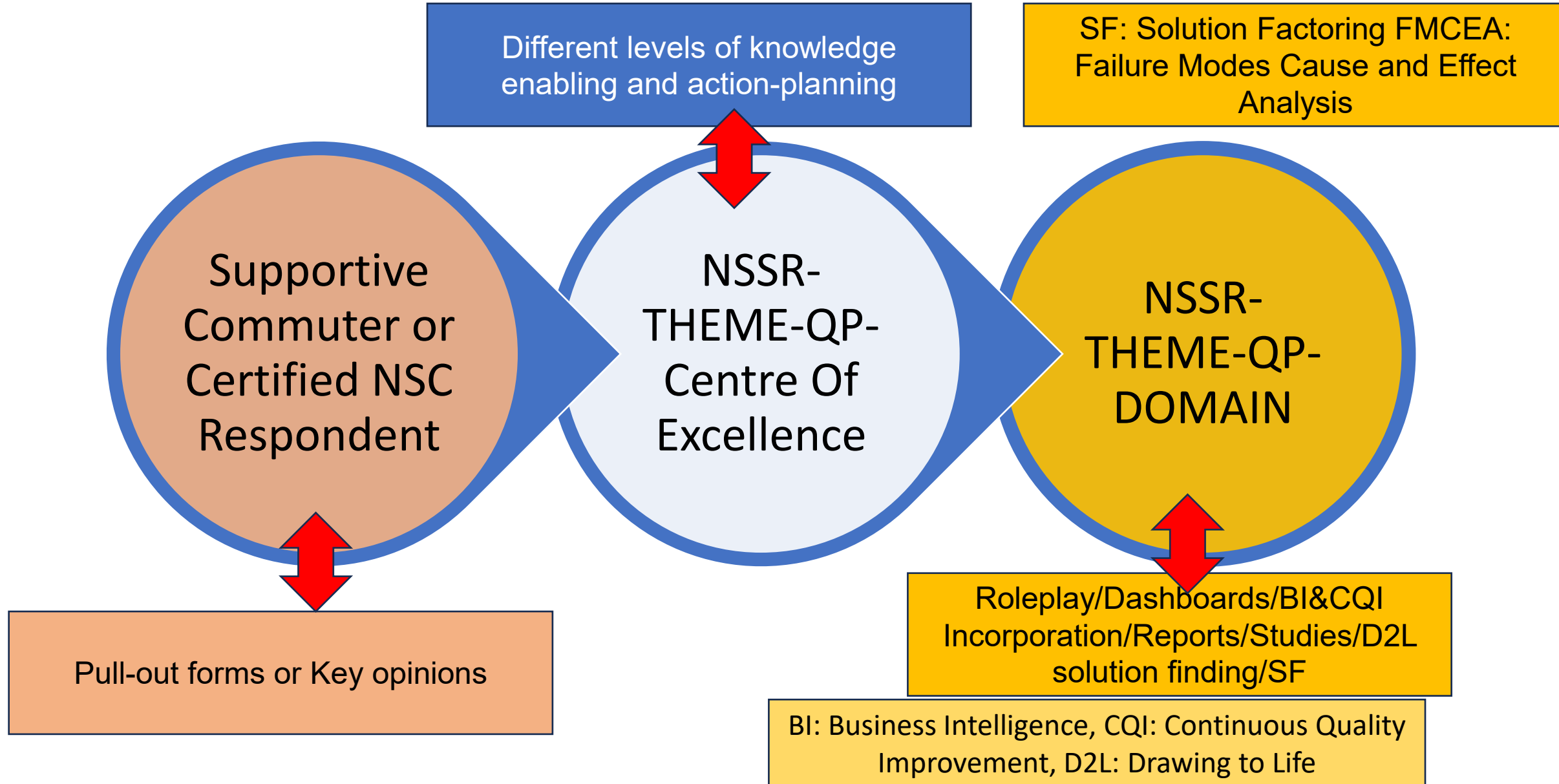


# NSC Certified Respondent Level 5 Traffic Engineering with Coverage specific Implementations

By  
AOEC, Gap Analysis 2025-2026  
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Proposal for NSC to ensure  
transformative  
implementation of the  
NSSR RS programme

# Response a for NSSR THEME





## NSC Certified Respondent Level 5 – Traffic Engineering with Coverage specific Implementation

# Primary Work Areas for BBMP Traffic Engineering



SI No	Nature of work (Serial Numbers 1...9 skipped)	Applicable for NSSR Theme
10	Projectization for Analytics for QOI, QOP, QOS and QOO in traffic engineering, planning and organization with an Event Wheel for incorporating Key Opinion Intelligence, Pincode Intelligence and TMS Route Assurance	Yes, WIP
11	<p>Design and develop a Traffic Engineering Studio with editioning of tiered responsiveness for</p> <p>(a) TE Attributes and Touch points with changing velocity and likelihood</p> <p>(b) TE related value delivery</p> <p>(c) TE problem solving for Ranked environments and landscapes</p> <p>(d) TE Viewpoint synergy, Where the Viewpoint for traffic engineering can be</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Profile information</li> <li><input type="checkbox"/> Regular Need/Concern/Complaint/Feedback based information</li> <li><input type="checkbox"/> Image attached Need/Concern/Complaint/Feedback based information</li> <li><input type="checkbox"/> Audio stream attached Need/Concern/Complaint/Feedback based information</li> <li><input type="checkbox"/> Audio/Video stream attached Need/Concern/Complaint/Feedback based information</li> <li><input type="checkbox"/> Advanced-focus or Perspective imagery attached Need/Concern/Complaint/Feedback based information</li> </ul>	Yes, WIP

# Profiling sites/locations for BBMP Traffic Engineering



AOEC intends to capture site / location specific profile details and TE/Road Safety-images to predict a pincode based Transition index and NavSite Risk Quotient.

The Transition Index identifies the Point Slope interception for the dynamics, degeneration or restoration reported for the site or location.

The TEC centre will use Point Slope Interception assessments to raise questions and concerns based on baseline aspects like

\*. Emergent impact for the location or site due to Changing Traffic Engineering (Control/Coordination) patterns

a. Emergent impact for the location or site due to Changing rainfall patterns

b. Emergent impact of seepage and overflows from neighbouring rivers or water bodies

# Profiling sites/locations for BBMP Traffic Engineering



c. Emergent impact if there is Environmental degradation and/or a bulk increase in waste at nearby dump sites

c.1.Growth rate of trees/greenery

c.2.Utilization of energy and infrastructure (electricity, diesel, fuel, owned non-conventional alternatives)

c.3.Utilization of natural resources (environment around the piece of land, running water or stored water or underground water)

c.4 Record of Natural disasters like earthquakes, floods, cyclones, hurricanes, famine, heat wave, cold wave etc.

c.5 Record of any man-made disasters like fires, attacks by pests



# Profiling sites/locations for BBMP Traffic Engineering



- d. Lack of the responsiveness shown by a (non-industrial category) producer or consumer in adversely affecting location or site
- e. Lack of the responsiveness shown by (an-industry category) producer or consumer in adversely affecting location or site
- f. Lack of any necessary TE/Road Safety related Corporate Social Responsibility to be shown by people living close by
- g. Lack of any necessary TE/Road Safety related Corporate Social Responsibility to be shown by people visiting regions near location or region

# Profiling sites/locations for BBMP Traffic Engineering



The NavSite Risk Quotient based on the pincode enables the GOI / GOK/ BBMP TE/ Disaster Management Departments to identify routes and targeted risk mitigation important for climate change and imminent disasters.

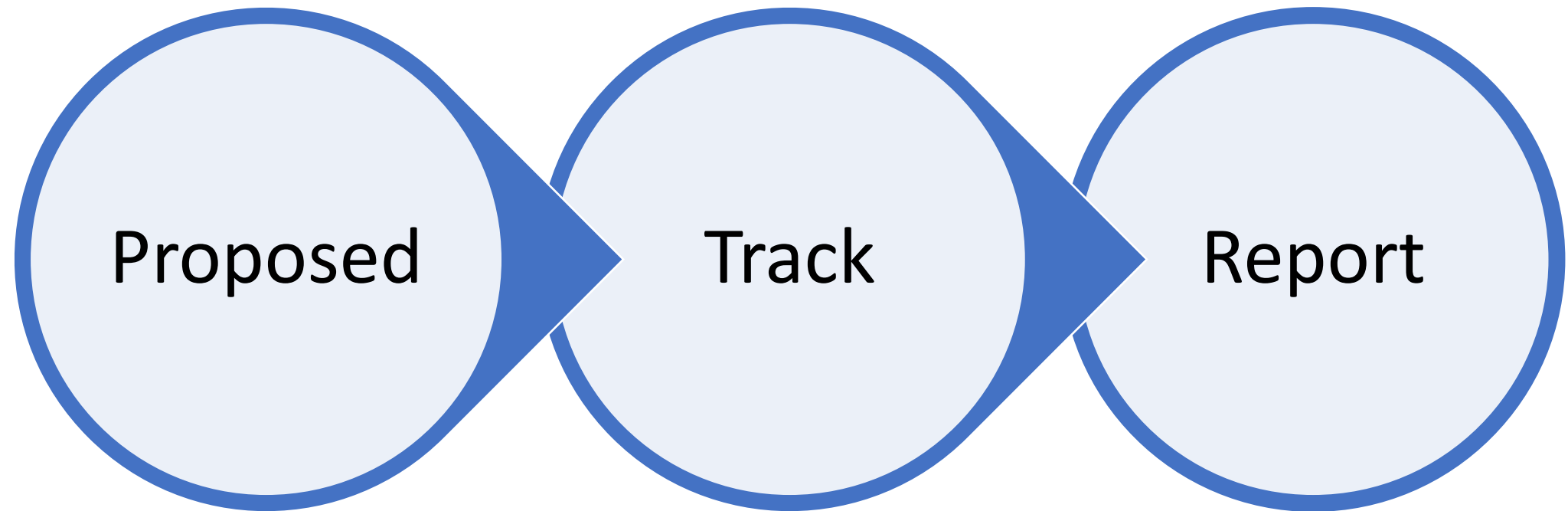
AOEC proposes a SMART Ward Content Management /system architecture that can be leveraged to incorporate TEC-image-processing for sites or locations or routes.

As a second milestone, AOEC proposes site or location related TEC–image-zoning for augmentation of SMART Ward Content Management /systems that in turn leverage Fast Track PRM frameworks to mitigate risks





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# Drive India NSSR-RS Unit 7\* (TMS Route Assurance)

## – Proposed Track Report

- Reporting a complaint about accountability for route assurance
- Road system name: Road system Id:
- Date of submission: Time of submission:
- Mapping from:
- Mapped till:
- Mapping pending:
- **Type of road system:** Road/Stretch/Route/Ring road /Highway
- **Type of transportation that uses road system:** Public transport/Private transport/Pooled transport/Personal transport/Priority transport
- **Added commuting systems:** Overhead Metro/Underground Subway/Tram
- **Current Risk Health:** Assisting TEPO/Assisting signs satisfactory/Acceptable driving conditions/Other reports/Do not know
- **Route assurance related risk details:** ...

# Drive India NSSR-RS Unit 7\* (TMS Route Assurance)

## – Proposed Track Report

- Reporting a complaint about accountability for route assurance
- **TEPO concern/issues for route assurance:**
- **Associated route editioning (to be uploaded in pull-out form / key-opinion format with details of profile of RADIUS of coverage/site/road system/location):**
- **Associated images (to be uploaded in.jpeg format with details on location):**

# Drive India NSSR-RS Unit 7\* (TMS Route Assurance) – Proposed Track Report

- Reporting a complaint about accountability for route assurance
- **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 / conditional dynamics

Impact on

- ☐ Sustainable Development & Growth
- ☐ Socio Economic Solutions
- ☐ Traffic Control
- ☐ Supply chaining
- ☐ TMS Logistics
- ☐ Environmental quality
- ☐ Incidence Response / Mitigation
- ☐ Fire fighting (amenity specific) / Fire Department response

# Drive India NSSR-RS Unit 7\* (TMS Route Assurance) – Proposed Track Report

- Reporting a complaint about accountability for route assurance
- **Required TEPO to mitigate risks to commuters or people**
- ( ) **Road signs identifying traffic safety norms** (signage about sharp curves, bends, gradients, narrowing, 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**
- ( ) **Other issues impacting unregulated driving/track report:**



# Drive India NSSR-RS Unit 7\* (TMS Route Assurance) - Proposed Track Report

NSSR-RS-Id:

Date of report:

Time of report:

( ) Quality levels

Details: For example “**Good/Moderate/Poor/Hazardous**” with added details

( ) Traffic volume levels

Details: For example “**Heavy/Moderate/Low volume/Controlled**” with added details

( ) Pollution levels

Details: For example “**High/Moderate/Normal/Uncontrolled**” with added details

( ) Accidents or incidence (even crimes) trends

Details: For example “**High/Moderate/Rare/Controlled**” with added details

( ) Possible route diversions

Details: For example “**Arterial arrangement/Alternate deviations/Service roads/Flyovers/Recommended by intervention diversions**” with added details

( ) Commuter comfort levels (specific to Commuter profile)

Details: For example “**High volume related stress levels/Moderate volume related stress levels/Normal volume related stress levels/Uncontrolled volume related stress levels/Repair work related stress levels/Breakdown of vehicles related stress levels/Ambulance or Emergency Response or Special need vehicles related stress levels/Climate change related stress levels/Disaster conditions related stress levels/Escalated tension related stress levels...**” with added details

# Drive India NSSR-RS Unit 7\* (TMS Route Assurance) - Proposed Track Report

( ) Availability of alternate transportation services

Details: For example **“Overhead Metro/Underground Subway/Tram”** with added details

A Votary Track is a Road System that is being reported about for NSSR-RS responsiveness

( ) Availability of emergency response services

Details: For example **“Equipped with first aid provisions/Has clearance for air lift/Equipped with fire extinguishers/Equipped with smoke alarm systems/Equipped with sentinel sensors”** with added details

( ) Afflicted due to weather forecasts

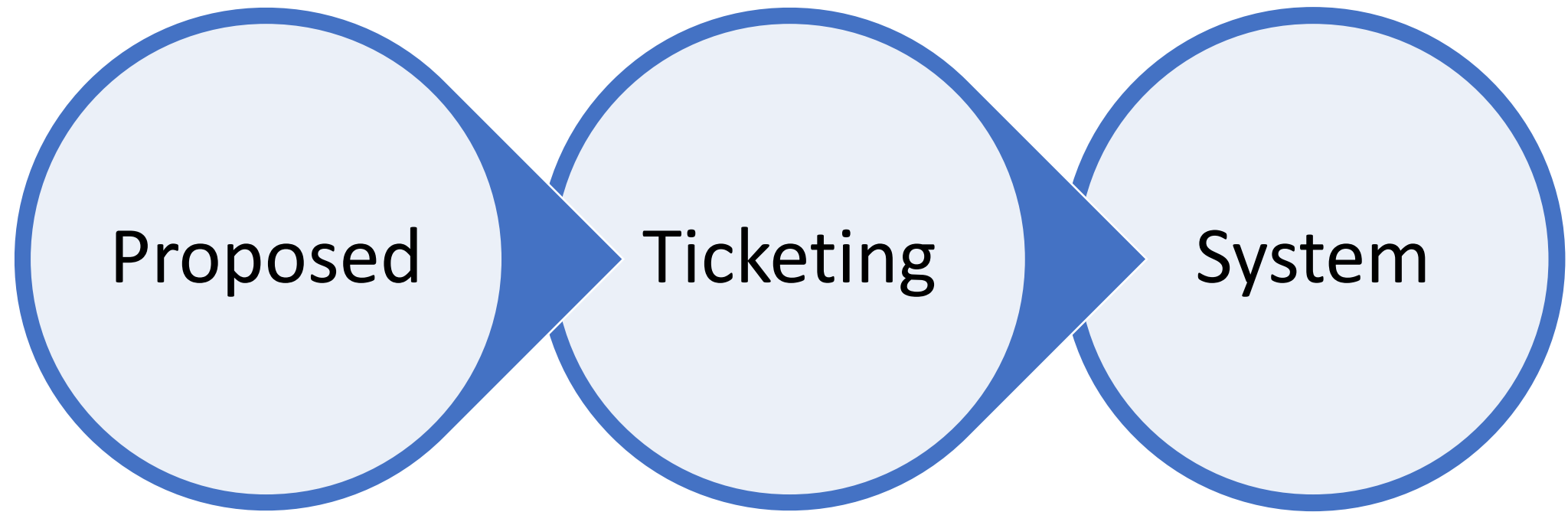
Details: For example **“Harsh weather conditions, high ambient temperatures, poor quality of air, low visibility levels, high speed wind velocity, heavy rainfall leading to flood like situations, water logging, overflowing of sewage drains”** with added details

( ) Vital network and signal coverage

Details: For example **“Normal Votary Track connectivity/Failing Votary Track connectivity/Problematic Votary Track connectivity/ Normal Emergency Response connectivity/ Failing Emergency Response connectivity/ Problematic Emergency Response connectivity/Good quality signal strength reported for most mobile services/Complaints recorded for most mobile services/Poor quality signal strength due to weather forecasts”** with added details

( ) Vehicle indicators

Details: For example **“Normal for road system configuration/ Problematic for road system configuration/ Problematic for unmapped road system configuration/Complaints recorded for road system configuration”** with added details



# Drive India NSSR-RS Unit 7\* (TMS Route Assurance) – Proposed Ticketing system

## IMPORTANT DETAILS FOR TMS ROUTE ASSURANCE

NSSR-RS Ticket Id: DIP-RSM-Email Id/Whatsapp

Source: NSSR-RS-HANDBOOK/DESK

NSSR-RS Id:

**Ticket status:** Open/Closed/Escalated/Needs details/Not available

**Date of submission:**

**Time of submission:**

**Road system name:**

**Road system Id:**

### **Problems faced for reasons such as:**

- ( ) Quality levels
- ( ) Traffic volume levels ( ) Pollution levels
- ( ) Accidents or incidence (even crimes) trends
- ( ) Possible route diversions
- ( ) Impacted Commuter comfort levels (specific to Commuter profile) ( ) Non-availability of alternate transportation services
- ( ) Non-availability of emergency response services ( ) Non-availability of drive guidance services
- ( ) Afflicted due to weather forecasts
- ( ) Faulty vital network and signal coverage
- ( ) Vehicle indicators (problems related to Commuter Health and Lifespan Dynamics)

# Drive India NSSR-RS Unit 7\* (TMS Route Assurance) – Proposed Ticketing system

( ) Management of (negative influence specific) Key indicators

- [ ] Nature of congestion [ ] Probable Hazards
- [ ] Lack of Signage deployment ( ) Repair or restoration
- [ ] Interpretations on Fuel consumption
- [ ] Lack of support for renewable energy or battery powered vehicles

( ) **Sustainable infrastructure (positive influence specific) Key indicators**

- ☐ Stabilizing aspects
- ☐ Planning behind repair or restoration ☐ Signage and barricade deployment
- ☐ Traffic management advisory
- ☐ Pedestrian and Commuter safety ☐ Associated Traffic Management
- ☐ Accident relief, Emergency response and assistance



## RoadMIR and RoadKPI framework

### Details of problems faced:

**Resolution sought:**





### NSSR-THEME-QP-Domains

- ✓ NSC
- ✓ BBMP Road Infrastructure Projects
- ✓ BBMP Traffic Engineering
- ✓ BESCO, BWSSB
- ✓ Healthcare Providers, Medical Supplies Providers
- ✓ Civic Amenity Providers
- ✓ Automobile Dealers
- ✓ Automobile Manufacturers
- ✓ Banking institutions
- ✓ Educational institutions
- ✓ Corporate commuters
- ✓ Mission critical parts manufacturers

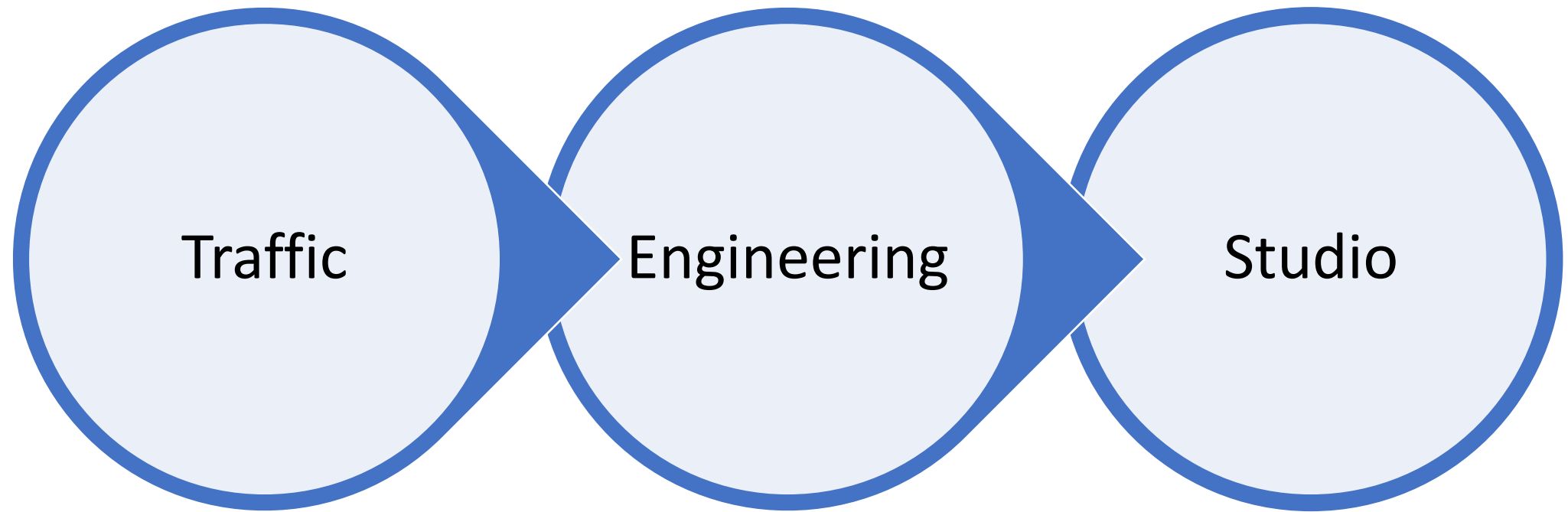
### Tracking Roads and Road Systems



RoadMIR and RoadKPI framework

### NSSR-THEME-QP-for

- ✓ Driver Fitness
- ✓ Vehicle Fitness
- ✓ Road system understanding
- ✓ Road system improvement
- ✓ Alpha Assistance



## Traffic Engineering Studio

### Immersive TEPO

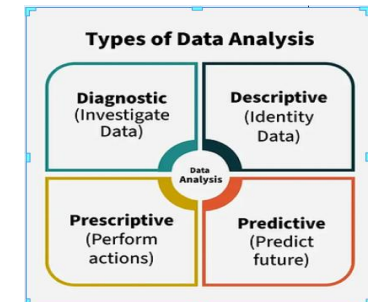
The **Links or Relationships for any PIDS Recognition** could be any of the following:

1. Environmental, Social and National health goals
2. Economic relevance
3. Social interests
4. Political demand for specific health indicators
5. Business policy
6. Unified ownership
7. Fast Track PRM evaluation and route editioning

- ☐ Viewpoint
- ☐ Need
- ☐ Concern
- ☐ Complaint
- ☐ Feedback based information



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## Traffic Engineering Studio

### Immersive TEPO



- ☐ Viewpoint
- ☐ Need
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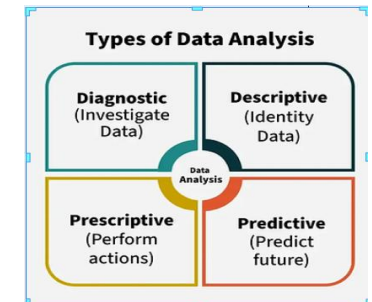
The categorization for PIDS Recognition will be any of the following:

1. PAN India or National level site
2. Urban site
3. Healthcare Provider site
4. Corporate network site
5. Social network site
6. Service Provider site



7. Fast Track PRM site & route editioning

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## Traffic Engineering Studio

### Immersive TEPO



- ☐ Viewpoint
- ☐ Need
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- ☐ Complaint
- ☐ Feedback based information

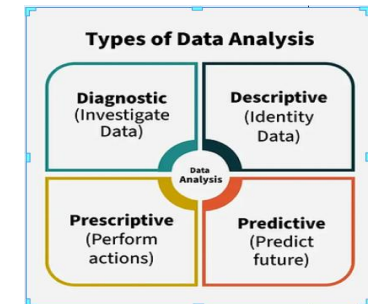
Composition will be planned based on the **RADIUS** of 5 factors such as

1. Minimum Viable Analytics
2. Detailed Highlight Analytics
3. Transformation Highlight Analysis
4. Link or Relationship Highlight Analysis
5. PIDS Recognition Analytics



6. Fast Track PRM Analytics and route editioning

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## Traffic Engineering Studio

Immersive  
TEPO



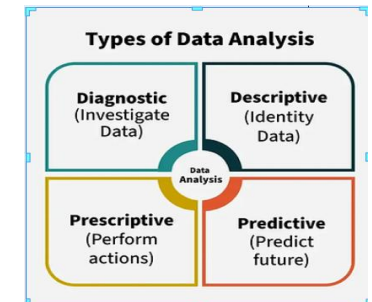
### Trending factors for the Video Workflow:

1. Relevance for Analytics
2. Repetition for Analytics
3. Continual composition for Analytics'
4. Feedback for Analytics
5. Reinforcement for Analytics
6. Transfer of Learning for Analytics based on the “**Empower to Enable to Engage**” tiered strategy
7. Fast Track PRM Analytics



- ☐ Viewpoint
- ☐ Need
- ☐ Concern
- ☐ Complaint
- ☐ Feedback based information

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## Traffic Engineering Studio

Immersive  
TEPO



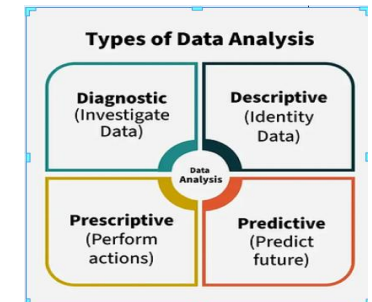
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  4. Feedback for Analytics
  5. Reinforcement for Analytics
  6. Transfer of Learning for Analytics based on the “**Empower to Enable to Engage**” tiered strategy
7. Fast Track PRM Analytics



- ☐ Viewpoint
- ☐ Need
- ☐ Concern
- ☐ Complaint
- ☐ Feedback based information

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## Traffic Engineering Studio

### Immersive TEPO

The **Transfer of Learning** should be easy, where PIDS recognition can be strategies that can be adopted. The strategies could be the following for the **Empower to Enable to Engage** tier:

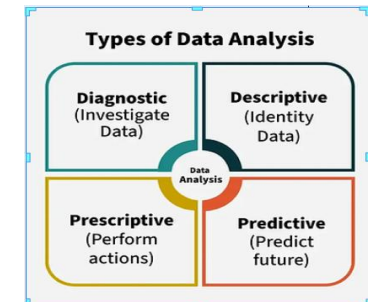
1. Direct strategy for the tier
2. Experienced strategy for the tier
3. Training strategy for the tier
4. Teamwork strategy for the tier
5. Self-correction strategy for the tier



6. Fast Track PRM strategy for the tier

- ☐ Viewpoint
- ☐ Need
- ☐ Concern
- ☐ Complaint
- ☐ Feedback based information

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## Traffic Engineering Studio

### Immersive TEPO



- ☐ Viewpoint
- ☐ Need
- ☐ Concern
- ☐ Complaint
- ☐ Feedback based information

Associated **Transfer of Learning ratings** for the onboarded video workflows could be any of the following:

1. Common expectation (from ownership or topography) Ratings
2. Unified Network expectation (from ownership or topography) Ratings
3. Risk Factor Ratings
4. Ripple Factor Ratings
5. A fundamental R\* Ratings that indicate whether the ownership at the site or topography of the site is Recognizable, Reportable, Responsive for Transfer of Learning or with Critical Path Management for Links or Relationships

The Ratings are expected to enable risk reduction or risk transfer with or without Immersive TEPO Studio|integration.

6. Fast Track PRM Ratings

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