THE NSSR ROAD SAFETY/SUPPORT PROGRAMME

MONTHLY BULLETIN

DASHBOARDING ROAD SAFETY / SUPPORT

BY

VENKATRAM K S, AOEC 2026-2027

Road Safety / Support is a mainline National Safety and Social Responsibility

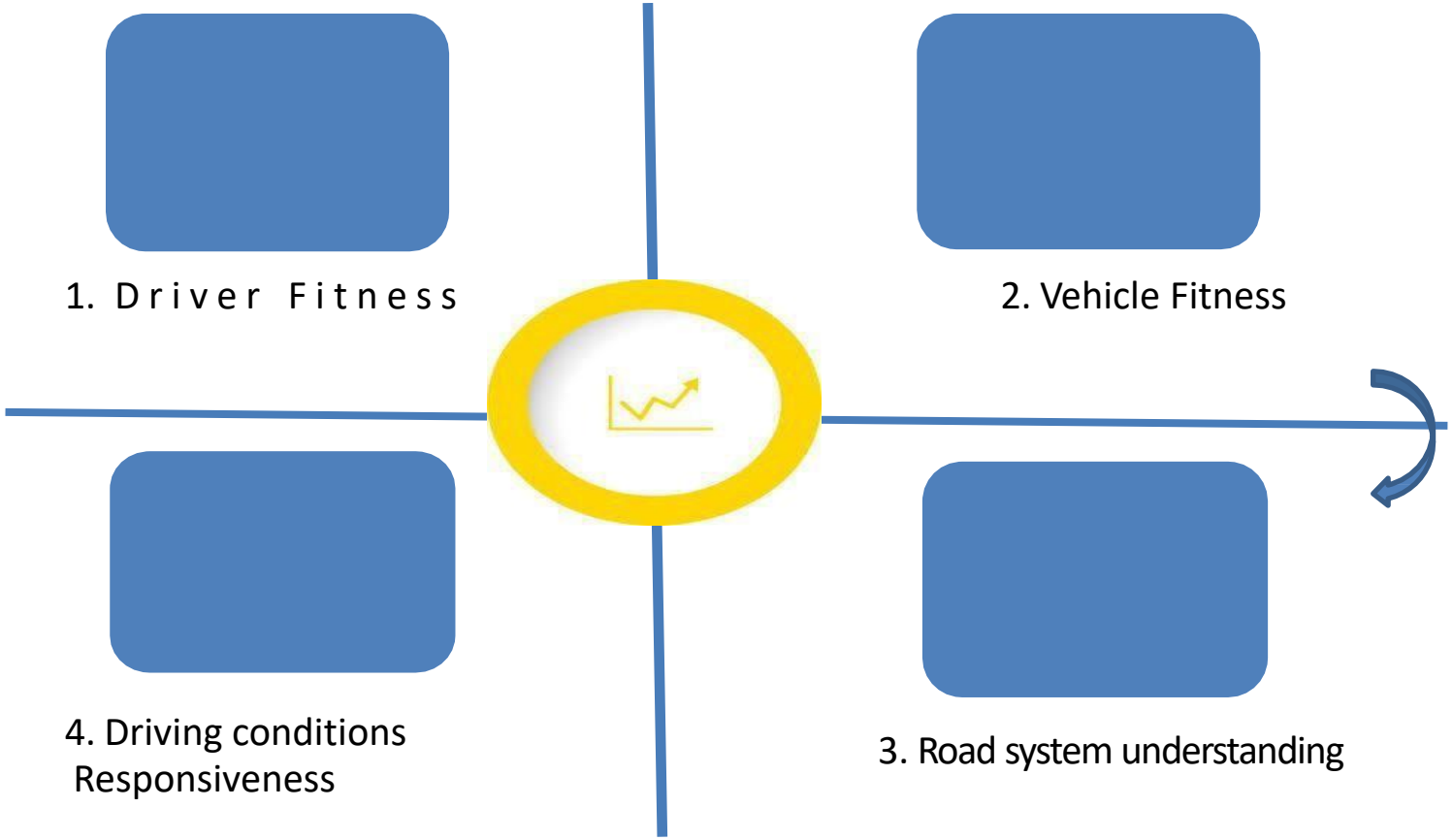
May 2026

Dashboarding Road Safety/Support

- **AOEC finds that safety while commuting on road, depends upon the automobile manufacturer's quality assurance, driver fitness, vehicle fitness, driving conditions dimensioning, and road system responsiveness, where driving conditions n**eed us as commuters/road-system-infrastructure stakeholders to fine focus and design capability for improved road safety.

Driving conditions dimensioning

JOURNEY/TRIP
Route
Road Surface,
Distance,
Drive time, and
Correlation for
Responsiveness,
Safety and
Reliability



COMMUTING AND 5R(S)

Relate

Respond

Reduce Risk

Reciprocal Driving insights

TMS Resilience for route designed RADIUS and CIZ

CIZ : CRITICAL INTERACTION ZONE IN A JOURNEY/TRIP

Dashboarding Road Safety/Support

- AOEC finds that instrumentally, Dashboarding Road Safety / Support (DRSS) projects must
- define a TMS workflow for accentuating
- 1. Driver Fitness
- 2. Vehicle Fitness
- 3. Road system understanding
- 4. Alpha Assistance
- 5. 5R(s) SMART(ness) for a safer journey

CRITICAL INTERACTION DETERMINERS

ROAD SURAFCE COVERINGS, LIGHT / SHADE ISSUES, CURVES, MEANDERS, INCLINES, BOTTLENECKS, CLOSE PROXIMITY REGIONS

SMART(ness) :

SPECIFIC CRITICAL INTERACTION FOR MEETING NEED WITH APPLICABLE INSIGHT RESPONSE AND TEMPERAMENT

Dashboards

EXPERT SYSTEM

SPHERE OF CONTROL, FOCUS, CAPABILITY AND INGENUITY

TIME MOTION SCALE / POINT SLOPE INTERCEPTION

Handbooks/Guides/Planners

Dashboarding Road Safety/Support

CRITICAL INTERACTIONS

EXPECTED LICENSE, PROBABLE INCIDENCE/HAZARD/ RISK/RULE COMPLIANCE, PRECISE DRIVING, ENDURANCE DRIVING, INTERCEPTING CURVES, MANEUVERING OPTIONS, RESPONSE, RAPID RESPONSE, UNDERSTANDING SERVICE ANYWHERE ANYHOW ASSISYANCE, EMERGENCY RESPONSE / SPECIFIC NEEDS

Dashboarding Road Safety/Support

- DRSS SMART(ness) for a journey/trip and virtual POINT SLOPE INTERCEPTION can make it simpler to identify the tangible correlation between driving conditions dimensioning of a route/road system/road with a DRSS Workflow to help and improve safer commuting

- This DRSS Workflow plus NSSR RS programme teamwork can
- Record-or-review,
- Relate,
- Reduce risk,
- Reciprocate response and
- Design Resilience for any journey/trip and its dimensions like the
- road surface,
- distance,
- drive time,
- commute reliably factors, where there is universal or brand specific service centre-assessable part-lifetime mitigation, condition monitoring, traceable fault tolerance/preventive and corrective action, where this DRSS Workflow development can help a NSSR participant define/use a NSSR RS index for a journey/trip/TMS radius, where the index can be simply (1), (2), (3), (4) or combinations of them

The NSSR project recommends the use of different assistants to help commuters improve their experience

Dashboarding Road Safety/Support

- **(1) NRRS-I1:=** where this workflow will need to address History of interaction & **Foreseeable needs** and 5R(s)
- **(2) NRRS- I2:** = this workflow will need to address **Critical Interaction Zone** needs and 5R(s)
- **(3) NRRS- I3:** this workflow will need to address **Road/Route dynamics** and 5R(s)
- **(4 NRRS- I4:** this workflow will need to address A**dvanced safetyneeds and 5R(s)**
- (like air quality, unregulated climate intolerance, temperature/humidity, road system or road or terrain safety, with more than an expected driving style for commuting with safety, reliability & timing and with more than programmed gear changes, or braking or drive distribution between the front and rear wheels as expected in 4WD modes)
- The bulletin looks at the different assistants that can help a commuter's 5R(s). The editions that follow will delve into details of each of them to help a commuter/stakeholder ramp up scores in a dashboard

Dashboarding Road Safety/Support

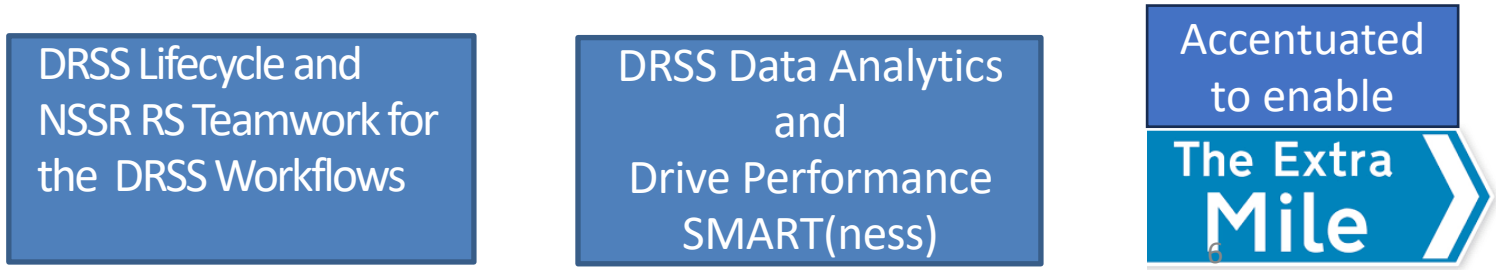
- The DRSS Data Analysis Channel Building for an **automobile manufacturer's quality assurance, driver fitness, vehicle fitness, driving conditions dimensioning, and road system responsiveness** for deteriorating or changing driving conditions dimensioning of the needed SMART(ness for safer commuting will need to

- **1. Improve Sensitization and Awareness for Road Safety**

- **2. Develop issue/feedback/data channelization for safer commuting**

- **3. Provide handbooks/guides/planners for such planning/ incorporation**

- **4. Promote quality for road safety and infrastructure via NSSR guided methodologies like the training programmes/monthly bulletins & quizzes/dashboarding of experience or incidences**



Road safety and Accountability Dashboard for the Year 2026

- ❑ Certificate of Excellence — YES / NO / NOT SATISFACTORY
- ❑ Traffic issues or incidences — YES / NO / NOT SATISFACTORY
- ❑ Compliance with FMVSS standards — YES / NO / NOT SATISFACTORY
- ❑ Onboarding of NSSR Road Safety objectives — YES / NO / NOT SATISFACTORY
- ❑ Upgradability of NSSR Road Infrastructure objectives — YES / NO / NOT SATISFACTORY
- ❑ Traffic Engineering Assets planning — YES / NO / NOT SATISFACTORY
- ❑ Traffic Engineering Defects Liability — YES / NO / NOT SATISFACTORY
- ❑ Improved on-road assistance — YES / NO / NOT SATISFACTORY
- ❑ Cost of Quality /Cost of Poor-Quality Project Assistance — YES / NO / NOT SATISFACTORY
- ❑ Complexity for Road Safety and Accountability — YES / NO / NOT SATISFACTORY

Year:

Road safety and Accountability Dashboard for the Year/Season 1

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Season: Summer / Spring/ Monsoon/ Winter

Road safety and Accountability Dashboard for the Year/Season 2

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Season: Summer / Spring/ Monsoon/ Winter

Road safety and Accountability Dashboard for the Year/Season 3

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Season: Summer / Spring/ Monsoon/ Winter

Road safety and Accountability Dashboard for the Year/Season 4

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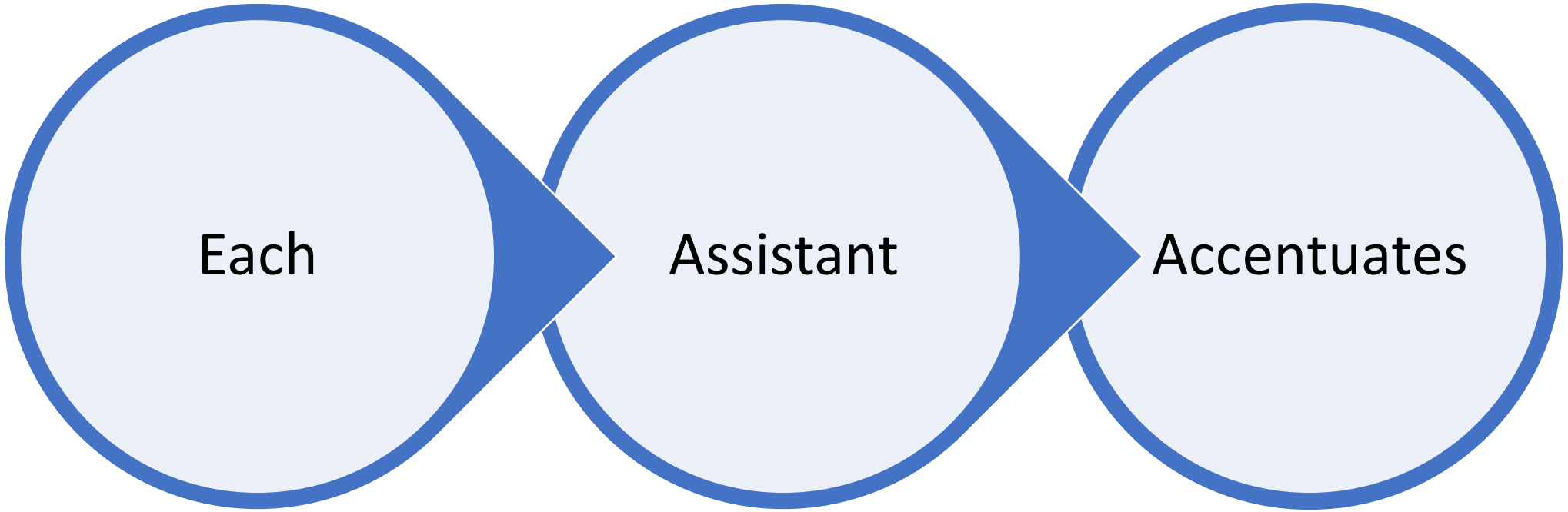
Season: Summer / Spring/ Monsoon/ Winter

DRSS Assistants – Road system understanding



Understanding Road Systems

- For the climate change in the years ahead, the insight is that a Management Index Specification for Road Systems abbreviated as MIR can outline a design specification to mitigate hazards in a road system, where different aspects of a road system are considered.

- The purpose of any road being to help commuters, movement of goods or main stream vehicles travel from one point to another. Any road has different types of traffic, which can be outlined as follows

- **Types of traffic distances**
- 1. Short distance traffic or traffic within a neighborhood
- 2. Medium distance traffic (inter-neighborhood, inter-zonal regions or intra-city)
- 3. Long distance traffic (be it a National Highway, State Highway, District Roadway which in turn is intra-district or inter-district)
- 4. Millennium concepts like NICE roads, Ring roads, Flyovers, Road corridors
- 5. Evolving RADIUS of coverage roads

Understanding Road Systems

- **Types of traffic**
- 1. Trucks, Goods and Freight carrying vehicles
- 2. Government and Private Buses
- 3. Mini buses, vans
- 4. Cars, taxis
- 5. Auto rickshaws
- 6. 2-wheelers
- 7. Cycles, Cycle rickshaws
- 8. Animal driven carts
- 9 Free or herded Livestock
- 7. Additionally Feeder traffic, Freight carrying traffic, Inter-state or Inter-city Passenger traffic, Emergency response traffic, Tube or Elevated Rail traffic

Understanding Road Systems

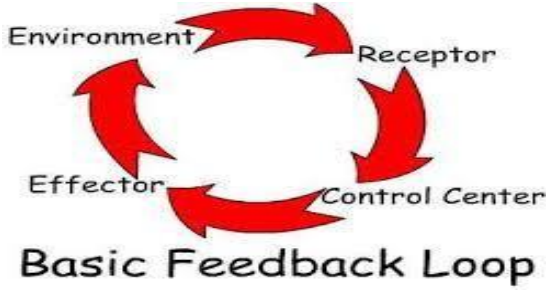
- Every road has certain MIR assets and certain MIR liabilities, where MIR assets help road system utilization and performance, whereas MIR liabilities are always or sometimes hazardous if not suitable for a road configuration or can pose a risk to people using a road system.

- The MIR specification terms the following as **MIR assets**
- 1. Road configuration databases and/or cloud based systems
- 2. Traffic signals and traffic control systems
- 3. Disaster mitigation systems and Emergency Response systems
- 4. Defect liability based feedback systems
- 5. Planned Road signs, Billboards/Hoardings, Signages
- 6. Evolving RADIUS of coverage Key Performance Indicators or KPI(s)

Understanding Road Systems

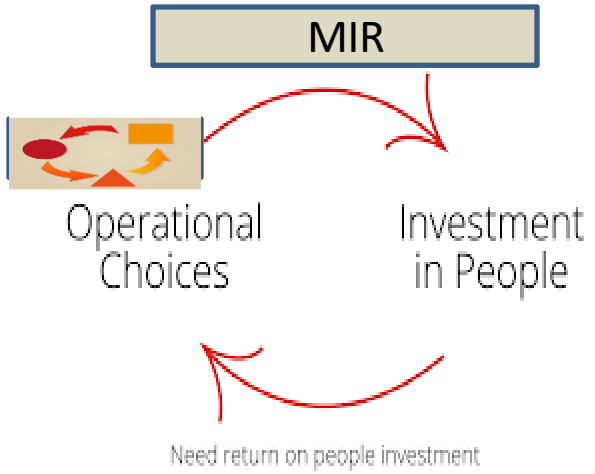
- The MIR specification terms the following as **MIR liabilities**
- 1. Unplanned Lanes, Road Medians
- 2. Unplanned Bordering Road Barricades
- 3. Unplanned Speed breakers or Road Humps
- 4. Unplanned or poorly constructed Pavements
- 5. Poorly maintained Manholes & Sewer systems
- 6. Impediment causing Elevated or Tube Railway infrastructure
- 7. Unmanned or poorly maintained Railway crossings
- 8. Poorly maintained Bridges and Tunnels*
- 9. Poorly maintained Trees and Greenery
- 10. Hotspots (locations that need converged administration to address the need to mitigate climate change, rising pollution levels, rising CO_2 levels, poor air quality, accident trends, traffic problems, incidences of crime, issues with road system arboriculture)
- 11. No Road Infrastructure Transformation evaluations to minimize RADIUS OF COVERAGE inefficiencies

Understanding Road Systems



- An MIR specification can balance MIR liabilities with MIR assets. To do this the specification will need to brainstorm for a new principle called "RADIUS OF COVERAGE " and "defect liability", where the nature of planning, implementation, commissioning, performance and SMART Resolution, maintenance and/or reengineering are all evaluated via the need to perform reliably, effectively for route assurance for a specific radius of coverage, improve safety and mitigate hazard or risk.
- An MIR specification can integrate a Management index or defect liability indicator with each road system, where different parameters such as MTTD, MTTP, MTTN & MTTR and feedback loops all decide the balance.
- **Abbreviations and their meanings:**
- MTTD: Mean Time to Detection MTTP: Mean Time to Prioritize
- MTTN: Mean Time to Network needed Engineering infrastructure and resources
- MTTR: Mean Time to Resolution
- MTTCOPQ: Mean Time to Cost of Poor Quality
- MTAAR: Mean Time to Alpha Assistance Resolution (for afflicted or aged commuters)

Understanding Road Systems



- An MIR specification can use the following core indicators and systems to define a road system configuration
- 1. Nature of planning
- 2. Defect liability systems
- 3. Associated planning, risk mitigation, repair and/or restoration programmes
- 4. Traffic management systems
- 5. ACCIDENT RELIEF, EMERGENCY RESPONSE AND ASSISTANCE systems
- 6. Viewpoint Management for road system issues or incidence indicators

Nature of planning (Rated as a crucial influencer):

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( ) **Design standards compliance** (width of road, margins for pillars, gradient designs, curves designs, median designs, arboriculture safety, pedestrian and passenger safety, safe commuting between 2 points, reasonable time taken to travel from one point to another, enablers for vehicles that use renewable energy)

( ) **Accountability for Traffic factors** (speed standards set for road systems, reaction time based on PIEV*, navigation standards, safe stopping sight distance, safe overtaking or passing, safe sight distance for entry into any associated intersections, feedback systems)

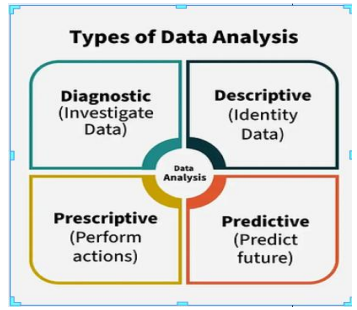
( ) **Accountability for Environment factors** (sentinel screening and risk mitigation for unforeseen snow fall, hailstorms, heavy rainfall, thunder storm and lightning arrestors, ease of maintenance despite severe weather conditions)

( ) **Maintenance Systems reliability** (proper design out maintenance, risk mitigation & maintenance, inspection and maintenance of extensions, gradient-design validation, policy for emergency services, policy for disaster management services)

( ) **Quality of associated Drainage systems** (design and implementation after consideration of water table, sub-grade soil, reinforced earth, nature of geo-grids that are to be used in the road construction, management of seepage flow & capillary rise, reliable impervious wearing surface of road with aggregators and binders)

( ) **Quality of traffic signalling systems** ("(Google Earth related) satellite imagery, or drone flight imagery or sentinel sensor feedback based" Risk Mitigation Desk notifications and proactive responses by the traffic management network, by nature of design "intelligent signaling solutions" that decide as to how traffic has to be managed or routed in case there is a disaster, accident, or in a case where part of the road or road system is rendered unusable)

Strategic-Tactical-Operational intelligence Infrastructure and/or Data Management influencers



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( ) **Satisfactory Emergency Response planning** (Equipped with signage and barricade deployment, contact numbers for nearest "ambulance services, hospital, police station, fire department, disaster management department", availability of first aid provisions, equipped with fire extinguishers & fire fighting facilities, equipped with smoke alarm systems, equipped with sentinel sensors, has clearance for air lift to save life, has collapsible floor/ground escalation systems at designed locations to help evacuate passengers from elevated metro railways)

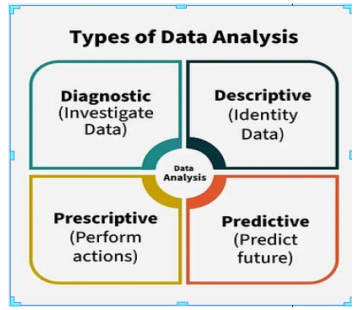
b. Nature of congestion (Rated as important negative influences):

( ) Perennial congestion ( ) Seasonal congestion
( ) Time-based congestion
( ) Incidence specific congestion
( ) Feeder Traffic specific congestion
( ) Goods/Freight movement specific congestion
( ) Congestion due to other influences

Strategic-Tactical-Operational intelligence Infrastructure and/or Data Management influencers

c. Stabilizing aspects (Rated as positive influences):

( ) Has a Management Index Specification ( ) Has satellite images
( ) Included in Google maps ( ) Is of good quality
( ) Has multiple-lanes
( ) Has sensor-enabled medians or bordering road barricades
( ) Has reliable traffic signals
( ) Has SMART Meters for immersive TEPO
( ) Accountable traffic intervention possible at location
( ) Not in close proximity to industries
( ) Not in close proximity to rivers and other rainfall affected water bodies,
( ) Has storm water drains
( ) Has well maintained manholes and septic systems
( ) Not affected by festivities
( ) No pedestrian sidewalks
( ) No encroachment



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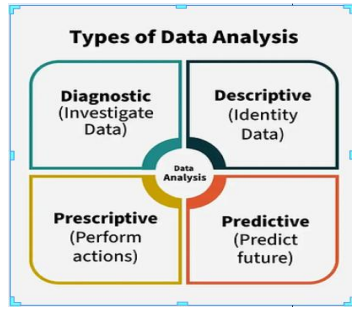
( ) No alteration
( ) Not sidelined by trees
( ) No afflicted by dumping of industrial waste
( ) Not afflicted by dumping of public waste
( ) Has a proper sewage system

d. Probable Hazards (Rated as very important negative influences):

( ) Is an inter-link for other roads or routes etc
( ) Is in close proximity to neighboring states
( ) Is in probable or escalated tension areas
( ) Is a sensitive area (where satellite imagery a threat)
( ) Is in close proximity to an industrial cluster
( ) With curving meanders
( ) Has a steep incline with improper entry or exit
( ) Has underlying dangerous landforms
( ) Is in close proximity to dangerous landforms
( ) Has a history of unattended potholes ( ) Has potholes
( ) Is sidelined by less maintained trees
( ) Is in close proximity to rivers and other rainfall affected water bodies
( ) Is in close proximity to marshes or swamps
( ) Is part of a bridge or connects to a bridge
( ) No storm water drains
( ) Has poorly maintained manholes and septic systems
( ) Afflicted by incidences of bottlenecks
( ) Is difficult to manage via surveillance
( ) **Is prone to crime** (due to lack of surveillance/being a remote location/ lack of traffic signals/lack of lighting)
( ) **Is prone to accidents** (due to lack of sufficient planning for pedestrian and passenger safety)

Strategic-Tactical-Operational intelligence Infrastructure and/or Data Management influencers



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Strategic-Tactical-Operational intelligence Infrastructure and/or Data Management influencers

e. Associated planning, risk mitigation, repair and/or restoration programmes

The addressing of problems is either well-planned or not well-planned, where there are selective classifications that can help identify issue levels for the commuter:

Planned (Rated as positive influences)
( ) Forecast based
( ) Control Room based
( ) In time surveillance based

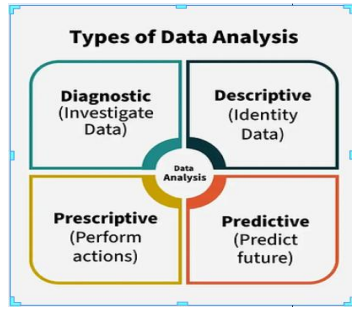
Not well-planned (Rated as very important negative influence)
( ) Only reciprocal (where problems are addressed in a reactive manner)
( ) Only when problems are escalated
( ) Only when mass grievances are reported

f. Signage deployed to mitigate risks to commuters or people
( ) **Road signs identifying traffic safety norms** (one-way or two-way signs, permitted timings, speed limits, rules for pedestrian and passenger safety, rules about overtaking, rules against cutting lanes, rules for parking, signage about low visibility zone, low height clearance and load levels)

( ) **Signage for accident relief, emergency response and assistance** (like contact information for the nearest "ambulance services, hospital, police station, fire department, disaster management department", associated civic body)

( ) **Signage and barricades around (perimeter) of potholes, poor quality manholes and septic systems**

( ) **Signage with precautionary and must know information about ring road, flyover, bridge, tunnel, subway, metro track, tram track, and level crossing**



ROAD SAFETY - OUR NATIONAL SAFETY AND SOCIAL RESPONSIBILITY

Defect liability systems (Rated as a crucial influencer):

( ) **Road system/route utilization analytics / guidelines**

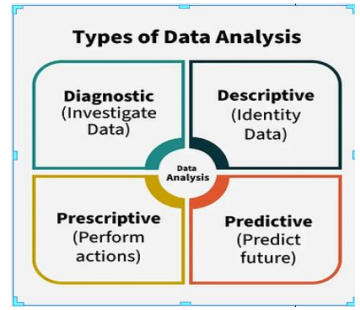
( ) **Associated Heavy Rain/Storm/Disaster Warning analytics / guidelines**

( ) Associated **Road system/route utilization related FESA / unplanned for driving conditions- based planning analytics / guidelines**

Strategic-Tactical-Operational intelligence Infrastructure and/or Data Management influencers

( ) Associated or **critical NOC compliance/ commissioning status analytics / guidelines**

( ) Associated or **critical NOC compliance/ commissioning status specific planning-evaluation-resolution schedules**



( ) Associated or **critical Transformational solutions or Civic Amenities enabling**

Traffic Management strategy (Rated as a crucial influencer):

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( ) Current solutions for traffic management and road system/route utilization

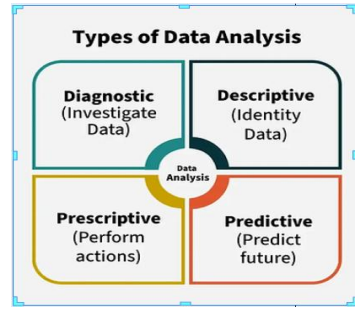
( ) OTA Theme based solutions for traffic management and road system/route utilization

( ) Commuter subscribed-for solutions for traffic management and road system/route utilization

Strategic-Tactical-Operational intelligence Infrastructure and/or Data Management influencers

( ) Building/Site/Plot owners/associations subscribed- for solutions for NOC adherence/NSSR Theme incorporation

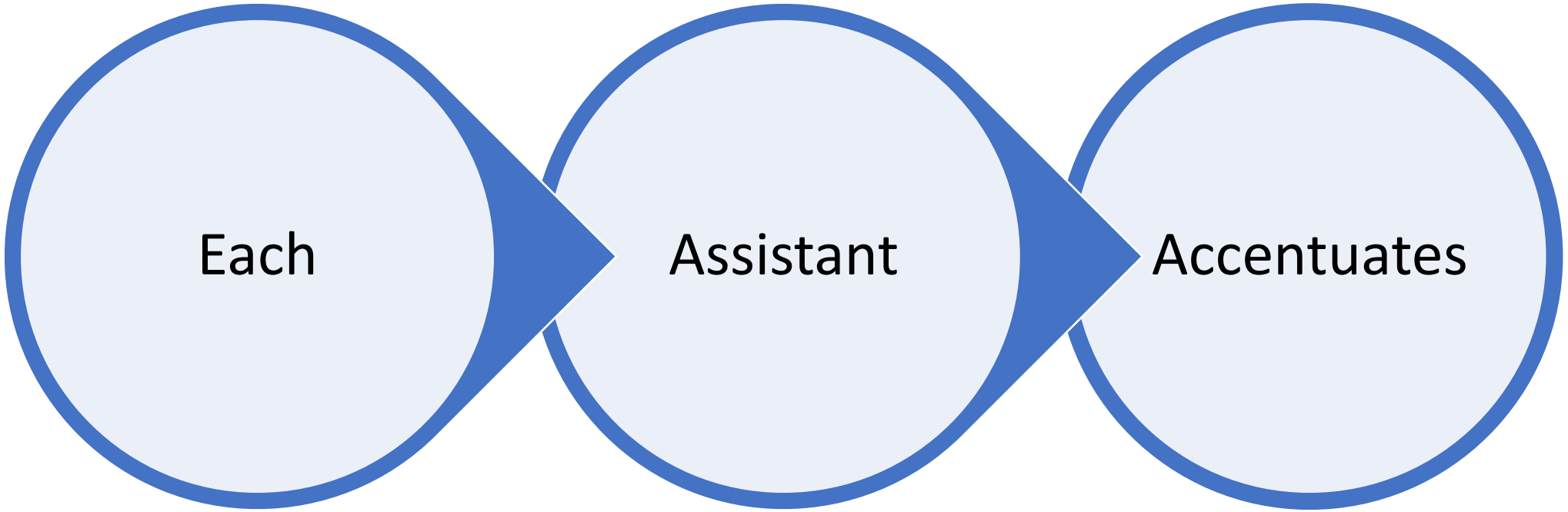
( ) Strategic-Tactical-Operational intelligence specific Infrastructure and/or Data Management



Notes for Road System Responsiveness

Field book pertinence

DRSS Assistants – Road system understanding



Quiz

DRSS Assistants – Road System Understanding