

# Rethinking Driver Training

A Road to Safer Traffic





|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Foreword</b>   | <b>05</b> |
| 1.1      | Aarti Harbhajanka   | 06        |
| 1.2      | Raghvendra Kumar  | 07        |
| 1.3      | Shri SN Dhole   | 08        |
| <hr/>    |   |           |
| <b>2</b> | <b>Executive Summary</b>  | <b>09</b> |
| <hr/>    |   |           |
| <b>3</b> | <b>Introduction</b>   | <b>12</b> |
| 3.1      | Road Safety as a Global Development Priority: Current state of road safety in India and other countries | 13        |
| 3.2      | Managing a Silent Epidemic on Indian Roads  | 13        |
| 3.3      | Current Driver Licensing and Training Ecosystem in India  | 14        |
| 3.4      | Bridging the Analytical Gap   | 16        |
| 3.5      | Central Proposition of the Study  | 17        |
| 3.6      | Research Methodology  | 17        |
| <hr/>    |   |           |
| <b>4</b> | <b>Road Safety through a Policy Lens</b>  | <b>18</b> |
| 4.1      | Policy Framework governing road safety in India   | 19        |
| 4.2      | Policy Bottlenecks  | 19        |
| <hr/>    |   |           |
| <b>5</b> | <b>Road Safety issues in India: Beyond Statistics, a Human Cost of Road Accidents</b>                   | <b>21</b> |
| 5.1      | Statistical overview of road accidents  | 22        |
| 5.2      | Findings from Primary Survey  | 24        |

|          |   |           |
|----------|---|-----------|
| <b>6</b> | <b>Impact of Driver Training within the Licensing System on Road Safety</b>   | <b>31</b> |
| 6.1      | Dimensions of the Safety Impact of Driver Training                            | 32        |
| 6.2      | Strengthening Training and Capacity Building: Policy and Comparative Insights | 36        |
| <hr/>    |   |           |
| <b>7</b> | <b>Reforms within the Training and Licensing ecosystem</b>                    | <b>39</b> |
| 7.1      | Short-Term Priorities: Immediate Strengthening of Driver Training             | 40        |
| 7.2      | Medium-Term Priorities: Licensing System Reform                               | 43        |
| 7.2      | Long-Term Priorities: Sustained Behavioural Change and Governance Reform      | 46        |
| <hr/>    |   |           |
| <b>8</b> | <b>Conclusion: From Preventable Tragedy to Evidence-Based Reform</b>          | <b>48</b> |
| <hr/>    |   |           |
| <b>9</b> | <b>Annexure</b>   | <b>50</b> |
| 9.1      | Research Methodology  | 51        |

A photograph of a winding asphalt road with double yellow lines, curving through a dense forest. The trees are in various stages of autumn, with some showing vibrant yellow and orange leaves, while others are still green or have turned brown. The overall scene is captured in a slightly darker, muted color palette, giving it a serene and quiet atmosphere.

01

**Foreword**

# 1.1

## Aarti Harbhajanka

Co-founder & Managing Director  
Primus Partners



Road safety is one of the most pertinent everyday challenges of our time. As per World Health Organisation (WHO), road accidents claim nearly 1.19 million lives every year across the globe. India which is home to only 1% of the globe's vehicles contributes disproportionately to the tune of 11% to such road accident related deaths..

These numbers signal a compelling case for systemic reform. While improvements in road infrastructure and enforcement remain critical factors affecting road safety outcomes, safer roads ultimately depend on drivers' awareness, judgement and sense of responsibility, all of which must be consciously built through rigorous and comprehensive, behaviour-oriented trainings.

At Primus Partners, we believe that rethinking driver training is not a peripheral, rather a foundational reform, needed to strengthen the entire road safety ecosystem. Through this thought leadership report, Rethinking Driver Training: A Road to Safer Traffic, we intend to create value for policymakers by carving out implementable policy pathways needed to achieve this goal.

We hope this report which emphasises that the positive driver behaviour is the core factor that can catalyse the actions towards mitigation of road accidents and safer road behaviour serves as a policy enabler and drives the attention towards rethinking on Driver Training in India.

# 1.2

## Raghvendra Kumar

Helmet Man of India



As mobility has become an integral part of modern human life with use of different modes of transport catering to our daily socio-economic needs and aspirations, it is prudent to cultivate a safe and required adherence to traffic and road safety behaviour right from the childhood.

While there has been significant progress in the design and technology related to road safety practice and adoption, however awareness on road safety practices and importance of proper training and education do not receive the same level of attention. This necessitates the urgent need for sustained campaigns and for integrating road safety education into our formal learning systems.

For me, road accidents are nothing less than an invisible war, that I fight every day by spreading awareness on the roads of India. As the "Helmet Man of India," my mission is to educate every individual about the importance of wearing helmets and following road safety rules. With dedicated support of the Indian Army, the Police and the Public, I have been successful in conducting numerous road safety awareness campaigns across the country.

Over the past 12 years, I have travelled across 22 states of India, distributed more than 75,000 helmets free of cost, and have been gratefully successful in saving many lives directly through this initiative. I have also worked towards strengthening road safety regulations and played an active role in enabling the implementation of a Supreme Court directive making helmets mandatory for children above the age of four, with the intention to cultivate road safety values in our future generations.

This thought leadership report by Primus Partners aligns with my mission of instilling good road ethics in citizens through rigorous training and capacity building. I hope we can together foster a safer future and protect every precious life.

# 1.3

## Shri SN Dhole

Head- Technical Secretariat,  
Central Institute of Road Transport



Road safety is an important national issue, requires continued and sustained efforts. In view of the same MoRTH has taken lot of efforts for last more than two decades to have mandatory safety features to enhance safety in vehicles by continuous monitoring through the formulation of Central Motor Vehicle Rules (CMVR) and the establishment of Automotive Industry Standards (AIS). Vehicle design, strength, and safety-related components have made important contributions to improving transport safety standards.

Road safety, however, is not merely a function of vehicle design and safety standards. Even the best-designed, most safety-compliant vehicles can only do so much on their own. At the end of the day, it's the driver behind the wheel who makes the real difference. Safe roads depend not just on standards and technology, but on drivers who are skilled, alert, and responsible in how they behave every single time they drive.

This report, therefore, rightly highlights the need to improve the driver licensing process. Systematic training, objective, and technology-based testing, and periodic reinforcement of skills are required to ensure that the licensing process is a true measure of competence and not mere process completion. In the evolving Indian transport scenario, with increasing public transport networks, complex vehicles, and growing mobility needs in urban areas, the need for proper preparation of drivers assumes even greater importance.

The findings and insights discussed in this report provide a constructive outlook on how the driver training and licensing framework can be made to align with the overall road safety goals. Enhancing the institutional framework in this area can be a high-impact strategy to improve compliance culture and minimize the risks associated with road accidents. Also, MoRTH has started many (IDTR) Driver Training Institutes pan India to have certified drivers which will increase road safety! Pride to have First IDTR in CIRT & running successfully. We must utilities such facilities to create safe drivers for road safety! I hope that this report contributes constructively to the ongoing discourse on road safety and brings the driver training to the centre of the interventions enabling a safer and more responsible driving environment for all.



02

**Executive  
Summary**

India's road safety problem is something we see around us every day, and yet it continues at a scale that is hard to accept. Every year, over 4 lakh accidents are reported and more than 1.7 lakh people lose their lives. These numbers are not just about roads or vehicles. They reflect how people drive, how rules are followed, and how systems actually work on the ground. The economic impact is close to 3% of GDP of our country, which only reinforces that this is as much about people and behaviour as it is about policy.

Over the years, India has significantly strengthened its road safety framework through amendments to the Motor Vehicles Act, revised penalties, digitized monitoring and enabled better emergency response mechanisms. But despite such reforms, the severity of accidents and the number of fatalities continue to increase. This brings us to a basic question, are we missing the core factor that has a direct influence on road safety? And the missing link while we are aware but often not prioritised is assessing and certifying driving competence. Driver competence is seen as a procedure compliance than actual capability building.

In this report, driver competency is defined as the demonstrated ability to apply traffic knowledge, behavioural judgment, hazard perception, and defensive driving skills consistently and responsibly in real-world traffic conditions.

This report examines the role of driver training within India's licensing architecture as a critical determinant of road safety outcomes. While road safety policy is traditionally organised around the "4Es" framework: Engineering, Enforcement, Education, and Emergency Response, this study focuses specifically on the Education pillar, assessing whether strengthening driver preparation and licensing processes can serve as a high-impact and institutionally feasible pathway for reducing crash risks.

The study begins with understanding and analysing the policy framework in India, governing road safety. While the policy mandates training for obtaining a commercial driving license, the same is absent for obtaining the private one. The analysis draws upon national accident statistics, comparative review of international licensing frameworks, and findings from a primary survey examining driver training exposure, behavioural compliance, and safety awareness.

The survey reveals significant structural gaps in driver preparation. Although licensing coverage among respondents is high, **42.11% reported receiving no formal training prior to obtaining their private licence**, and among those who did receive training, **63.64% indicated that emergency response was not covered**. One of the clearest gaps that emerges is what happens after a licence is issued. For most drivers, learning effectively stops there. **More than 90% report that they have never gone through any refresher or advanced training, but interestingly, many of them also say they would welcome stricter tests and periodic training if it helps to enable safer roads**. This suggests that the issue is not resistance, but the absence of a system that encourages people to keep improving their driving over time.

Looking at how other countries approach this, offers some useful perspective. In places like Sweden, Germany, Japan, Australia, and Canada, learning to drive is not treated as a one-time assessment to clear. It is a structured process. New drivers spend time in supervised practice, move through different stages of licensing, and are gradually given more staggered permissions over years. Such system is therefore designed to build confidence and judgement, not just basic control of a vehicle.

This report builds on such benchmarks with the Indian context in mind. It argues that improving how we train drivers before and around the time of licensing is one of the most practical and effective ways to improve road safety outcomes. The approach is spread across three time horizons.

In the short term, the focus is on designing the fundamentals, meaning , developing clearer standards for what good training looks like, ensuring that learners spend a minimum amount of time actually practising under supervision, and introducing road safety concepts early through schools.

Over the medium term, the licensing system needs to evolve. Instead of a single step, it can move toward a staggered process where drivers are progressively assessed and then provided full driving permissions on road. Parallely, driving schools also need a closer oversight with testing systems making better use of technology to reduce subjectivity and improve consistency.

In the longer run, the emphasis shifts to what drivers do after they are provided driving license. This includes building systems that can track patterns of driving behaviour and provide feedback. Institutions like National Driver Behaviour Observatory can be setup to help create a feedback loop from the data gathered on road behaviour so that learning does not stop once a licence is issued.

Such measures shall enable in preparing drivers better, reinforcing good habits over time. This shift of policy actions from reacting to preventing, is what can make a lasting difference in reducing accidents and saving lives.



03

**Introduction**

## 3.1

## Road Safety as a Global Development Priority: Current state of road safety in India and other countries

Sustainable Development Goals under its Goal 3: Good Health and Well-being, identifies road Safety has a global policy priority and had a target to reduce the fatalities from road accidents by 50%, however since it could not be met by 202, there is a renewed objective devised through UN Decade of Action for Road Safety 2021-2030 that calls for intensified efforts to lower fatalities, strengthen road safety measures and improve overall management of the road, traffic and vehicular landscape across the globe.

As per WHO's global status report on road safety 2023 the share of road fatalities worldwide is contributed disproportionately by low and middle-income countries, including India, with these accounting for 90% of worldwide fatalities, although their share in world's vehicles remains relatively small [1]. The highest number of deaths occur in the Asia Region with 28%, Western Pacific Region with 25%, African Region with 19%, Americas accounts for 12%, Eastern Mediterranean Region for 11%, and 5% occur in the European Region [1].

Experience from several countries indicates that to curtail the fatalities require an integrated approach combining engineering improvements, strong enforcement, public awareness, and institutional reforms in driver licensing systems.

Given its size and scale, India is central to achieving global road safety targets. Hence Strengthening domestic systems therefore contributes not only to national outcomes but also to global development commitments.

## 3.2

## Managing a Silent Epidemic on Indian Roads

Road crashes in India have become a normalized tragedy, recurring with such frequency that their structural roots often escape deeper scrutiny. Unlike sudden disasters, this crisis unfolds daily across highways, urban corridors, and rural roads, claiming lives incrementally yet persistently (around 462 lives are lost per day in India to road accidents) [2]. The scale and regularity of these incidents justify describing road safety as a silent epidemic.



Despite strong deterrence mechanisms with penalties, robust road networks, city infrastructure and various other majors, there is no reduction but on contrary is growing slowly. This indicates that the challenge is not merely of infrastructure or enforcement, but one that is intrinsic to the human and institutional foundations of mobility.

As road safety issues are behavioural events shaped by training, judgment, and risk perception, the attention must shift from reactive control to foundational capacity building. The question is therefore not simply whether drivers are licensed, but whether they are meaningfully prepared for the practical challenges of modern traffic environment.

### 3.3

## Current Driver Licensing and Training Ecosystem in India

India's policy framework consists of the Motor Vehicles Act, 1988 and the Central Motor Vehicles Rules (CMVR), 1989. The Regional Transport Offices (RTOs) implement this policy framework on the ground through the national Parivahan/Sarathi digital platform. There are two separate processes followed for obtaining a driving license for private (non-transport) and commercial (transport) vehicles in India.

Process for obtaining a private driving license consists of firstly obtaining a learner's driving license, valid typically for six months, post which the permanent license can be obtained after appearing for a driving test. The process does not mandate training from a recognized institution.





This contrasts with the process for obtaining a commercial driving license which additionally requires mandatory training, certified through submission of Form 5 certificate, from a recognized driving school or an accredited driver training centre [3]. However, despite the requirement for training for obtaining a commercial license, the system remains ridden with challenges. There have been cases and investigations raised before the Delhi High Court [4], highlighting how Form 5 certificates are issued without providing adequate training, making the certificate only a formality to be fulfilled, instead of evidence of actual driver competence.

Hence, while the policy completely bypasses mandatory training for obtaining a private drivers' license, the mandatory training ecosystem for obtaining a commercial license also remains inadequate.



### Gaps in Uniform Training

Although the licensing framework exists, formal driver training is not uniformly mandatory across all licence categories. Many applicants rely on informal learning mechanisms, including peer instruction or short-duration driving school exposure. So the key gaps include the absence of the following

- Clearly defined minimum practical training hours
- A standardised curriculum focused on defensive driving principles
- Hazard anticipation and risk perception training
- Exposure to simulated emergency situations or adverse weather conditions

As a result, in India driver preparedness differs significantly across states and with training providers, leading to variability in real-world driving competence.



## Limitation Testing Methodology

Current driving tests generally focus on basic vehicle handling skills within a controlled environment. While these tests assess operational ability, they may not adequately evaluate behavioural readiness in complex traffic situations. Publicly available national data on pass rates, re-test frequencies, and competency benchmarks is also limited. Moreover, the current testing structure does not systematically evaluate higher-order driving competencies such as:

- Hazard perception in dynamic traffic situations
- Speed management and risk calibration
- Defensive driving techniques
- Decision-making under stress

Without structured measurement of these competencies, licence issuance may certify minimum technical capability rather than comprehensive behavioural readiness.



## Absence of Graduated and Periodic Reassessment Mechanisms

Many countries employ graduated licensing systems, where new drivers progress through supervised stages before full licensing. Evidence from jurisdictions such as the United States shows that such systems can reduce crash risks among young drivers by 10-30% [5].

In India, however, the journey from learners' licence to permanent licence lacks structured, periodic supervision. Once it is issued, rarely such drivers are subject to any reassessment or supervision and any renewal thereon is mostly administrative barring exceptions in few cases.

This hinders any opportunity to any kind of regular exposure to persist and impart safe driver behaviour.

### 3.4

## Bridging the Analytical Gap

As elucidated earlier, policy interventions in India have largely focused on engineering improvements and stricter enforcement, driver training and preparedness have received relatively less institutional emphasis.

According to the Report of 2023 on Road Accidents in India, over 70% of accidents were from drivers holding valid licences. In a system where licensing coverage is high, this raises questions about the quality of training and competency validation.

Within the 4E framework of road safety i.e Engineering, Education, Enforcement, and Emergency Response, India has certainly made progress in engineering and enforcement, but on the education front, particularly structured driver training, remains underdeveloped. Without strong foundational preparation, enforcement can ensure compliance only temporarily rather than produce sustained behavioural change.



### 3.5

## Central Proposition of the Study

This report is guided by the central proposition that **strengthening structured driver training and embedding competency validation within the licensing framework can contribute meaningfully to improved road safety outcomes in India.**

The proposition certainly not claims that driver training related licensing reforms alone are panacea, however it positions them as a core and often neglected part of the 4E framework, which is a very feasible intervention that shall further efficiently enable the other levers of the 4E framework. While also significantly contributing towards better aware drivers and its positive impact on road traffic.

### 3.6

## Research Methodology

This study adopts a mixed approach drawing heavily from secondary research via sources such as published government reports, Acts/regulations and well recognised studies to substantiate the core proposition and then test this through primary consultation which indicates the behavioural patterns of Indian drivers across states. Further key stakeholder consultations have been made from Subject Matter Experts, Officials, Moto Driving Schools and the drivers to understand and derive inferences.

Such key stakeholder consultations involved gathering of primary inputs through a small set of structured surveys using stratified sampling. The study broadly assessed exposure to formal driver training, awareness of traffic rules and safety practices, behavioural compliance with road regulations, and perceptions regarding the adequacy of licensing tests.

For the primary survey, states were sampled basis population, accident levels, fatalities, and registered vehicles to ensure contextual diversity. Accordingly, the final data set involved 38 samples that were identified through purposive sampling covering mix of regions, driver category. The objective was not to derive statistical conclusions but intended to provide indicative insights that further justify the need for driver training and its awareness among the drivers. A detailed methodology is made available in the Annexure of this report.





04

**Road Safety  
through a  
Policy Lens**

## 4.1

### Policy Framework governing road safety in India

The guiding legislative framework governing road safety in India is the **Motor Vehicles Act (MVA), 1988**, amended through the **Motor Vehicles (Amendment) Act, 2019 (MVA 2019)**. The 2019 amendment brought a significant shift in road safety governance. This was done by increasing the penalties for high-risk violations such as for over speeding, enabling electronic enforcement through e-challans, CCTVs and providing legal protection to Good Samaritans. It has been known for strengthening overall accountability in vehicle fitness and licensing.

- **National Road Safety Policy (2017):** This policy supports the *4 Es governance framework- Engineering, Enforcement, Education and Emergency Care, aimed at systematically reducing crash risk and fatalities.*
- **Good Samaritan Protection Guidelines (2016):** It has now been adopted in the 2019 MVA amendment. It legally protects bystanders who assist accident victims during the crucial “*Golden Hour*”, encouraging prompt emergency response without the fear of legal harassment.

Despite these legal advances, substantial gaps remain in both policy design and implementation across the 4 Es i.e. Engineering, Education, Enforcement and Emergency Response, which must be bridged for enhancing road safety outcomes. This report aims specifically looking at “Education” as a key pillar, which must be strengthened for

enhancing road safety outcomes. The section below highlights some policy gaps existing in this domain.

## 4.2

### Policy Bottlenecks

Road safety education is a critical pillar in enhancing road safety as part of the 4Es framework. However, serious challenges persist in this domain both at the policy and implementation front.



#### Issues pertaining to driver training:

The legislative framework in India governing driver education still doesn't make formal trainings explicitly mandatory for obtaining a private driver license, although Central Motor Vehicle Rules 1989 encourage trainings from Accredited Driver Training Centres (ADTCs), by allowing exemption of an applicant from RTO test, if training from an accredited institution is completed. Moreover, under Rule 31 of Central Motor Vehicle Rules (CMVR) 1989 and subsequent amendments, formal training from a recognised institution for obtaining a commercial license is generally required. This continues to make India's system reliant on testing-based qualification, not training-based qualification, especially for private drivers. Moreover, training efforts remain episodic rather than sustained in the country with campaigns during National Road Safety Month lacking the necessary consistency needed to build long-term behavioural change among road users. Lack of training when coupled with serious lapses in enforcement, makes the road safety scenario quite bleak in the country.



## Issues pertaining to drivers' licensing:

A robust driver licensing system is critical to ensuring road safety because it is the sole determinant of who drivers and with what level of preparedness. Under the Motor Vehicles Act, 1988, a graduated licensing framework is mandated—starting with a learner's licence, progressing to a permanent licence and including specialised categories such as commercial licences, to ensure drivers demonstrate competence before being allowed on public roads. This system is meant to ensure that the drivers have both theoretical knowledge and practical skills to operate vehicles safely on roads.

However, investigations over the years have highlighted that many licences in India are issued without rigorous assessment of skills, including hazard perception, emergency response, night and highway driving, leaving many drivers on India's roads unprepared to deal with real life situations. [6]

This calls for the strengthening of the driving license system in the country through a multi-pronged approach that will be subsequently discussed in the report. While the sections till now have aimed at providing an overview of road safety in India through a policy lens, the following section delves deeper into the implementation challenges, highlighting the causes and the implications that follow.



# 05

## **Road Safety issues in India:**

Beyond Statistics, a  
Human Cost of Road  
Accidents

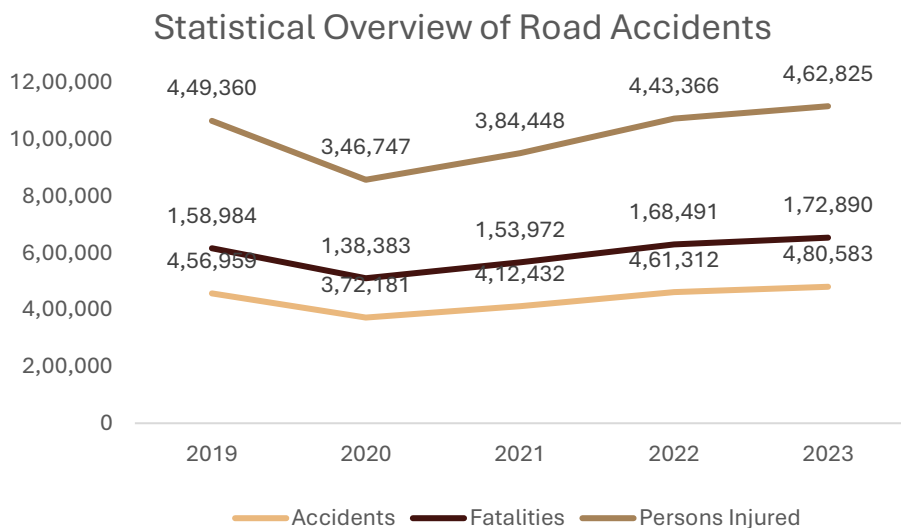
India has one of the largest road networks in the world. Rapid motorisation with increasing urbanisation has led to increased traffic congestion and road safety risks. Owing to economic growth, mobility needs have increased but the same hasn't resulted in increased road safety systems in the country. Addressing road safety in India is, therefore, critical and requires a multi-pronged, data-driven approach.

## 5.1 Statistical overview of road accidents

India is witnessing rapid motorization. Official estimates by the Ministry of Road Transport and Highways as of February 2026, point to registration of over 41.77 crore vehicles, with 37.69 lakh [7] vehicles added in the current year. Moreover, approximately 23.10 crore driving licences have been issued across the country. These numbers reflect growing traffic exposure in India.

Road accidents have been witnessing an upward trend over the last five years, with a temporary decline during the COVID-19 period. However, as mobility and economic activity resumed from 2021 onwards, accident indicators also resurfaced.

Between 2019 and 2023, road accidents increased at an average annual rate of 2.04%, as shown in the chart below. Fatalities grew at an even higher rate of 9.12%, highlighting rising accident severity. By 2023, total accidents crossed 4.80 lakh [8] and fatalities reached approximately 1.73 [8] lakh.



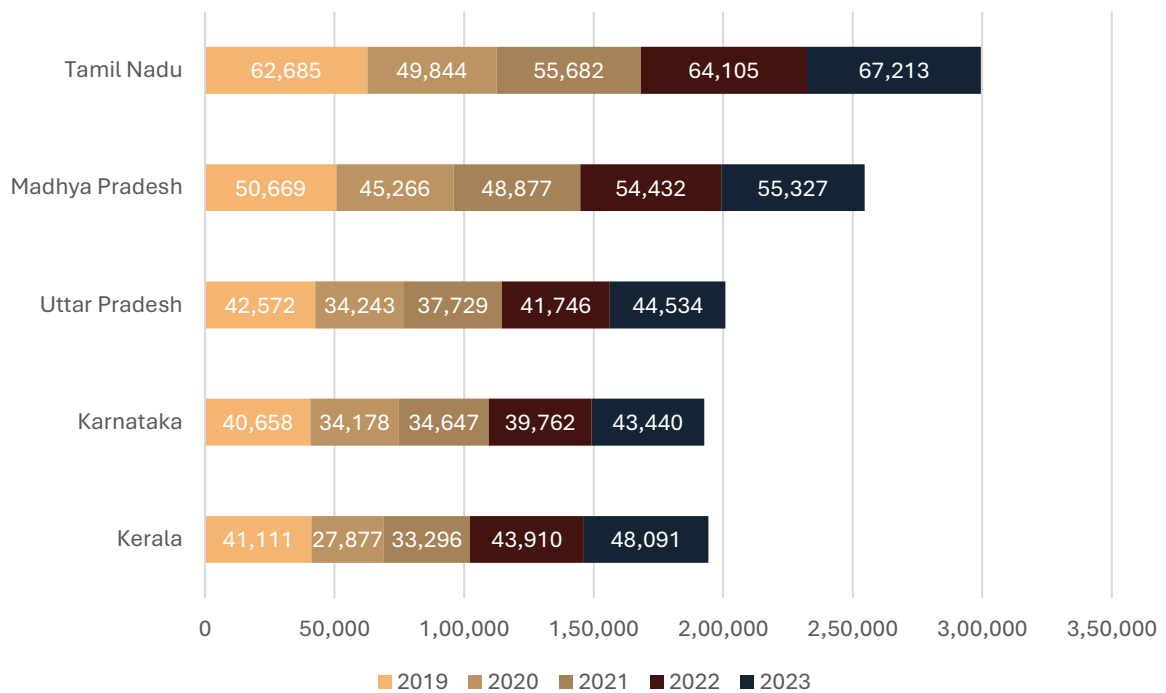
Graph 1: Statistical Overview of Road Accidents

Source: Ministry of Road Transport and Highways. Road accidents in India – 2023. Government of India

Moreover, in 2023, states such as Madhya Pradesh, Karnataka, Kerala, Tamil Nadu, and Telangana recorded high accident volumes, although their severity rates were below the national average. Contrastingly, states such as Uttar Pradesh, Maharashtra, Gujarat, Rajasthan, and Andhra Pradesh observed both high accident numbers and severity rates above the all-India average [8]. This difference could be attributed to differences in factors such as training exposure, behavioural compliance, enforcement intensity and infrastructure conditions across states.

Taken together, these trends are reflective of the need for India to invest in its road safety ecosystem. But as a first step, it is important to examine the institutional and behavioural bottlenecks, leading to such bleak road safety outcomes in the country.

### Top 5 States with Highest Number of Road Accidents in India



Graph 2: Top 5 States with highest number of road accidents in India

Source: Ministry of Road Transport and Highways. Road accidents in India – 2023. Government of India

## 5.2 Findings from Primary Survey

The primary survey conducted, assesses the respondents on the following parameters: exposure to pre and post licensing training, behavioural compliance and safety awareness. The analysis below, presents a picture of the training and licensing ecosystem in the country and their translation into behavioural compliance and corresponding road safety outcomes.

### 5.2.1 Driving Licenses Coverage and Training Exposure

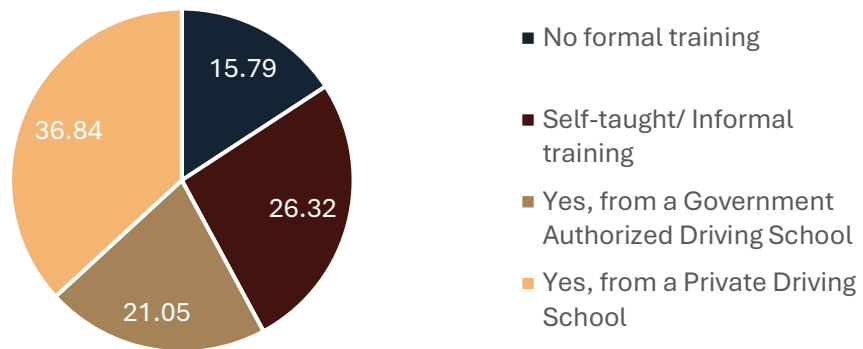
The primary survey assessed the extent of licensing coverage and exposure to formal driver training across respondents. A large majority, 97.37%, reported holding a valid driving licence. However, only 57.89% indicated that they had undergone formal driver training through a private or government-run driving school prior to obtaining their licence.

Moreover, differences were observed in the duration and depth of training. Approximately 44.74% of respondents highlighted that they underwent training for less than a month before licensing. Even within this short duration, the training was more focused on concepts of basic vehicle handling and preparation for the driving test, rather than equipping the participants to address real-world traffic problems. Around 63.64% of respondents reported no coverage of emergency response practices during the trainings. Post-licensing training is also negligible according to the survey. 90.91% of respondents who received formal training reported absence of any refresher or advanced training after obtaining their licence.



These findings indicate that while licensing coverage is high among the respondents, significant improvements are needed in the duration, quality and content of trainings provided.

### Training Status Before Receiving Driving Licence (in %)



Graph 3: Training Status before receiving driving license (in %)

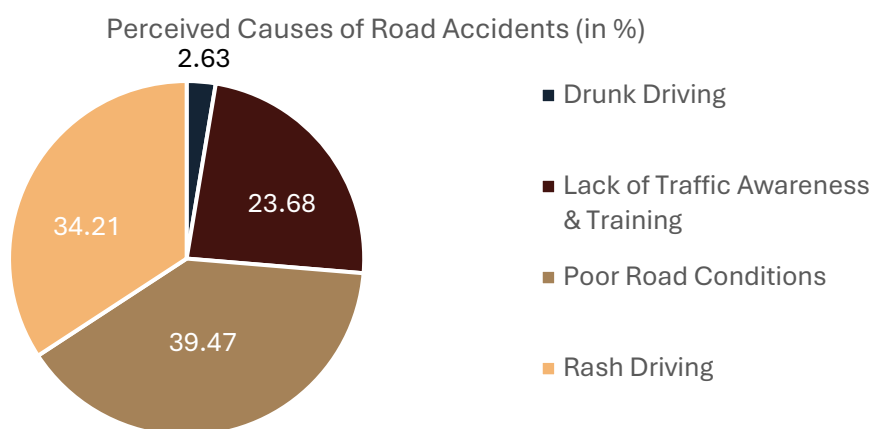




## 5.2.2 Perceived Causes of Road Accidents and Driving Challenges

Survey responses reflect a multi-factor understanding of road accident causation. While 39.47% of respondents cited poor road conditions as the cause, a majority 60.52% highlighted behavioural non-compliance as the leading factor.

This includes factors such as rash driving, lack of traffic awareness and exposure to formal training: rash driving was identified by 34.21%, lack of traffic awareness and formal training by 23.68%, and drunk driving by 2.63%.



Graph 4: Perceived causes of road accidents (in %)

This distribution is highly significant. While infrastructure emerges as the single largest individual category, more respondents linked accidents to driver behaviour than to road conditions alone.

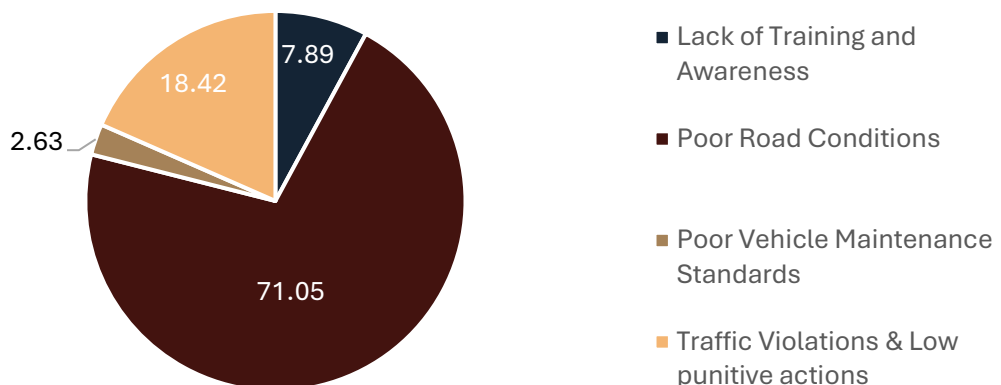
The findings suggest that accident risk is not perceived solely as a function of road design or maintenance, but substantially as a function of on-road decision-making and compliance.

A related pattern is observed in responses around everyday driving challenges. A majority of respondents, about 71.05% identified poor road conditions as the most pressing challenge in their city or area of driving.

However, traffic violations and lack of focus on training and awareness were cited by only 18.42% and 7.89% of respondents respectively. This contrast suggests that while human behaviour is seen as the main reason for accidents, everyday driving challenges are more attributed to infrastructure condition of Indian roads.

When these perceptions are read alongside earlier findings on training exposure, a structural alignment emerges. A significant proportion of respondents reported limited or absent formal training, no importance given to hazard anticipation and emergency response during the trainings and no post-licensing refresher reinforcement. The convergence of behavioural attribution with documented training gaps suggests that driver preparedness remains a central vulnerability within the system.

Biggest challenges of driving in city/area (in %)



Graph 5: Biggest challenges of driving in a city/area (in %)

### 5.2.3 Traffic Violations, and Compliance Patterns

Now that the perceived causes of road accidents have been identified and behavioural factors have emerged as the leading contributors, it is time to delve deeper into the behavioural compliance patterns majorly seen amongst the respondents. In this study, significant on-road behaviour such as adherence to signals, speed regulation and usage of mobile phones while driving, have been given particular attention. These dimensions are widely recognized in literature on road safety.

Signal adherence emerged as a critical behavioural dimension. While 57.89% of respondents reported that they do not violate traffic signals and 34.21% indicated only rare violations, 50% identified ignoring traffic lights during low-traffic conditions as the most common violation.

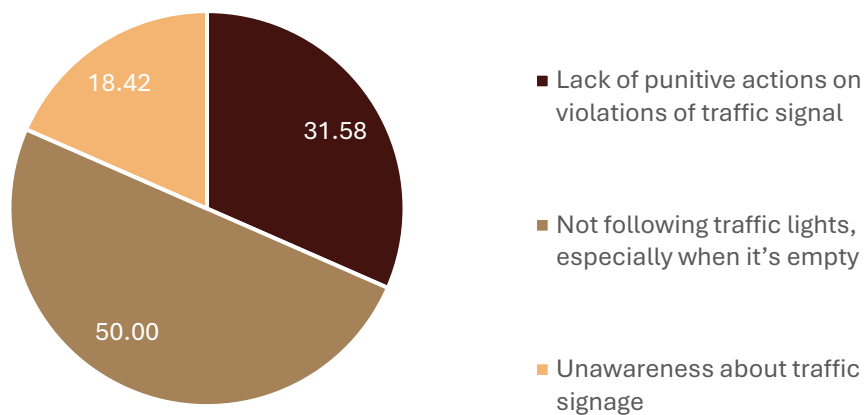
This finding highlights how non-compliance becomes normalised under perceived low-risk conditions. Further, 31.58% of respondents pointed to lack of punitive action for signal violations as a contributing issue. Moreover, 18.42% of respondents highlighted unawareness of traffic signage as a major violation.

These responses highlight the variability in compliance when enforcement is low. This suggests that external factors such as enforcement, although extremely essential, alone cannot solve the issue of road risks. Factors internal to the human conditioning such as human conscience, primarily driven through continuous training and education, have an equally important role to play in ensuring high compliance even during low enforcement times.



#### Signal Compliance and Enforcement Perception

Most Common Traffic Signal Violations Leading to Road Accidents



Graph 6: Most common traffic signal violations leading to road accidents



## Speed Regulation

Speed discipline reflects similar variability. While approx. 39.47% reported inconsistent compliance to speed limits, 23.68% observed that compliance strengthens in the presence of surveillance cameras. This highlights a direct correlation between enforcement intensity and compliance. At the same time, 10.53% believed that speed limits are mostly disregarded, indicating a serious compliance challenge.



## Mobile Phone Usage

While 47.37 % of the survey respondents highlighted completely avoiding their mobile phones while driving, 42.11% reported usage of hands-free devices, highlighting presence of distractive elements. This finding suggests that although self-reported compliance appears relatively high, distraction remains a critical factor, bringing to light the larger issue of attention management while driving.

A key insight emerging from these findings points to compliance being influenced more by perceived monitoring rather than being internalized. While deterrence mechanisms influence human conduct, sustained behavioural conditioning is equally required to achieve greater road safety outcomes, even in low enforcement situations. These findings reinforce the earlier conclusion that behavioural preparedness, rather than infrastructure alone, remains central to road safety outcomes.

## 5.2.4 Safety Awareness, Preparedness and Support for Training Reform

Having examined behavioural violations and compliance patterns in the previous section, this section aims to focus on safety awareness, preparedness, and attitudes toward continued driver training among respondents.

Strong basic safety awareness stood out strongly amongst the survey respondents. 86.84% reported using protective gear such as seatbelts or helmets consistently. 71.05% highlighted being aware of penalties related to over speeding and non-use of protective gear. Moreover, around 94% of respondents indicated that they would take appropriate action, in case of a road accident, either by checking for injuries first (55.26%) or immediately contacting authorities and emergency services (39.47%).

The findings reveal the respondents' familiarity with core safety requirements, including usage of protective gear, penalty structures, and basic emergency response protocols. However, earlier sections contrastingly highlighted patterns of non-compliance of traffic rules such as adherence to signals speed regulations, particularly under conditions of low perceived enforcement or traffic density. This divergence clearly signals that cognitive awareness of rules does not necessarily translate into consistent behavioural compliance. This bridge between knowledge and practice highlights the importance of sustained behaviour-based trainings.

The most significant structural finding relates to training continuity. While licensing coverage is high, 92.11% of respondents reported that they have not received any refresher or advanced training after obtaining their licence. At the same time, the findings reveal substantial support from the respondents for strengthening the licensing framework. **89.47% favour more rigorous driving licence examinations, and 78.95% support mandatory refresher training after a defined period.**

This combination of baseline awareness, inconsistent compliance patterns, and strong support for stricter training standards points toward a deep systemic bottleneck. **The issue appears not to be absence of laws or basic knowledge, but the absence of sustained competency reinforcement within the driver licensing ecosystem.**

### **5.2.5** Survey Conclusion

Taken together, the primary survey findings reveal coherence in the behavioural profile. While licensing coverage and baseline safety awareness among respondents are relatively high, behavioural factors account for a majority share of perceived accident causes.

Moreover, compliance patterns appear situational, shaped more by enforcement conditions, rather than human conditioning. At the same time, respondents exhibit an overwhelming support for rigorous testing and periodic refresher requirements, together highlighting the need for renewed focus on "Trainings" as a critical dimension of road safety.



A traffic cone with orange and white reflective stripes stands in the foreground. The background shows a building with a grid-like facade, possibly a parking garage or industrial structure, under a dim, overcast sky.

06

**Impact of Driver  
Training within  
the Licensing  
System on Road  
Safety**

The preceding analysis highlights a structural imbalance within India's road safety ecosystem where high levels of licence issuance coexist with uneven depth of structured driver preparation and persistent behavioural risk. These patterns raise a critical institutional question. **To what extent does the quality of driver training within the licensing framework shape road safety outcomes?**

Licensing is not merely an administrative gateway to vehicle operation. Instead, it is the process at which a driver's understanding of road behaviour, decision-making ability, and awareness of risks must be systematically assessed through well-designed training and evaluation mechanisms. The effectiveness of this process has a direct impact on the driver's behaviour on the road, how they managed the risk and how safety practices evolve over time.

This section focuses on the role of structured driver training and its impact on road safety from behavioural, economic, and lifecycle perspectives. It **highlights the importance of training at the point of licence issuance, not merely for examination purposes, but as a foundation for safer road practices.**

## 6.1 Dimensions of the Safety Impact of Driver Training

The influence of structured driver training is examined here in a more granular manner. Rather than treating training related licensing reform as a single intervention, this section analyses how formal training shapes safety outcomes across different domains of the driving system.

By isolating these dimensions, the discussion provides a clearer understanding of the broader implications of strengthening driver training within the licensing architecture.

### 6.1.1 Formal Training and Licensing Outcomes

The strength of a licensing system not only depends on testing procedures but also on whether drivers undergo structured and formal training prior to certification. Licensing frameworks which include mandatory instruction, supervised practice, and defined curriculum standards ensures that licence issuance reflects prior preparation rather than procedural clearance.



Various road safety research indicates that structured driver education improves rule comprehension, operational preparedness, and risk awareness among novice drivers [9][10]. Also, evaluations of graduated and competency-based licensing systems further suggest that structured entry-stage preparation contributes to safer driving behaviour, particularly during the early period of driving.

In Indian context the Transportation Research and Injury Prevention Programme (TRIIPP), IIT Delhi [11], has highlighted that compliance sustainability depends on systematic prior education rather than solely dependent on enforcement mechanisms. Also, where training is informal and examination-focused, behavioural discipline tends to fluctuate with enforcement visibility.

The findings from our primary survey presented earlier reflect this gap. A significant number of respondents reported receiving no formal training before obtaining their licence. Also, post-licensing refresher training were not provided to them. At the same time, majority expressed their support for stricter driving testing standards and willingness for refresher training. This combination of limited formal preparation and strong reform receptiveness suggests that drivers themselves recognise the value of structured training continuity.

Taken together, the literature and survey evidence indicate that formal training rigor, both at entry and through periodic reinforcement is a central institutional lever for improving road safety outcomes. Licensing systems that integrate structured preparation and sustained skill reinforcement are more likely to produce durable

compliance than systems reliant primarily on post-facto enforcement.



## 6.1.2 Economic Significance of Formal Driver Training

The macroeconomic burden of road traffic injuries in India, estimated at nearly 3% of GDP annually [12], underscores the economic stakes of preventive safety interventions. Much of this burden arises from post-crash medical care, productivity loss, and enforcement administration. The scale of loss shows that road safety is not only a transport or public health concern, but a macroeconomic issue.

The primary survey findings indicate that compliance is increases when enforcement is visible, suggesting that behavioural discipline is not uniformly internalised. Where formal training prior to certification is limited, sustained compliance requires continuous monitoring and corrective enforcement.

This dynamic increases institutional expenditure and shifts safety management toward reactive correction rather than preventive preparation

Strengthening formal driver training before licence issuance alters this economic equation. By embedding structured preparation and competency validation at entry, the licensing system moderates risk formation upstream. This reduces reliance on enforcement-intensive compliance and contributes to long-term cost containment within the broader road safety framework.



International road safety assessments, including World Bank reviews, have recognised driver training and licensing reform as cost-efficient components of comprehensive safety strategies when implemented with institutional consistency [13]. The economic rationale for training reform therefore rests not on speculative projections, but on its preventive character and its ability to moderate systemic risk before it materialises into fiscal and social costs.

In this sense, formal driver training is not only a behavioural necessity but also an economically prudent intervention within India's road safety architecture.

### **6.1.3** Early-Stage Driver Training as a Risk Stabilisation Mechanism

Road traffic fatalities in India are disproportionately concentrated among individuals in the 18-34 age group [14]. This demographic corresponds to drivers in the early years of independent mobility, when exposure levels increase rapidly due to employment, education, and urban commuting patterns.

Crash vulnerability at this stage reflects not only behavioural tendencies but also the quality of initial preparation prior to independent driving. Findings from the primary survey indicate that entry-stage training is frequently limited in duration and often focused primarily on basic vehicle handling and test clearance rather than real-world traffic complexity. Critical components such as anticipation of hazard, defensive driving technique, and structured



emergency response were not uniformly embedded within training exposure.

When new drivers move from short-duration or test-oriented preparation into high-exposure environments, the gap between formal certification and practical readiness can increase the risk. Unlike experienced drivers whose behavioural judgement may have stabilised over time, new entrants rely heavily on the quality of foundation training received at the licensing stage.

From a public safety perspective, targeting entry-stage drivers is strategically significant because demographic concentration of fatalities overlaps with the period of highest mobility expansion. Licensing reform, therefore, serves as a preventive stabilisation mechanism during the most exposure-intensive phase of a driver's lifecycle.

## 6.2

### Strengthening Training and Capacity Building: Policy and Comparative Insights

The primary survey results discussed above indicate a structural gap, wherein a high proportion of the population indicates awareness of traffic norms and consistent usage of seatbelts/helmets, but the actual instances of signal jumping, using a mobile phone while driving, and inconsistent usage of seatbelts/helmets indicate a high rate of violations. Secondly, the responses indicate a varied exposure to formal training for drivers prior to the issuance of a license. It appears that many drivers were exposed to informal training rather than formal ones.



## 6.2.1 Domestic Context and Training Gaps

The changes introduced in the Indian context have primarily been aimed at ensuring the integrity of the test process, including the installation of automated test tracks in some states. Although the changes introduced a greater degree of transparency to the test process, the increased failure rate under the standardized test process indicates a problem with the foundational development of the test takers. However, the evidence provided by the responses to the survey indicates that the problem lies not with the process of testing but rather with the quality of training provided to the test takers.

In the current context, no national mandate exists that requires a minimum level of practical training to be provided to all test applicants. Such a move would potentially help to improve the levels of preparedness among test takers, which would enable a greater degree of defensive driving to become an integral part of the mindset of the drivers.

## 6.2.2 International Training-Centric Models

Global experience shows that countries that have a formal and compulsory pre-licence training structure are more likely to achieve a more consistent level of competence.

In Sweden, learner drivers are required to undergo a minimum of 15-20 hours of formal instruction combined with private practice under the guidance of a supervisor and risk awareness courses prior to being issued a full licence.



- In the **European Union**, the European Parliament adopted a directive on driving instruction, 2006/126/EC, which enables EU countries to make their own regulations regarding minimum training requirements for learner drivers prior to taking a driving test.
- In **Germany**, learner drivers are required to undergo a minimum of 14 double period lessons of theoretical instruction and a minimum of 12 special practical lessons on highway driving, night driving, and rural driving prior to being eligible to take a driving test.
- In **Japan**, learner drivers are required to undergo a minimum of 26-34 hours of practical driving instruction and a further 26 hours of classroom instruction through a certified driving school prior to being eligible to take a driving test for a standard passenger car licence.
- The **Singaporean** learner has to undergo around 20-25 structured hours of practical driving, along with other essential theory and simulator training before the final practical driving test.
- In **Ontario, Canada**, the approved driver education programmes have a minimum requirement of 20 hours of classroom instruction and 10 hours of in-vehicle driver education, along with a graduated system for supervised driving.
- **New Zealand** has additional structured learning for its drivers in the form of defensive driving and refresher courses, which include behavioural correction and anticipation.

In all these countries, the link between licensing and training exposure, instruction, and delivery is direct, with testing acting only as a validation process and training being the main driver for competency development.





07

**Reforms within  
the Training  
and Licensing  
ecosystem**

Enhancing road safety requires stronger driver training and licensing system, where holding a licence reflects real driving ability and preparedness, rather than just meeting procedural requirements. Under the current framework, training pathways are not uniform across licence categories. For commercial vehicle licences, structured instruction through authorised driving schools and certification under the Central Motor Vehicles Rules is an established requirement prior to licensing. In contrast, for private licence applicants, while accredited training institutions exist, formal pre-licensing training is not uniformly mandated nationwide.

Drawing on the analysis of accident trends, behavioural patterns, and findings from the primary survey, the following recommendations focus on strengthening structured driver preparation and reinforcing behavioural compliance across the driving lifecycle through short, medium, and long-term reforms within the training and licensing ecosystem.

## 7.1

### Short-Term Priorities: Immediate Strengthening of Driver Training

These reforms within the driver training ecosystem represent high-impact interventions that can be taken and implemented without requiring major legislative changes or institutional restructuring. These measures act as quick risk stabilisers by strengthening behavioural preparedness of drivers at the point of certification.

The following short-term priorities focus on improving training quality, consistency, and relevance within the existing licensing framework, addressing behavioural issues that directly influence road safety outcomes.



### 7.1.1 Introduced a Competency-Based Training Framework

The primary survey revealed significant variation in training exposure, including short-duration preparation and limited clarity in practical driving situations such as defensive manoeuvring and risk anticipation. These findings indicate that while regulatory provisions for driving schools exist under the Central Motor Vehicles Rules, implementation lacks uniform behavioural benchmarks across states.

It is therefore recommended that the Ministry of Road Transport and Highways notify a competency-aligned national training standard under existing rule-making powers. This standard should clearly specify mandatory skill domains and measurable proficiency requirements that must be demonstrated prior to licence eligibility, with licensing tests explicitly aligned to these benchmarks.

Such notification-based standardisation can be undertaken within the current regulatory framework and would directly respond to the preparedness gaps identified in the primary survey.

### 7.1.2 Mandate Minimum Training Hours Prior to Licensing

While elements of structured instruction exist within India's licensing framework, there is no uniformly enforced minimum supervised training benchmark applicable across all licence categories prior to certification. The primary survey reflects variability in training duration, with 44.74% of respondents reporting less than one month of instruction before licensing.

International licensing systems particularly graduated licensing models in countries such as Australia and Canada require documented minimum supervised driving exposure prior to independent certification. Establishing a defined minimum structured training threshold in India, specifying baseline supervised theory and practical hours before eligibility for testing, would align certification with documented preparation standards.

Such a measure would enhance uniformity in foundational skill development and strengthen behavioural readiness at the point of licensing without requiring major institutional restructuring.



### 7.1.3 Integrate School & Community-Based Road Safety Education & Training

Behavioural change begins well before formal licensing. To improve and strengthen the quality of students entering the driving ecosystem, structured road safety education should be formally introduced within curriculum at school level.

While the primary survey reflects basic awareness among the respondents, it also reveals that there is variability in rule comprehension and preparedness, suggesting that exposure to structured road education is not uniform.

Introducing road safety modules at early stage such as understanding of traffic signage, lane concept, penalty norms etc can help to build the familiarity and risk awareness before individuals begins the formal licensing process. Such early exposure strengthens the quality of individuals entering driver training programmes, enabling more effective skill development at the certification stage.

Community partnerships with local resident associations, NGOs, and training schools can further strength these modules through periodic outreach and refresher engagements. This kind of early pre-licensing conditioning would act a as a foundation support layer that complements formal driver training at the certification stage, strengthening behavioural readiness across the driving lifecycle.



## 7.2

### Medium-Term Priorities: Licensing System Reform

Medium-term reforms deal with the improving and strengthening existing system and bringing uniformity across training and certification processes. It will help to enhance the quality of training and assessment framework.

Such interventions can improve driver competency and support more consistent adherence to road safety practices. These are the systemic reform of licensing architecture which is necessary to ensure that licence possession reflects verified competency rather than procedural eligibility.

#### 7.2.1 Strengthen Licensing Architecture through Graduated and Periodic Certification

In India, current licensing framework largely based on the certification which as a single-point identity and validation of driving capability, with limited mechanisms for staged skill development prior to full licensing or structured competency reinforcement thereafter.

As a result, licence issuance often functions as a procedural gateway to vehicle operation rather than part of a continuous competency-based system.

Introducing a graduated licensing structure can help and strengthen existing licensing system by allowing individuals to move through defined stages before obtaining permanent driving licenses. At every stage

they would be required to gain driving knowledge and showcase their skills prior to permanent driving licenses. This graduated licensing approach would enable new individual drivers to collect on ground practical experience and align licensing more closely with demonstrated driving capability rather than reliance on a one-time test. In addition to this, the licence renewal process should also include periodic checks and assessment of driving skills and knowledge to ensure continued preparedness among drivers. The findings from the primary survey indicates that 90.91% of respondents had not undertaken any refresher or advanced training after getting their permanent licence, indicating that there is very less focus on post-certification skill reinforcement.

Currently, renewal of driving licences for non-transport vehicles is mostly administrative process and often handled through digital systems such as Parivahan Sewa that verify documentation but do not evaluate driver competency and ability. Introducing periodic reassessment or refresher learning requirements at fixed intervals can help ensure that licence validity reflects sustained preparedness rather than permanent entitlement.

#### 7.2.2 Strengthen Implementation and Oversight of Driving School Standards

There are regulatory provisions already exist under the Central Motor Vehicles Rules, which prescribe basic requirements relating to training facilities, instructors, and infrastructure for governing recognised driving schools. However, implementation and monitoring of this regulatory provision is not uniform across states. The findings from the primary survey reflected inconsistency is,

where 44.74% of respondents reported receiving less than one month of training before obtaining a licence, highlighting considerable variation in how training programmes are actually delivered.

To overcome this, the Central Ministry, along with state transport departments, should strengthen driving schools by implementing clearer compliance mechanisms and conducting periodic audits. There should also be stronger focus on maintaining verifiable training records and ensuring that recognised institutions adhere to prescribed infrastructure, instructor qualification, and practical training requirements.

Improving regulatory enforcement and transparency within the driving school ecosystem would help ensure that driver training is delivered through consistent and accountable institutional arrangements, thereby strengthening the quality of preparation among licence applicants across states.

### **7.2.3 Levering Technology for Stricter Implementation and Actions**

The primary survey indicates that unsafe driving behaviour are quite common among road users. This includes not wearing helmets or seatbelts, using mobile phones while driving, and jumping signals when traffic is low. At the same time, these violations often overlooked or attract only minor penalties reducing their impact as a deterrent. This indicates that there is need for strengthen enforcement mechanisms supported by use of technology.



Digital technologies can make enforcement transparent, consistent, and free from manual interventions.

Some potential measures could include automated systems to detect traffic violations, integration of enforcement databases with vehicle and driver records, and digitally enabled penalties for serious offences such as rash driving, drunk driving, or driving without a valid licence. For example, enforcement actions may include temporary suspension of licences, digital restrictions linked to vehicle identifiers such as FASTag, increase in vehicle, and prohibition of few essential citizen services like Passports, Aadhar related services on reaching high risk thresholds, insurance premium or mandatory corrective measures such as community service or safety awareness programmes.

Technology can play an important role in improving and strengthening the driver training and testing ecosystem. Tools such as automated driving test tracks, AI-based behavioural assessment, and digital logging and tracking of training hours. Integrating these with existing government mobility platforms can also help in delivering refresher training and road safety awareness content more effectively.

Additionally, publishing anonymised centre-wise testing outcomes and pass rates through public dashboards could enhance transparency and encourage higher standards among training institutions.



## 7.3

### Long-Term Priorities: Sustained Behavioural Change and Governance Reform

Institutional strengthening, policy alignment, and capacity development are some of the long-term interventions that are necessary in reforming the driver training system.

The areas to be targeted include adopting competency-based driver training programs, enforcing regulations, and adopting technologically driven evaluation mechanisms. Eventually, these will lead to institutionalising the high standards of competence among drivers.

#### 7.3.1 Data-Driven Training & Risk Monitoring

In the long run, the process of governance towards road safety should include the use of systematic analyses of data on accidents, licensing practices, and traffic violations. Currently, crash and licensing information is mainly utilized in statistical analysis without being linked to driver training or decision-making processes related to training.

The first step in solving this problem should involve creating an organization that will consolidate and analyse data that is concerning accidents, violations, licensing, and enforcement practices within different states. Hence, there needs a reason for establishing a National Driver Behaviour Observatory under the Ministry of Road Transport in association with State Authorities and Highways

This organization will be pivotal in the identification of possible trends in behaviour that could lead to accidents on the roads, such as speeding, driving while distracted, ignoring traffic lights, or making dangerous manoeuvres.

Based on the results of the analysis performed by such an organization, one will be able to introduce necessary changes to the training curriculum and conduct additional training for problematic driver populations.

Additionally, findings from National Driver Behaviour Observatory may be used for improving road design and traffic management and even collaborating with car manufacturers and safety technology producers in order to develop better warning systems

#### 7.3.2 Behaviour-Linked Telematics and Vehicle Safety Monitoring

Long-term solutions include the adoption of telematics programs by the Government of India based on driver behaviour that provide driver safety ratings by analysing data from either the vehicle itself or the smartphone regarding speed limit violations, hard braking, and distracted driving. The UK and US Governments have adopted such programs through telematics-based insurance schemes, where good driver behaviour translates into tangible benefits like reduced premiums.

For India, such programs can be integrated with the driver training program and allow drivers to obtain their behavioural ratings following their certification and tie safe-driving ratings to refresher courses or safe-driver incentives

A second significant aspect that can enhance the safety measures of vehicles concerns vehicle conditions. The survey indicated that as much as 39.47% of the respondents consider only critical components of the vehicle, such as brakes, tires, and lights, as needed. Telematic systems incorporated in new vehicles can identify any possible faults in the vehicle's system and notify the drivers through dashboards and/or mobile applications even before such faults pose risks to motorists on the roads.

In cases where older vehicles are involved without built-in monitoring systems, the transportation agency should adopt a risk-based approach that involves subjecting older vehicles to intensive tests for roadworthiness. This kind of policy is adopted in Japan. The state's department of transportation could identify those vehicles which have crossed a particular threshold age and make them undergo inspections or get their maintenance certificate before they can be renewed with a license or run on roads.

This combination of monitoring of the driving behaviour of the driver and the alerts provided about the condition of the vehicle could be helpful in extending the driver training beyond the issuing of the license.





08

**Conclusion:**

From Preventable  
Tragedy to Evidence-  
Based Reform

It is evident from the analysis above that road safety in India is tragic and preventable, rather than an outcome of rising mobility. Thousands of driving licenses are granted each year in India; however, the quality and rigor of training is not uniform. Drawing from the experience of national trends in accident rates, the practices adopted by countries around the world, and the results of the initial survey, it can be seen that licensing procedures in India are merely a formality and lack credibility in proving the ability of drivers. The remedy for this issue lies in the adoption of evidence-based reforms involving the development of structured training programs during the licensing process and behavioural preparedness throughout the drivers' journey.

Not only would such a shift aid in minimizing the chances of accidents and fatalities, but it would also reinforce the legitimacy and effectiveness of road safety institutions. It can thus be argued that, for success in enhancing road safety, a different perspective on the issue of driver preparation is required, as highlighted by the main premise in this report



A person is working at a desk. In the background, a laptop is open, and their hands are typing on the keyboard. In the foreground, there are several documents. One document has a blue and green geometric logo. Another document is being written on with a silver pen. There are also some sticky notes on the desk. The overall scene is dimly lit with a warm, brownish-orange tint.

09

**Annexure**

## 9.1 Research Methodology

The research method for this project involves exploratory techniques using a combination of secondary literature and primary surveying alongside consultation from key stakeholders. Given the complex and multi-faceted nature of road safety, the research methods were chosen to provide insight from the grassroots perspective regarding the readiness of drivers, efficiency of licensing procedures, and quality of training programs. It should be clarified at this point that this research does not seek to generate statistically generalizable results but rather informed observations.

The research model for this study will centre on the assumption that increased competency-based driver training and licensing procedures can have an impact on behavioural compliance

### 9.1.1 Secondary Research

During the process of data collection for this research, two major sources of data were used: primary and secondary research. The secondary source of information served as the basis of analysis of this study, and its purpose was as follows

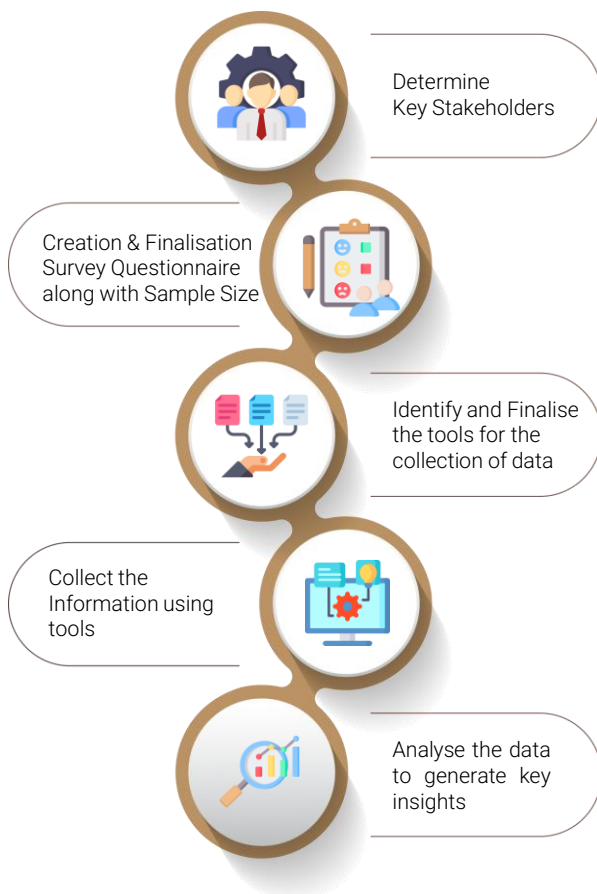
- To get primary understanding of the trend of road accidents in India, considering accident statistics, mortality figures, risky behaviour, and reasons.
- To assess existing policies, and foreign experience regarding driver training programs
- To recognize any deficiencies in current driver training initiatives
- To develop primary data gathering methods



## 9.1.2 Primary Research

Primary research was undertaken to supplement findings from secondary research with stakeholder perspectives and experiential insights. The objective was to understand behavioural patterns, training exposure, and perceptions regarding licensing system.

Also, this study relied on primary data collected from various stakeholders to get diverse perspectives. The methodology that was adopted for primary research involved the following steps



The primary research included:

- Structured surveys administered to drivers.
- Focus Group Discussions (FGDs) with drivers and road users.
- Key Informant Interviews (KIIs) with officials and practitioners involved in licensing, enforcement, and road safety advocacy.

The study does not claim national representativeness; instead, it seeks to generate indicative patterns and recurring themes that may inform policy refinement.

## 9.1.3 Indicators to Assess Research Outcomes

The research examines the relationship between structured driver training, licensing rigor, and indicators of behavioural readiness, which are widely recognised as intermediate determinants of road safety outcomes. The study assesses outcomes across the following dimensions:

### Training Exposure

- Whether respondents underwent formal driver training prior to licensing
- Duration and nature of training received

### Knowledge and Rule Awareness

- Understanding of traffic signs, speed regulations, and safety mandates
- Awareness of defensive driving practices

### Behavioural Compliance Tendencies

- Self-reported adherence to traffic norms
- Propensity toward speeding, distraction, or risk-taking behaviour

#### Perceived Effectiveness of Licensing Tests

- Views on adequacy of theoretical and practical assessments
- Perceptions of objectivity and rigor in testing

The study does not measure direct accident reduction outcomes. Instead, it evaluates behavioural readiness and systemic preparedness as intermediate variables associated with road safety performance.



### 9.1.4 Stakeholders of the Study

The following major stakeholders are considered to get diverse perspectives:

| S. No | Stakeholder Group                                   | Rationale   |
|-------|---|---|
| 1.    | General Drivers (LMV, MCWG)                         | Experience on licensing process, Knowledge, Awareness, Training and Education |
| 2.    | Commercial Drivers (LMV-TR, HMV)                    |   |
| 3.    | NGOs working in Road Safety                         | Tools and Methods used for awareness creation, training and Education         |
| 4.    | RTO Officials, Traffic Police, Motor Driving School | Policy implementation and regulatory perspective                              |

*Table 1: Stakeholders identified for the purpose of the study*

### 9.1.5 Determination of Sampling Size and Sampling Method for the Primary Survey

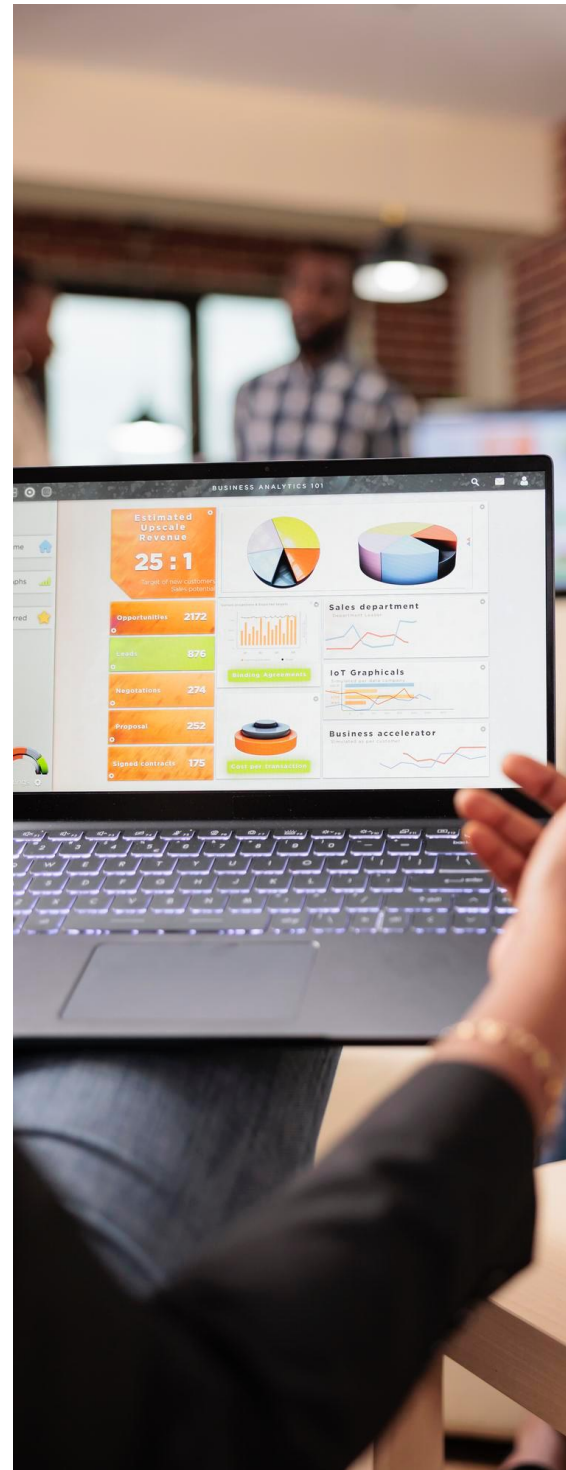
For the selection of states for driver survey component, four contextual parameters were considered to ensure diversity in exposure and risk:

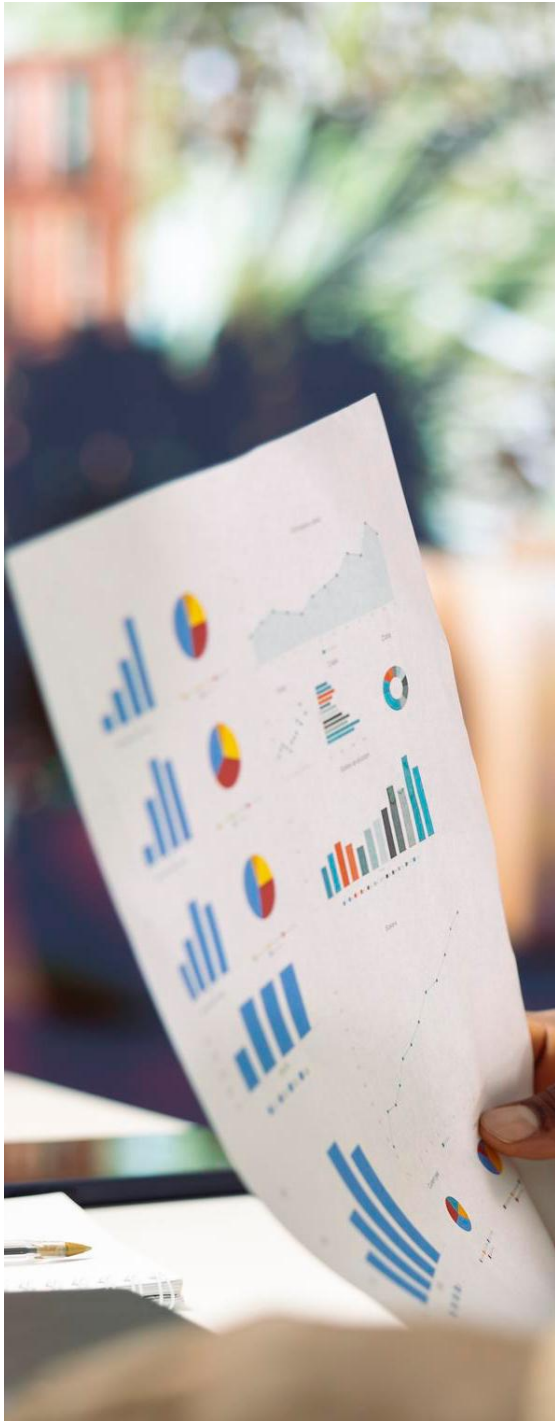
- Population as per Census 2011
- Average number of accidents during 2018–2022
- Number of fatalities due to accidents
- Total registered vehicles as of mid-2023

Each parameter was assigned equal weight to generate a composite score and guide proportional allocation of respondents across states. This framework was designed to ensure representation across varying demographic and accident-risk profiles.

However, due to response constraints and field-level limitations, the achieved sample did not fully meet the initially targeted proportional distribution. The primary survey covered 38 respondents across multiple states, representing urban, semi-urban, and rural contexts.

A purposive sampling was used for officials, NGOs, and driving school representatives to obtain informed institutional perspectives





Given the limited sample size and response variability across states, the dataset is exploratory in nature and does not statistically represent India's driver population. It is intended to identify recurring behavioural and institutional patterns rather than establish nationally generalisable estimates

### **9.1.6** Tools and Technique for the collection of data

The following tools and techniques were used for the collection of primary data for the study -

- **Surveys (Online + Offline):** with the help of Google forms, survey monkey, online surveys.
- **Focus Group Discussions:** Group Interviews, discussions with Drivers and citizens.
- **Key Informant:** Interviews/one on discussions with RTO officials, Police personnel, traffic police and key organizations involved in awareness generation or spread of education.
- **Observational Research:** Of big cities across all states of India with the help of primary as well as secondary sources.
- **Secondary Data Review:** Reports & Indices published by Central & state government, Insurance companies, police records, previously conducted research.

## 9.1.7 Limitations of the Study

The first part of the survey consists of 38 participants from different states and different groups of drivers. Although every effort was made to make the survey geographically diverse, the number is too small to draw conclusions that can be considered nationally representative.

The self-reporting nature of the survey is vulnerable to possible effects such as memory constraints and social desirability.

Disparities in the quality, completeness, and timeliness of secondary data may complicate comparison of certain indicators.

In conclusion, this study focuses on intermediate indicators of road safety in terms of behavioural and institutional readiness. The study does not investigate any longer term results in terms of accident prevention or causality between reforms in trainings and accidents.

### *Glossary*

| S. No | Acronym | Full Form                          |
|-------|---------|------------------------------------|
| 1.    | GDP     | Gross Domestic Product             |
| 2.    | SDGs    | Sustainable Development Goals      |
| 3.    | UN      | United Nations                     |
| 4.    | WHO     | World Health Organization          |
| 5.    | MV Act  | Motor Vehicles Act                 |
| 6.    | MVA Act | Motor Vehicles (Amendment) Act     |
| 7.    | CMVR    | Central Motor Vehicles Rules       |
| 8.    | RTO     | Regional Transport Offices         |
| 9.    | CCTV    | Closed-Circuit Television          |
| 10.   | ADTCs   | Accredited Driver Training Centres |

| S. No | Acronym | Full Form  |
|-------|---------|--|
| 11.   | COVID   | Corona Virus Disease                                     |
| 12.   | TRIPP   | Transportation, Research and Injury Prevention Programme |
| 13.   | IIT     | Indian Institute of Technology                           |
| 14.   | EU      | European Union   |
| 15.   | NGOs    | Non-Governmental Organizations                           |
| 16.   | AI      | Artificial Intelligence                                  |
| 17.   | FGDs    | Focused Group Discussions                                |
| 18.   | LMV     | Light Motor Vehicle                                      |
| 19.   | MCWG    | Motorcycle With Gear                                     |
| 20.   | LMV-TR  | Light Motor Vehicle (Transport)                          |
| 21.   | HMV     | Heavy Motor Vehicle                                      |

# References

1. World Health Organization. (2023). Global status report on road safety 2023. WHO. <https://www.who.int/teams/social-determinants-of-health/safety-and-mobility/global-status-report-on-road-safety-2023>
2. <https://www.ndtv.com/india-news/462-people-died-in-road-accidents-in-india-every-day-this-state-tops-list-7654809>
3. <https://vishwakhabar.com/private-to-commercial-driving-licence-conversion/>
4. <https://timesofindia.indiatimes.com/city/delhi/crackdown-on-motor-driving-schools-for-irregularities/articleshow/69087869.cms?>
5. Scott V. Masten, & Robert D. Foss. (2010). Long-term effectiveness of graduated driver licensing. *Journal of Safety Research*
6. <https://www.thedailyjagran.com/opinion/a-licence-not-a-skill-the-fatal-flaw-in-indias-road-safety-strategy-10231827>
7. <https://analytics.parivahan.gov.in/analytics/>
8. Ministry of Road Transport and Highways. Road accidents in India – 2023. Government of India. <https://morth.nic.in/sites/default/files/Road-Accident-in-India-2023-Publications.pdf>
9. Peden, M., et al. (Eds.). (2004). *World Report on Road Traffic Injury Prevention*. Geneva: World Health Organization. <https://www.who.int/publications/i/item/world-report-on-road-traffic-injury-prevention>
10. Christie, R. (2001). *The effectiveness of driver training as a road safety measure: A review of the literature*. Report No. 01/03. Victoria, Australia: Royal Automobile Club of Victoria.
11. Goel, R., & Mohan, D. (2017). Effectiveness of enforcement in preventing road traffic injuries. In D. Mohan & G. Tiwari (Eds.), *Traffic Safety and Road Conditions in India*. Transportation Research and Injury Prevention Programme (TRIPP), IIT Delhi. Working Paper Series.
12. <https://www.thehindu.com/news/national/india-losing-3-of-gdp-annually-due-to-road-accidents-gadkari/article69372892.ece>
13. World Bank. (2017). *The High Toll of Traffic Injuries: Unacceptable and Preventable*. Washington, DC: World Bank. <https://www.globalroadsafetyfacility.org/sites/default/files/202310/The%20High%20Toll%20of%20Traffic%20Injuries%20Unacceptable%20and%20Preventable.pdf>
14. 14. Ministry of Road Transport and Highways (MoRTH), Government of India. (2023). *Road Accidents in India – 2022. Annual Report*. <https://morth.nic.in/road-accident-in-india>

## Authors & Contributors



**Aarti Harbhajanka**  
Co-Founder & Managing Director



**Manoj Kurbet**  
Vice President



**Pankaj Shukla**  
Assistant Vice President



**Animesh Mishra**  
Manager



**Shaivya Harit**  
Manager



**Rhythm Mathur**  
Senior Consultant

## Design



**Parul Kataria**  
Consultant



**Shriya Uppal**  
Associate

### ***Disclaimer***

*The report is prepared using information of a general nature and is not intended to address the circumstances of any particular individual or entity. The report has been prepared from various public sources and the information received from these sources is believed to be reliable.*

*The information available in the report is selective and subject to updation, revision and amendment. While the information provided herein is believed to be accurate and reliable, Primus Partners Private Limited does not make any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and data available in the public domain.*

*While due care has been taken while preparing the report, Primus Partners Private Limited does not accept any liability whatsoever, for any direct or consequential loss arising from this document or its contents. We do not claim ownership over the images used in this document.*

# PRIMUS

## PASSION

for providing solutions to help clients achieve their goals

## RESPECT

for all and alternate viewpoints

## INTEGRITY

of thoughts and actions

## MASTERY

of our chosen subject to drive innovative and insightful solutions

## US

representing the Primus collective, where each individual matters

## STEWARDSHIP

for building a better tomorrow



## PRIMUS PARTNERS®

Solutions for Tomorrow

Primus Partners has been set up to partner with clients in 'navigating' India, by experts with decades of experience in doing so for large global firms. Set up on the principle of 'Idea Realization', it brings to bear 'experience in action'. 'Idea Realization'— a unique approach to examine futuristic ideas required for the growth of an organization or a sector or geography, from the perspective of assured on ground implementability.

Our core strength comes from our founding partners, who are goal-oriented, with extensive hands-on experience and subject-matter expertise, which is well recognized in the industry. Established by seasoned industry leaders with extensive experience in global organizations, Primus Partners boasts a team of over 250 consultants and additional advisors, showcasing some of the finest talent in the nation.

The firm has a presence across multiple cities in India, as well as Dubai, UAE. In addition, the firm has successfully executed projects across Africa, Asia Pacific and the Americas.

### India Offices



#### Bengaluru

91 Springboard  
Business Hub 175, 176  
Bannerghatta Rd,  
Dollars Colony,  
Bengaluru – 560076



#### Chandigarh

4th Floor, Netsmartz,  
Plot No. 10, Rajiv  
Gandhi Chandigarh  
Technology Park,  
Chandigarh – 160019



#### Chennai

147, Pathari Rd, Door #3,  
WorkEz Hansa Building,  
RK Swamy Centre,  
Thousand Lights,  
Chennai, TN - 600006



#### Delhi

1 to 7, UG Floor,  
Tolstoy House,  
Tolstoy Road,  
Connaught Place  
New Delhi - 110001



#### Kolkata

Collab Deck (Cabin W1021)  
Kankaria Center, 2/1 Russel  
Street, Park Street Area,  
Kolkata - 700071



#### Mumbai

156/157, 15th Floor,  
Nariman Bhavan, NCPA  
Road, Nariman Point,  
Mumbai – 400021

### International Offices



#### Dubai

United Arab Emirates  
(UAE)



#### Dammam

Kingdom of Saudi Arabia  
(KSA)



#### Washington D.C

United States of America  
(USA)

[www.primuspartners.in](http://www.primuspartners.in)

[info@primuspartners.in](mailto:info@primuspartners.in)

Primus Partners India

@partners\_primus

@primuspartners7128