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Mechanism for Implementation of Institutional Arrangement Towards the Reduction of Road Fatalities in India

Presented by

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Presentation outline

- **Background**
- **Present Institutional Mechanism in India**
- **Factors Contributing to Road Crashes**
- **Organisational Commitment at Various levels**
- **Funding Mechanism for RSA**
- **Institutional Mechanism & Decision Making Structure**
- **National Road Safety Action Plan**
- **Role of Road Safety Organization In Road Safety**
- **Business Sector Participation in Road Safety**
- **Inferences**

Background

- **Benefits that can accrue in conducting Road Safety Audit related studies**
- **However, it remains somewhat neglected area compared to total project as a whole in India.**

Background (Contd...)

Four major groups of risk factors

– Human behavior

- Excess speeding;
- Driving under influence of alcohol;
- Not using safety devices (e.g. helmets, seat belts, child restraints);

– Road factors

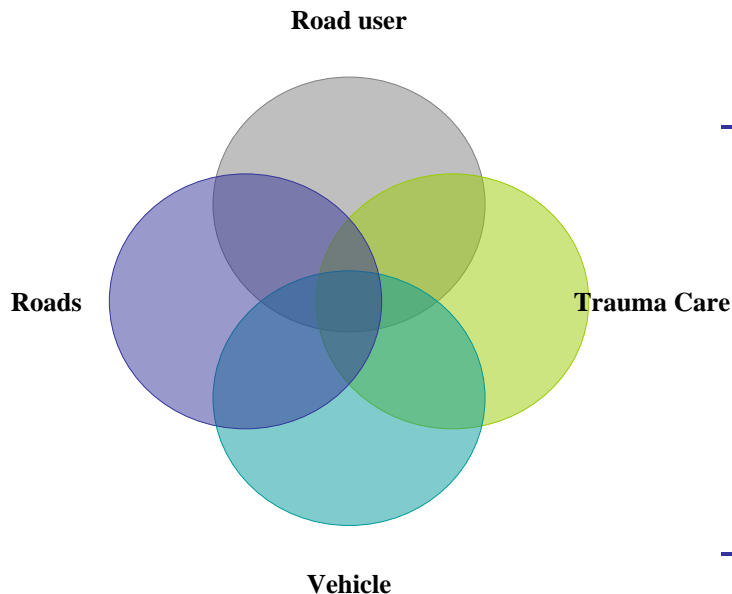
- Poor road design;
- Lack of pedestrian footpaths
- Inadequate traffic calming and signals
- Inadequate visibility

– Vehicle designs/condition

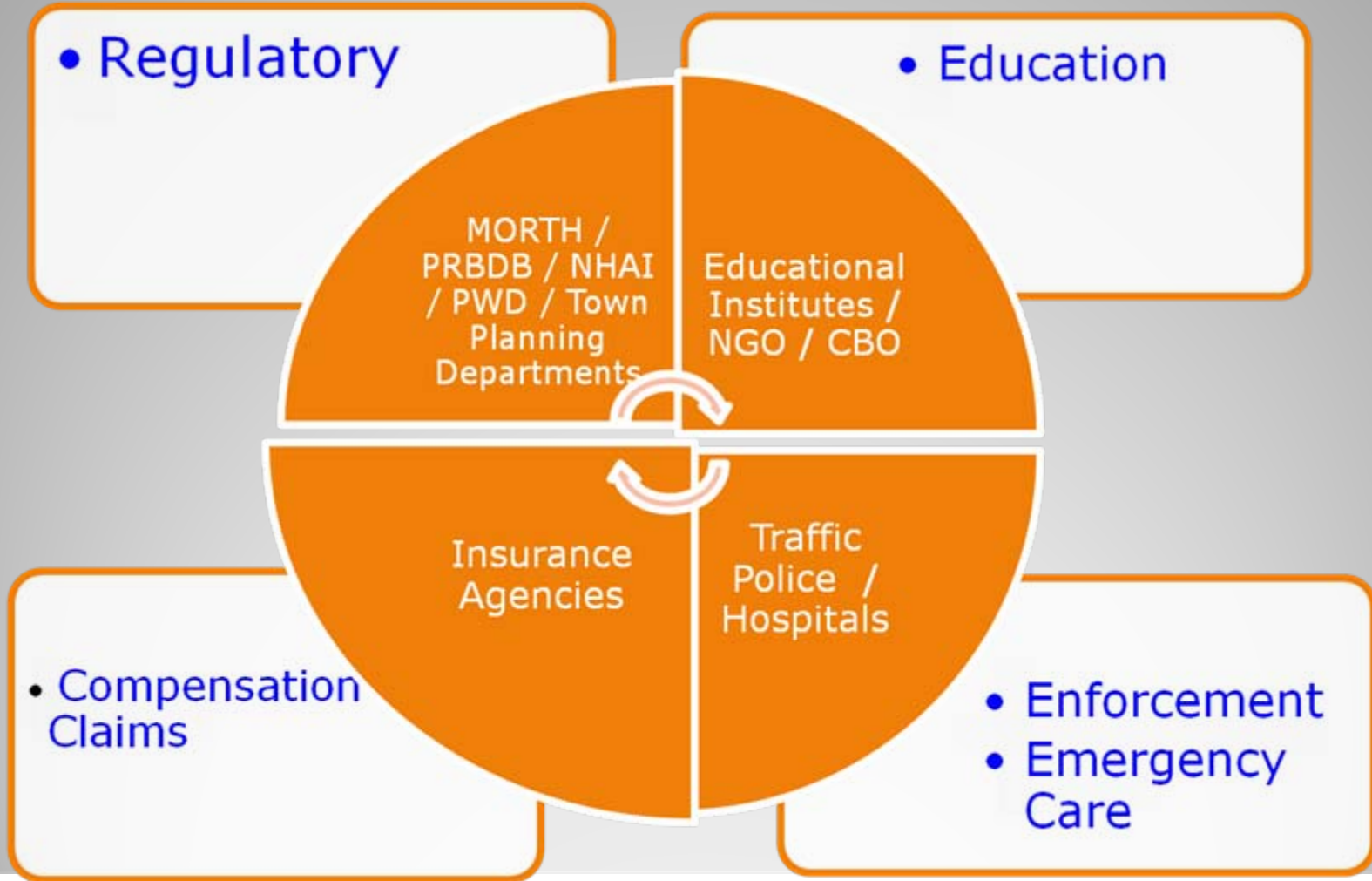
- Faulty designs and poor safety features
- Poor roadworthiness of vehicle

– Trauma care system

- Poor trauma care systems



Institutional Mechanism in Vogue India



Factors Contributing to Crash and Injury Risk

- ❑ Roadside hazards
- ❑ Narrow, unsealed shoulders
- ❑ Low-standard horizontal curves
- ❑ Undivided roads
- ❑ At-grade intersections
- ❑ Low friction pavements
- ❑ Narrow bridges and culverts with rigid, unprotected structures
- ❑ Low standard rail-road crossings
- ❑ Poor warning of and guidance through construction zones

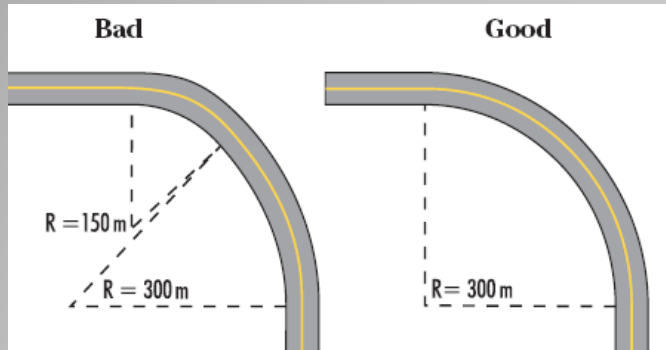


Lack of and poorly designed overtaking lanes

Areas of Influence for Engineers / Planners

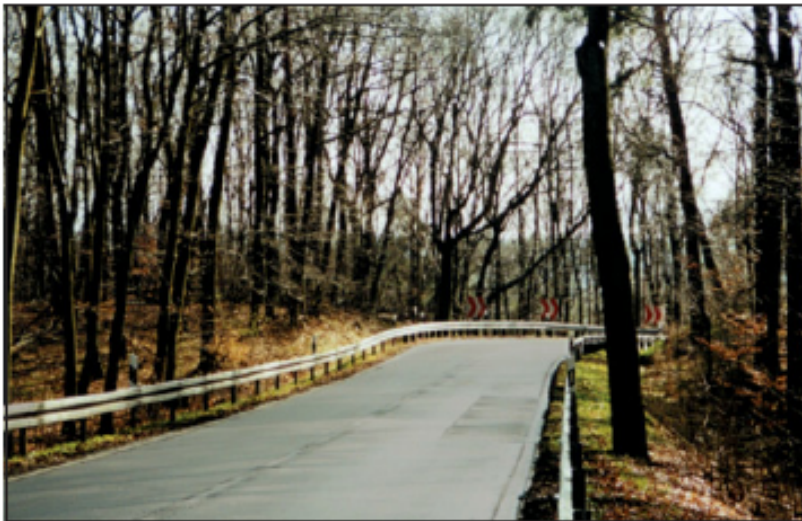
1. Influencing the ability of the driver to maintain vehicle control and identify hazards
2. Influencing the number and types of opportunities that exist for conflicts between vehicles
3. Affecting the consequences of out-of-control vehicle leaving the travel lanes by adjusting the design of the road and road networks to accommodate human characteristics and to be more 'forgiving' if an error is made
4. Affecting the behavior and attentiveness of the driver, particularly, the choice travel speed

1. Influencing the ability of the driver to maintain vehicle control and identify hazards



- significant features include lane width, alignment, sight distance, super elevation, and pavement surface characteristics

Before



Insufficient contrast between curve signs and background.

Source: Birth

After



Sign visibility has been increased by providing a yellow frame.

Source: Wartmann

2. Affecting the consequences of out-of-control vehicle leaving the travel lanes ..

Problems



Steep side slope

UNSAFE

TPL 10050

Possible Solutions/Benefits



Shallow side slope

SAFER

FBK 10050

- By adjusting the design of the road and road networks to accommodate human characteristics and to be more 'forgiving' if an error is made

Significant features include:

- shoulders width and type, edge drop,
- roadside conditions, side slopes, and
- guardrail

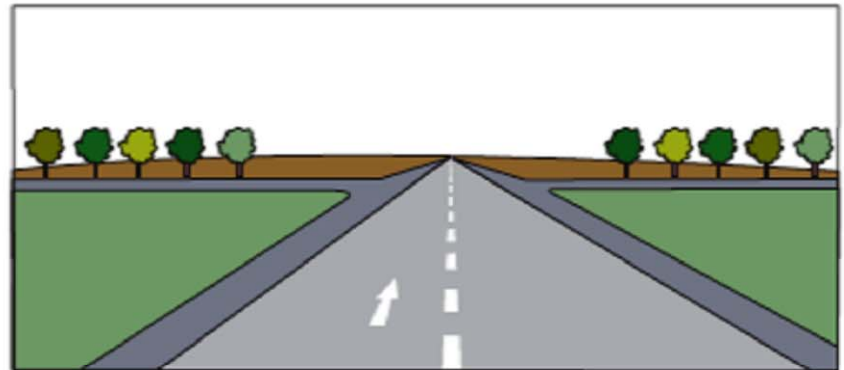
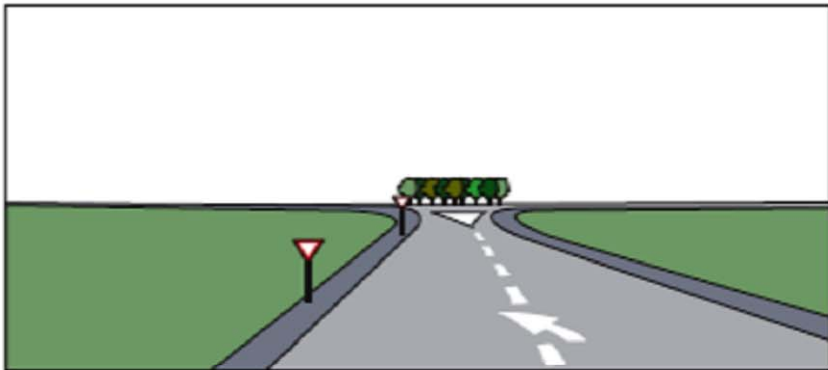
3. Affecting the consequences of out-of-control vehicle leaving the travel lanes



4. Affecting the behaviour and attentiveness of the driver ...

Infrastructure and its environment should be easily understood so that road users can quickly identify :

- where they are,
- determine which direction they must follow, and
- easily anticipate events with which they may be confronted -



... Affecting the behaviour and attentiveness of the driver

- Driver behavior is affected virtually by all the elements of the road way environment, *particularly, the choice travel speed*



Organizational Commitment at Various levels

Get Commitment from Government for Enhancing Road Safety

Road Safety as Component of Organisation's Policy and Plan

Road Safety in Organization's Plan & Develop organizational Road Safety Plan keeping in view relevant road safety strategies at National, State & Local levels

Government should make a formal commitment towards conduct of mandatory RSA studies at all stages.

Have Black Spot Treatment & RSA as Important Strategies

Accident remedial Programmes (Black Spots Identification) and routine RSA of road and traffic design as important strategies

Feedback

Organizational Commitment at Various levels (Contd..)

Create Cell to promote road safety and Nominate Persons to be Nodal Officer for RSA

Tackle Important RSA Issues and Develop Policies & Practices relevant to the Organization

Nodal Point for Road Safety and for devising RSA Studies

Get Practical Training

Get experienced Safety Auditors & conduct Pilot Projects including training w/shop sessions with them. Include managers, designers & potential auditors in this programme

Increasing awareness and cooperation of senior executives, managers and designers?
How to incorporate RSA into design or design/construction contracts?
What percentage of projects to be audited?
Who will conduct RSA?
Procedure to deal with recommendations of RSA and its feedback into designs

Use RSA to Improve Designs for Safety

Organizational Commitment at Various levels (Contd..)

Use RSA to Improve Designs for Safety

Routinely use RSA to improve designs to reduce potential hazards
Get feedback from Designers, Auditors and Project Managers.
Modify the process based on RSA experience and feedback

From Design Stage Audits to Safety Review of Existing Roads

Gain experience from design stage audits and also simultaneously conduct RSA on some of the existing roads with known hazardous locations

Feedback

Give feedback to governing body and senior executives about RSA so as to improve RSA process. Document the benefits and other experiences

Governing Body & Top Executive make a formal commitment to RSA

Funding Mechanism for RSA



General Revenue (In Most countries)

Insurance Levy (Finland, Australia, Canada etc..)

Hypothecation/Administrative Costs (a similar principle to 'the polluter pays'.) - **Some states in USA & Western Australia practice this.**

Dedicated Road Funds (New Zealand)

Based on the above, the Public sector funding for road safety can be derived from alternative sources other than general government revenues in India. These sources include:

- ✓. Levy on insurance;
- ✓. Hypothecation / Administrative Costs;
- ✓. Dedicated Road Funds

Review of Institutional Mechanism

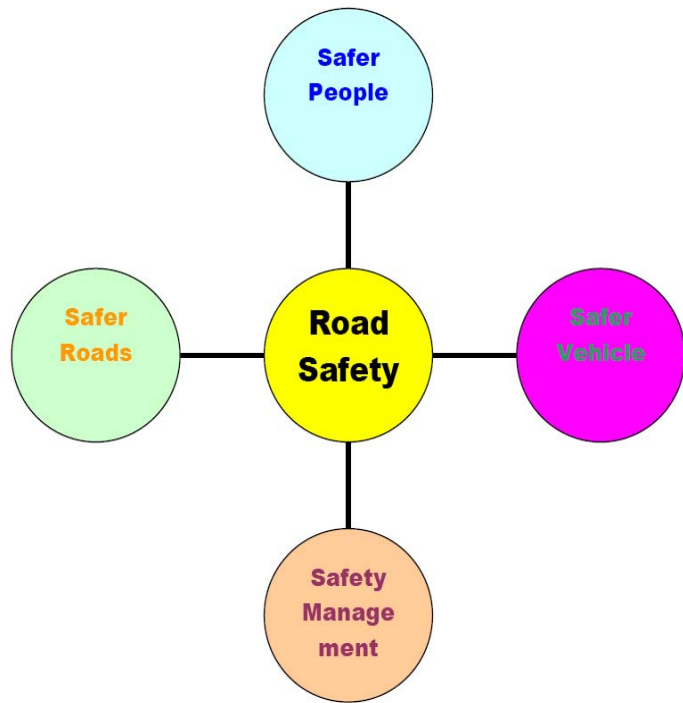
- Effective Institutional mechanism essential for sustainable road safety program implementation.
- Identifying shortcoming in the existing enforcement system (Physical and legislative)

Decision Making Structure (DMS)

For a State or City to carry out road safety work in a rational way, a coordinating body of decision makers including representatives of all institutional or NGOs and their active in enhancing road safety, is necessary. The DMS shall have following attributes:

- DMS should have a legal existence, enabling it to enforce decisions and to manage a budget;
- Come under the highest possible authority in order to achieve priority over individual governmental sectors;
- Include only high ranking decision makers able to impose the decisions taken into their own sector of responsibilities
- Have the means to provide adequate training
- Be able to commission studies or research from competent partners in order to get the right information to sustain decisions.
- Have financing powers or secure funding in order to implement safety measures that may not be included in the usual structure of sectoral budgets.

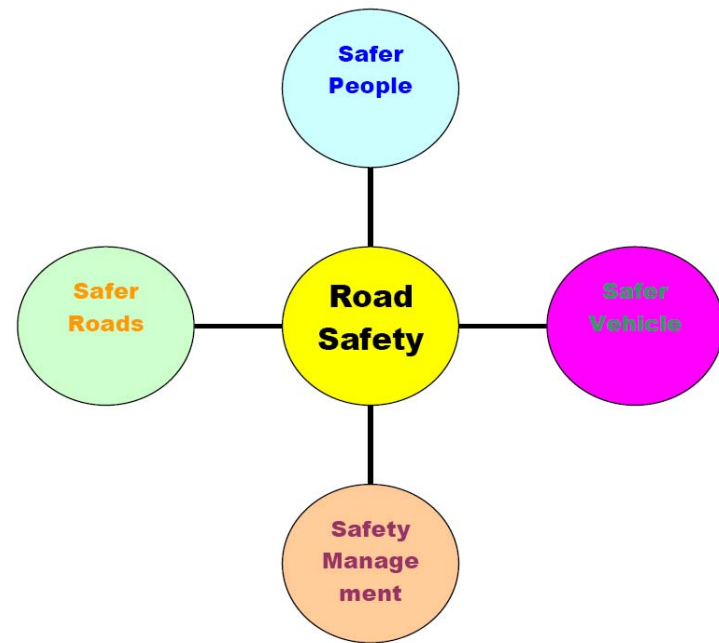
National Road Safety Action Plan (NRSC)



- Formation of the NRSC and its Secretariat, with support to develop guidelines for road safety program policies, wider cooperation, coordination and collaboration between all involved agencies
- Introduction of safety-conscious approach for road planning, design, and construction, and to its role as an integral part of traffic management
- Comprehensive blackspot strategy
- Review and upgrading of national and state road traffic rules and regulations
- Review and upgrading of accident data collection, analysis and investigation techniques
- Support to strengthen national police training centres, programs and curricula, and enforcement policies

Investment needed for safety

- This 'safety culture' cannot be developed without investment but, with road deaths set to become the sixth biggest killer by 2020, and the second highest in terms of years of life lost, (WHO forecast), it is an investment that is surely worth making.



Role of Road Safety Organization In Road Safety

- **Lead responsibility for road safety needs to be redefined and should include co-ordinating role and accepted by key organisations.**
- **A good bi-lateral working relationship between traffic police and roads authorities should be the next priority.**
- **Multi-sectoral co-ordination should be based on successful local precedents.**
- **Working groups and technical committees should be used both to promote the participation of business and civil society in developing road safety policy.**
- **A road safety central office will be required, regardless of the organizational model chosen, with adequate financial and technical resources to be effective.**

Business Sector Participation In Road Safety

- Identify and recognise the participation of business sector in promoting road safety and involve them in developing road safety strategy.
- Recognize and build on the management skills of the business sector.
- Encourage the adoption of best practice in risk management, including driver training.
- Use Health and Safety legislation to ensure fleet operators are responsible for road safety (re employees and other road users).
- Match potential sponsors to road safety activities.
- Promote the commitment to road safety through the use of awards.

Inferences

- **RSA Governing body must be set up at National Level for routine RSA aimed at strengthening and enhancing the road safety**
- **Similarly, at State level RSA Governing body must be set up**
- **At local level also, RSA Governing body / cell is needed to fund, routine RSA and strengthen and improve the safety**
- **During financial allocation for every project, financial commitment towards RSA should kept on board.**
- **For each RSA project, governing responsibilities should be clearly defined and identified.**
- **Media can be extensively used for spreading awareness of RSA.**

To summarize, political will and strong Government Support in the form of funding is necessary for the success of Road Safety Mission.

Thank You