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# Enforcement Measures to Bring Behavioural Change in Indian Drivers.

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# Contents

- Behaviour and Enforcement
- Driver Behaviour
- Responsibilities
- Practices and future
- Enforcement
- Persuasive Enforcement
- Punitive Enforcement
- Legal and institutional issues
- Summary of Recommendations

# Behaviour and Enforcement

- Behaviour is aggregate of the responses
- Matter of intense research
- Observations and psychological deductions
  
- Enforcement is to influence improved behaviour
- Can be persuasive & Corrective(by prosecution)



# Driver Behaviour

- Extension of public behaviour
- Who is behind the wheel?
- What are responsibilities of a driver?
- India scene - Driver profiles
- Owner drivers/employee drivers
- Background of majority drivers in India.



# Whose responsibility is it?

- Driver may not be in control and is not responsible for many violations by himself.
- Over speeding - Experiences with Bus transport, dumper trucks, etc..
- Service conditions like long hours of driving without rest.
- Statutory Obligations

# Whose responsibility is it?



What one can expect the driver can do...he may be lynched if he refuse to go.....!



# Whose responsibility is it?



Tyres of a public transport bus owned by a SRTC.

# Why unsafe practices?

- Ineffective statutory control – RTO's
- Old vehicles in use. Discarded from cities to hinter lands.
- Bad roads, long waiting at octroi/taxes/check posts  
-(*contra view*)
- Pressures on time – motivations
- Long driving hours without sleep/rest
- Distractions...mobile phones

# Driving....

- Very high level of research have taken place on driving.
- It is estimated that a driver is exposed to 1320 “items of information” per minute when driving at 30 miles/hr and need process them.
- But, Driverless automobiles are not far away.



# Enforcement

- Enforcement can be
  - Persuasive or
  - Punitive / Prosecution

Automation is the only feasible approach.

Key to the success of any automation is the availability of vehicle/license database, on line to be effective.

Two data bases – *sarathi* and *vaahan* by NIC initiative

*Recommendation : Evolve a national on line database accessible to all stake holders.*

# Persuasive Enforcement

- Providing higher level of service using automation can bring in behavioural adjustments naturally.

E.g. Behaviour at signals - fixed time, timers & intelligent systems.

Integrated ITS systems can empower road users with on line information.

Perceivable benefits from such systems encourage discipline and compliance.

# India – Status

- No Integrated ITS implemented anywhere in India.
- Late comer advantage.
- Advances in Technology and Telecom
- Digital convergence - in the offing.
- Trends in eGovernance and infrastructure funding.

## *Recommendations – Persuasive Enforcement*

- Evolve a national ITS policy for urban and interurban road networks.
- Implement integrated urban ITS in all major cities ( 5 – 10): with public web interface.
- Encourage usage of intelligent traffic signals to bring in respect for automation – Demo projects in 40 cities.

# Punitive Enforcement

- Enforcement index ....!
- Enforcement is done by Motor Transport and Traffic police departments.
- Fines has to be a deterrent. The offender should feel the pinch.
- Unlike other countries in India Traffic police is also responsible for traffic management. This function is never the top priority for any police force.
- Enforcement is done through field officers/constabulary.
- Almost all enforcement tickets/challans are issued on the evidence of a police officer physically present and witnessing the violation.
- For speed and drunken driving detection, instruments are used.
- The image of the traffic cop need an image make over.

# Traffic cop – Image make over

- Automate Field Enforcement
- Bangalore's pioneering attempt with 600+ blackberry with printer initiative.
- This brought in respectability to the cop.
- Also better enforcement practices like repeat offender detection.
- In Delhi pilot projects already started



*Recommendation: Implement complete automation in field ticketing progressively in every city.*

# Enforcement Systems in India

- Enforcement Systems are used for detecting violations in speed, red-light, drunken driving & overloading
- None of these are manufactured in India.
- Speed radars are used by all state police and highway police forces now.
- Breath Analysers are increasingly employed which made big impacts. About 5000+ of these are imported to the country over the years and barely 10% of them are functional.
- Few WIM units were brought into the country and there are no reports on their functioning .

# Speed and Red light Enforcement

- Few imported systems from Europe and china are implemented in a few large cities – Delhi, Bangalore, Hyderabad.
- Sporadic attempts of locally engineered products, but there is no way this can be tested and marketed in India, now.
- The effectiveness of all these installations in India is pathetically low, with even a single digit percentage of the violations recorded reaching the prosecution stage due to various reasons.



# Legal and Institutional Issues

- Delays in the judicial process is self defeating.
- Compounding of the offences – Effectiveness of the fines.
- Need to comply with Evidence Act and IT Act.
- There will be huge impact on the driver behaviour if the enforcement index improves..e.g. Experience on drunken driving, jail sentences Vs accidents/casualties.

# Recommendations – Enforcement Systems

- Amend compounding fines to be substantial.
- Encourage development of indigenous products for enforcement applications.
- Set up testing and certification laboratory for enforcement equipment.
- Set up calibration facilities in each region.
- Nurture industry growth, which is in a very socially relevant area.

# Summary of Recommended Action Plan.

- Evolve a **national on line database** for vehicle and licensing data accessible to all stake holders
- Implement complete **automation in field ticketing** progressively in every city.
- Evolve a **national ITS policy** for urban and interurban road networks.
- Implement **integrated urban ITS** in all major cities ( 5 – 10): with **public** web interface.
- Encourage usage of **intelligent traffic signals to bring in respect** for automation – Demo projects in 40 cities.
- Amend compounding **finest to be substantial.**
- Encourage development of **indigenous products** for enforcement applications.
- Set up **testing and certification laboratory** for enforcement equipment.
- Set up **calibration facilities** in each region for enforcement equipment.
- Nurture industry growth, which is in a very socially relevant area.



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# Thank you

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