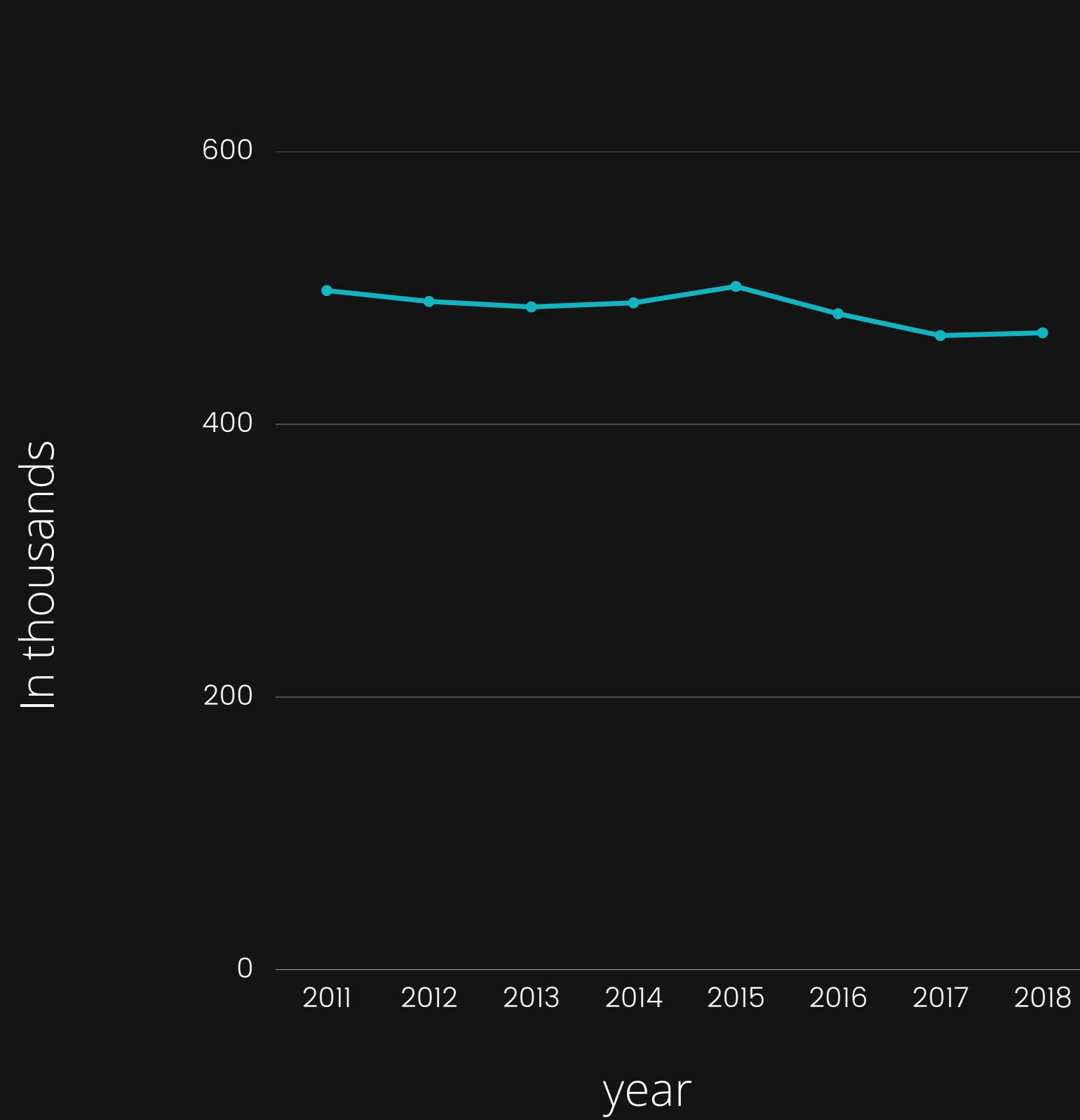


**A (without auxiliary lane)**

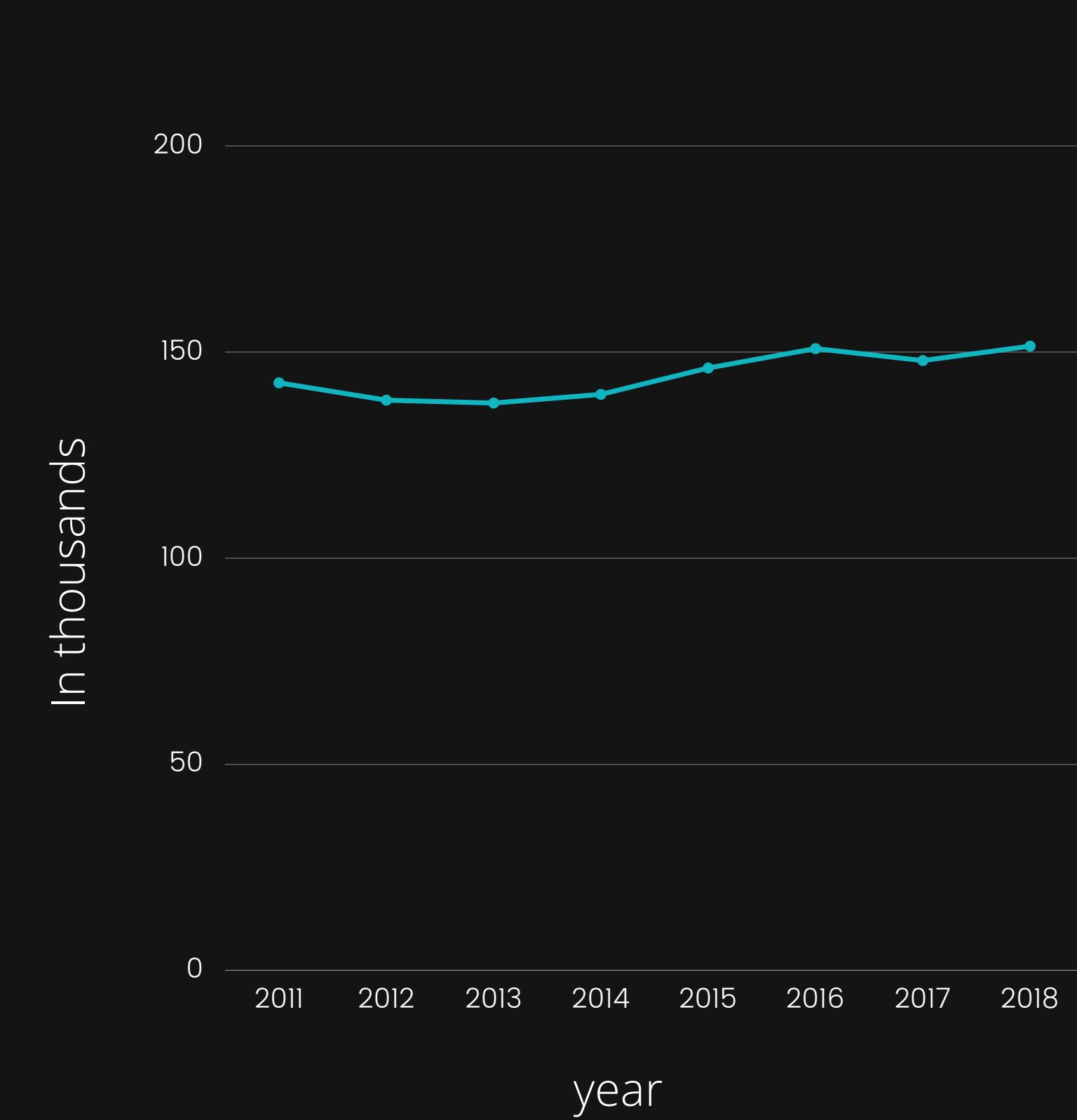


**B (with auxiliary lane)**





Road Accident



Road Accident Death

# Reasons

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- Subjective Analysis
- Not being done at optimum stages
  - should be carried out for each km & each stage
- Not considering every safety concern
- Hard to follow report
- Lack of client understanding
- Consideration of financial aspect
- Lack of capability to perform RSA



# What is RAPS Software?



RAPS(Road Accident Prevention Solution) Software is an automation of the analysis process of the road safety audit. which identifies potential hazard zone on the roads which can lead to a road crash, using AI and ML.

# Example of AI

## Demo

Hello, my name is Jainish.Todays i am here to discuss about the very serious problem; country is facing today. and about its solution. It is disheartning to see around 1.5 people died every day in india. So there are lots of reason that can lead an accident.

## Rules

- Singular / Plural
- Punctuation ( , . ; etc)
- Tenses
- Spelling
- Articles



# Benefits of RAPS

RAPS can help India achieve a goal of reducing road death and injuries by 50% by 2030

## EFFICIENCY

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As the software can analyze from every point of view much higher efficiency than a human can be achieved

## TIME

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Using Software Road Safety Audits will be completed much faster than one can imagine

## CONVENIENCE

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A simplified but robust system with more accessibility will be developed



vegneta

Project by Vegneta

Road Accident Prevention Solution

RAPS – Future of Road Safety Audit



# Road Accident Prevention Solution

Firm

Client

User Name

Password

Login

Register



choose starting and ending point of road



Region

Plain



Type of Road

2 Lane✓

Divided✓

National Highway✓

Length

10 km



Design Speed

100 km/h



Co - efficient of Friction

0.6



Accident Data

Chainage✓ Time✓ Date✓ Year✓ Type✓ Fatality✓

or

Upload File

Traffic

Upload File



Videography

Upload File



Geo Graphy

Upload File



GPS

Upload File



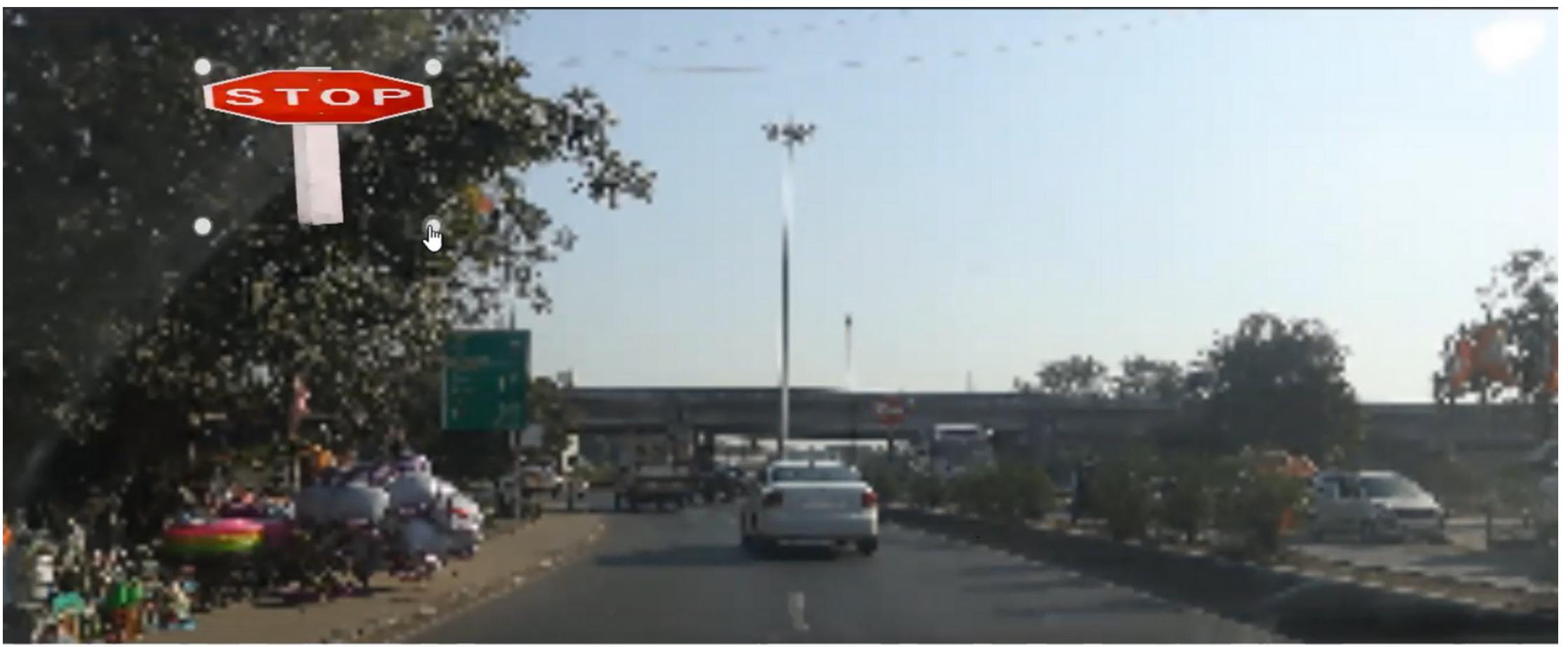
Next



Print Sheet





[Reset](#)[Rectangle](#)[Choose File 30.png](#)[Add Image](#)[Circle](#)[Save](#)

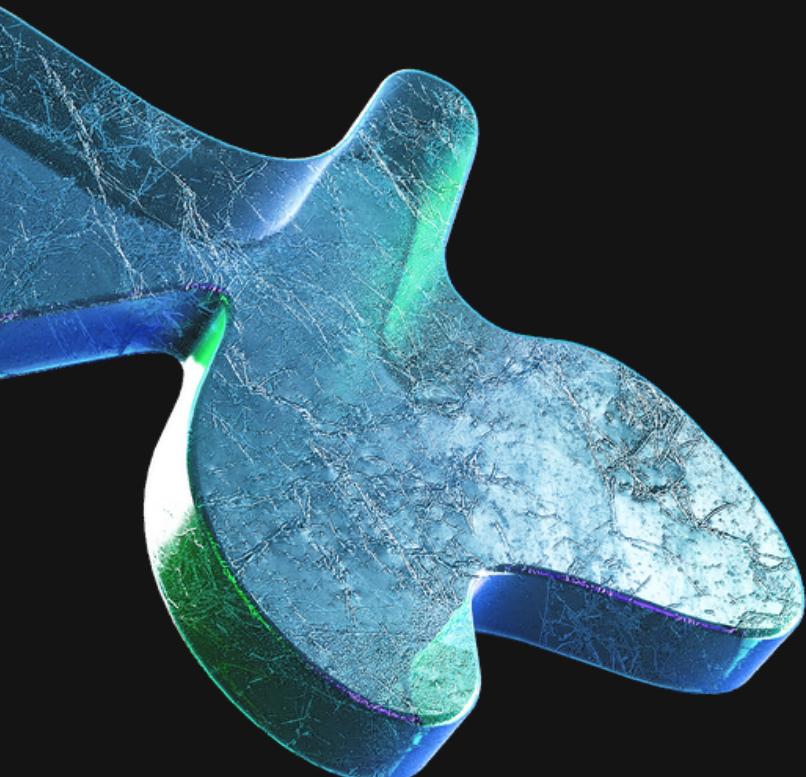
## Recommendation

No.		Effectiveness	Cost to Benefit Ratio
<input checked="" type="checkbox"/> 1			
<input checked="" type="checkbox"/> 2			
<input checked="" type="checkbox"/> 3			

[Add To DPR](#)

No	Safety Concerns and Audit Findings		Recommendations		
	Description(With image if any)	Risk	Description(With image if any)	Priority	Client Response
1	At chainage 40+490 STOP sign board is obstructing line of sight 	High	STOP sign board at chainage 40+490 should be placed in such a way that it does not obstruct line of sight according to IRC 67 : 2012 clause 4 on page 6 	highly desirable	

# The Benefits of RAPS





## Efficiency

As computers can be carried out calculations without an error, it will result in high efficiency



## Accessibility

No of Road Safety Auditor will be able to conduct a road safety audit efficiently.



## Data-Driven

An Objective analysis by computer turns results into a data-driven process



## Time

AS computer can handle an enormous amount of data at once, analysis time will be reduced considerably

## ADVANTAGES





## Risk Prioritization

This feature will help user take decisions more efficiently



## Semi Simulated

Solution against the habit of picking up Maintenance faults



## Adaptability

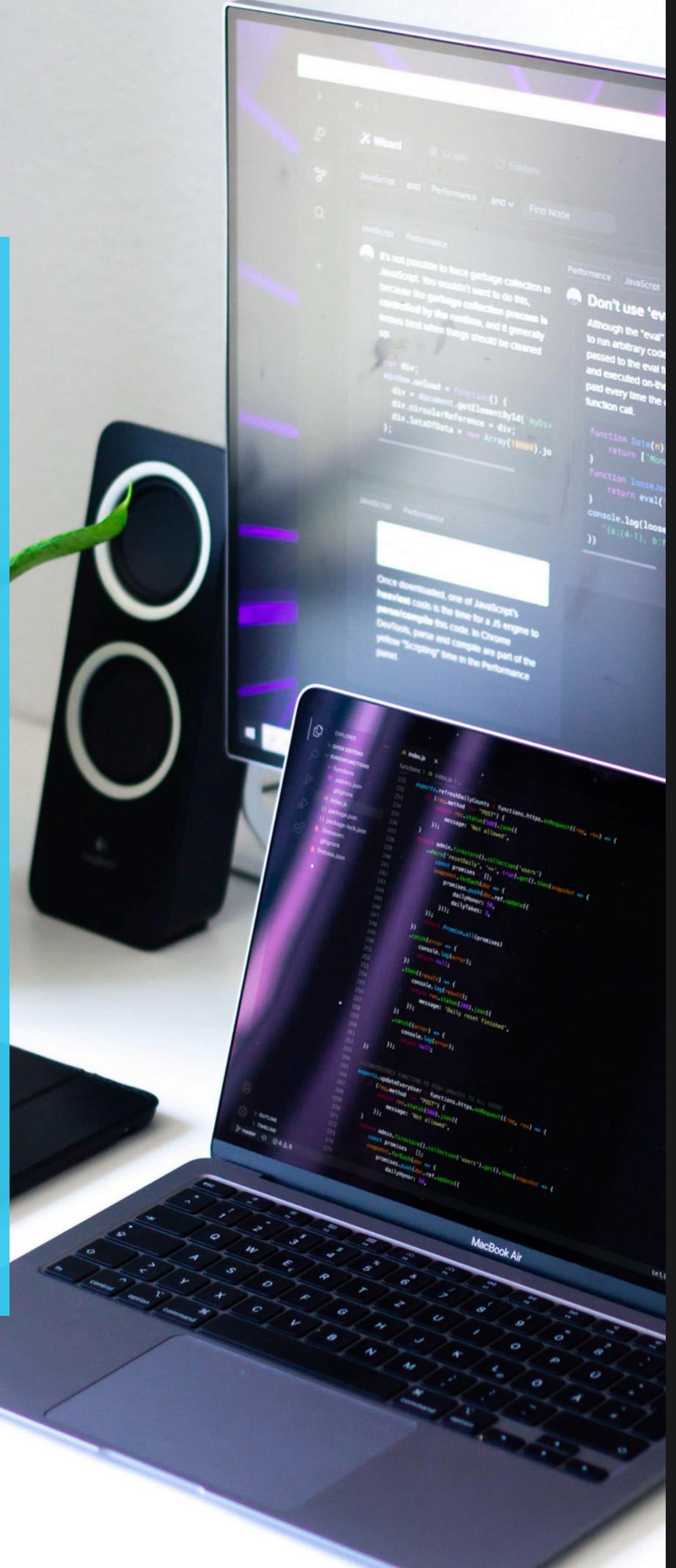
A few lines of codes and software will be future ready



## Easy to Understand

A feature to help understand the recommendation while implementing suggestions

## ADVANTAGES





## Centralized System

A unified platform for all stack holders of RSA System



## Data Analysis

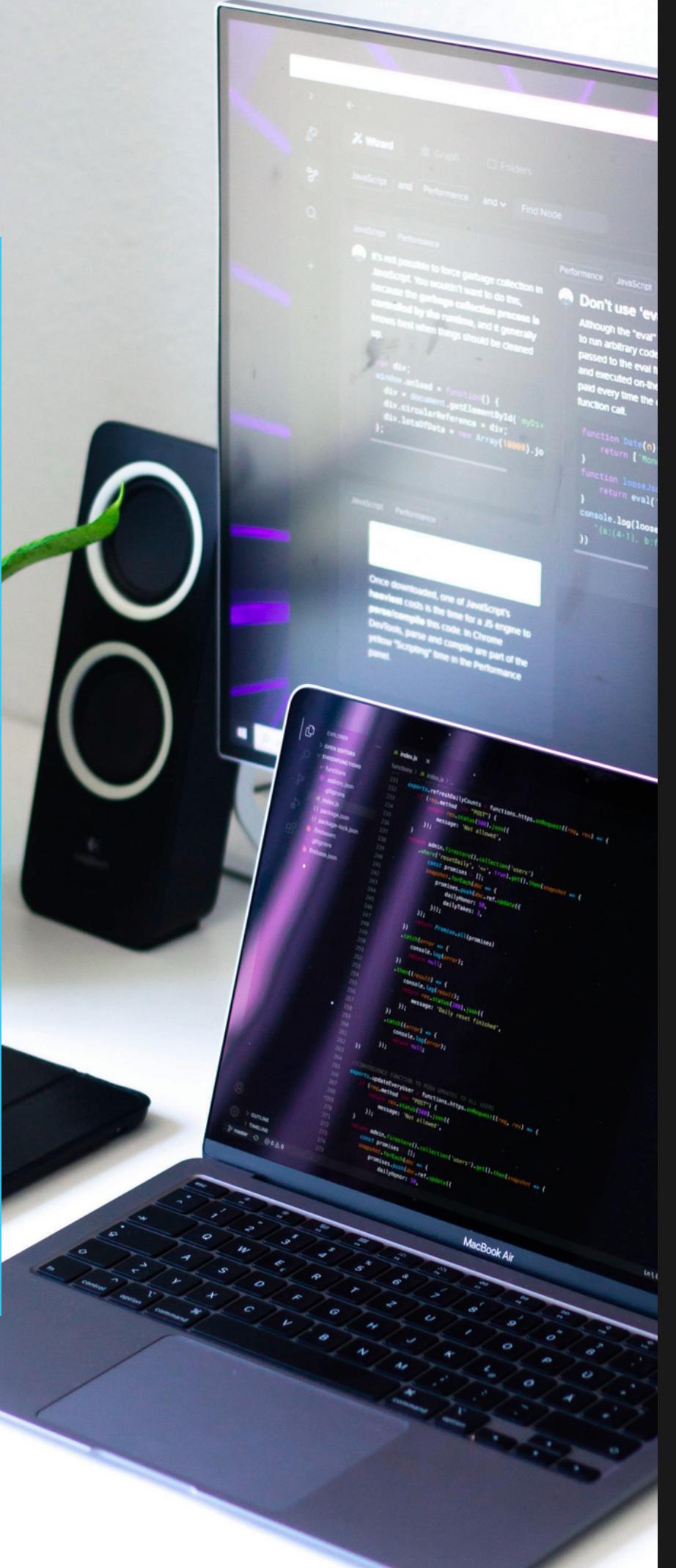
Effectiveness of RSA, future prediction



## Data maintenance

Completed, ongoing, future work, present scenario with visuals

## ADVANTAGES





Do you have  
any questions?

[Send it to us!](#) We hope you learned something new.