Evaluation of digital age transportation in Delhi-NCR

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ABSTRACT

Change is coming to transportation, whether we’re ready for it or not. The Digital Age has begun, and technology has brought us open traffic data, picture of alternative routes, GPRS, current network status and social customer service. As Digital age transportation will see a revolution over the next five years as transport operators adapt and new entrants arrive, new business models will transform the use of user information, payments, integration and automation. This study will center on Intelligent Transportation System usage for to redesign benefit conveyance models and operational proficiency. Some measures should be taken by high power committee to decongest the roads of Delhi. The ultimate aim of the paper is that ITS could be put into implementation immediately. The plan was in four stages: background information, identification of problems, intervention and monitoring. The possible solutions for problems encountered are suggested.

This plan which was efficient and cost effective can be used in transportation infrastructure in Delhi-NCR.

Keywords: Open Traffic Data, Intelligent Transportation System (ITS).

1. BACKGROUND

A high-powered committee of urban development have to set up of an intelligent transport system (ITS) as one of 10 ways in which to decongest the roads of Delhi. Such a system would reduce the need for a policeman to be present on the road while increasing flow of traffic. Among the 10 prescriptive measures of the high-powered panel, it is ITS that could be put into implementation immediately. In fact, some of the requirements of such a system are already in place, having been implemented by Delhi Police in past 2 years. This paper is primarily concerned

- To provide an efficient and economical rail- and road-based transportation system (including mass transport systems) well-integrated with the land use patterns to support balanced regional development;
- To provide accessibility to all parts of the region and discourage transit of passengers and goods through the core area of NCT-Delhi by constructing Peripheral Expressways/bypasses and thereby opening new areas for economic development;
- To provide a suitable public transport system in NCR to shift people from private transport to public transport, and
- To reduce vehicular air pollution.

2. IDENTIFICATION OF PROBLEM

Elements of an ITS system are in the works already after the central government, in an interim measure last year, sanctioned Rs 60core for upgrading the infrastructure on some congested, accident-prone roads and for the installation of modern technologies. Police earmarked some of the funds for the erection of 50 message boards along Ring Road and Outer Ring Road to project real-time data on the traffic on these stretches. Some funds were also set aside to procure uniform-mounted cameras for policemen to employ to record on-road violations.
The draft report says that ITS would be essential for providing commuters with real-time information in case of accident, road repairs, diversions, etc. It would also monitor parking space and guide commuters on the efficient use of empty slots. Such a system could also deal with an integrated fare management setup for buses.

**Interventions**

New technologies have the potential to make our roads and transit systems safer, greener and more efficient. The transportation department is working hard to ensure that these technologies can be integrated safely into our existing system.

“Delhi-NCR to have to get smarter about using that infrastructure and/or innovate in passenger vehicles and mobility”

The good transportation infrastructure is required in Delhi-NCR as study groups are trying to improve the following aspects:

- NCR Policy zones, demographic profile and settlement pattern
- Regional land use and rural development
- Physical infrastructure including transport and communications
- Utility and service infrastructure including power, water, sewerage, solid waste, drainage, irrigation etc.
- Social infrastructure including education, health, shelter, recreation, law and order etc.
- Environment including tourism, heritage, pollution, disaster management etc.
- Institutional Framework.
- Economic and Fiscal Policy group including resource mobilization, funding etc.

Alongside enlistment of innovation, the traffic police are likewise pitching for a congestion tax in certain city territories. An authority clarified that a sensor could be introduced at the passages and ways out of streets in such areas to decide the level of congestion at any given point. The sensors would likewise automatically deduct the congestion expense from a versatile wallet, as occurs in London.

Smart road projects abroad include measures to control, screen and guarantee smooth traffic flow. For example, in the US and Canada sensors are introduced each couple of hundred meters along the roads to track traffic flow. Information from these helps an electronic monitor sets the most reasonable speed limit and the signage is balanced in like manner to illuminate motorists. In different spots, to decrease congestion, slope metering gadgets end vehicles on slip roads and discharge them each one in turn to the main road.

**For Jam-Free Drive**

As per a study by School of Planning and Architecture, the accessibility to Delhi airport is the poorest among many Metro cities.

![Map of Delhi](image)

**Project 1: BARAPULLAH PHASE – IV**

Work: In phase-IV, the government plans to extend the elevated road from INA to Dhaula Kuan

**How it will help:** Once all phases are finished, residents of Noida and East Delhi will have a signal-free ride between Mayur Vihar and Dhaula Kuan
Status: 2020 Deadline

**Project 2: RTR FLYOVER**

**Work:** Construction of a parallel flyover along the existing one on Rao Tula Ram Marg

**How it will help:** Smoother ride to airport for those coming from Vasant Vihar, Nehru Place

Status: June 2018 Deadline

**Project 3: GRADE SEPARATORS TO DECONGEST NH8**

**Work:** Grade separators to make three junctions on NH-8 signal free between Dhaula Kuan and the point where Delhi-Gurgaon Expressway begins

**How it will help:** The junctions are major bottlenecks. The project will help decongest NH-8, a major link to the airport

**Status:** Deadline yet to be fixed

**Project 4: NORTHERN BY PASS**

**Work:** An underpass across NH8 and a flyover over Northern Access Road, near Hanuman Temple.

**How it will help:** Signal-free ride to airport for those coming from Vasant Kunj, Mahipalpur (in pic)
Status: Early 2019 deadline

Project 5: NSG ROUNDABOUT UNDERPASS
Work: An underpass was constructed on the NSG roundabout in 2009
How it will help: It segregated Dwarka bound traffic from T1 Traffic and eased out traffic flow at NSG roundabout
Status: Project completed

Project 6: NORTHERN ACCESS ROAD
Work: It was finished in 2010 as the link to the Terminal 3 of Delhi airport
How it will help: The road handles nearly 57% of the total traffic to T3
Status: Project completed

Project 7: SOUTHERN ACCESS ROAD
Work: Two underpasses and a flyover just ahead of the Gurgaon border on National Highway-8. Also proposed, a flyover for Dwarka-bound commuters
How it will help: It will provide smoother commute to airport and Dwarka from Vasant Kunj, Dhaula Kuan and Gurgaon
Status: 2020 Deadline

Project 8: DWARKA EXPRESSWAY
Work: Expressway connecting Shiv Murti, near airport to Kherki Daula in Gurgaon. It will further be linked to the Delhi-Jaipur Expressway
How it will help: It will not only provide a smoother ride to Gurgaon residents to the airport but will also be an alternative to Delhi-Gurgaon expressway
Status: 2021 Deadline

Project 9: NELSON MANDELA MARG EXTENSION

Work: Extension of Nelson Mandela Marg up to Gurgaon-Manesar by pass

Status: project under planning

Project 10: NORTH-SOUTH CORRIDOR

Work: An elevated road likes the Barapullah between Wazirabad in north Delhi and airport in the south

How it will help: Residents of north Delhi will be able to bypass major traffic bottlenecks on the way to airport.

Status: 2021 deadline

3. CONCLUSIONS

This study led to comprehend the Delhi-NCR setting and set out the background for a survey of traffic management and Intelligent Transport Systems (ITS). The transportation issues that urban areas are looked with can be extensively classified in five regions: land-usage; congestion; auto dependency; pollution; and different issues, which incorporate security, political challenges and economic success.

In Delhi-NCR, infrastructure planners are endeavoring to make smart city by using transport economy and intelligent transportation system. City transport arranging experts could enormously profit by methodologies and approaches are being implemented somewhere else around the world, as based on the outcomes, they could recognize best practice and tailor it to their city-particular need.

Key Performance Indicators (KPIs) can comprehend in which zones the transportation system of a city is performing admirably. KPIs ought to incorporate all territories in which movement administration applications can enhance execution, (for example, wellbeing, productivity of individual modes, manageability, social consideration and so on) in order to indicate whether late interests in the transportation arrange have conveyed changes and to help transport organizers in making business cases for future ventures. The NCR Planning Board had arranged a Functional Plan on Transport for National Capital Region with point of view year 2032.

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