

TRANSPORTATION ELEMENTS OF SMART CITY

Presented By
Ramakant Jha

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SMART CITY

A City which provides

- Quality of Life
- Quality Business Environment
- Quality Citizen Centric Governance

PRIMARY REQUIREMENTS OF A SMART CITY

- Adequate & Quality Physical Infrastructure
- Adequate & Quality Social Infrastructure
- An Efficient Governance System
- Citizen Participation in Planning, Development & Operation of various city services

Smart city programme is a laudable initiative of Govt of India

- **To involve State Govt, Urban Local Body and Citizen in the Development & Operation of their respective city.**
- **To inculcate Cooperative Competition among various cities to provide better facilities in their cities**

Citizen participation is an important
elements of the smart city
programme

- Recent Survey indicates that
mobility is of very high
priority in cities.

Transportation system provides
mobility and lifeline in the city

- As blood circulation is vital for the
body

Elements of Transportation System in a large city

A. Static infrastructure

1. Road system – Hierarchy of Road Network
2. Mass Rapid Transit System – Metro, LRT, Skyway.
3. Car Parking, Truck Terminals, Bus Terminals
4. Airport & Helipads
5. Water Transport System (City with Water Front) – Jetty, Water Transport Terminal
6. Long Distance Train System - Railway Station/ Terminals
7. Ports
8. Container Depot

Cont ..

Elements of Transportation System in a large city

B. Mobile Infrastructure

1. Personalized Modes - Cars, Motorbike, Bicycle
2. Public Modes – Buses, Paratransit, Mass Rapid transit (Suburban Train, Metro, LRT, Monorail, Skyway Train)
3. Public Transport for Intercity Travel – Railway/ Air Service, Buses and Skyway Train)
4. Water Transport for Intracity Travel – Boats, Catamaran, Hovercraft, Hydrofoil etc.
5. Trucks for goods movement

Transportation System in a city
consists of several transport
elements involving multiple
agencies

Efficient Integration of the various
sub systems/ elements of the
transportation system is an essential
requirement of a
SMART CITY

In most of large cities citizen
spends 3 to 4 hours of productive
time per day in travel

PRESENT SCENARIO

- 1. 30% of Air Pollution in a city is due to Transportation System**
- 2. About 70% of Noise Pollution in a city is due to Transportation System**
- 3. More people die in Road, Rail, Air Accidents than by other diseases**

**A large number of Autonomous
Agencies are responsible for the various
elements of Transport**

**- Without an effective coordination
mechanism**

**Economic loss on account of lack of
Integrated Transportation System is
Colossal**

**Smart City Programme Provides
for Effective Integration of
various modes of Transport in
the city**

INTELLIGENT / SMART TRANSPORT SYSTEM

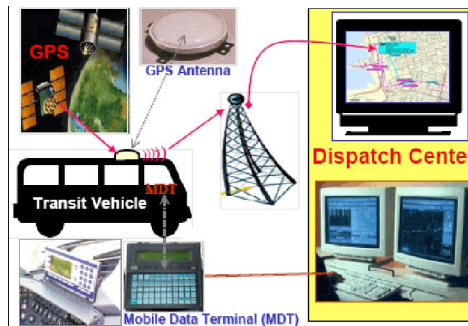
- **Intelligent Transport System helps in improving Mobility, Environment & Consumer Satisfaction**
- **Helps in better coordination among various agencies responsible for providing Transport Services**

SMART Transportation

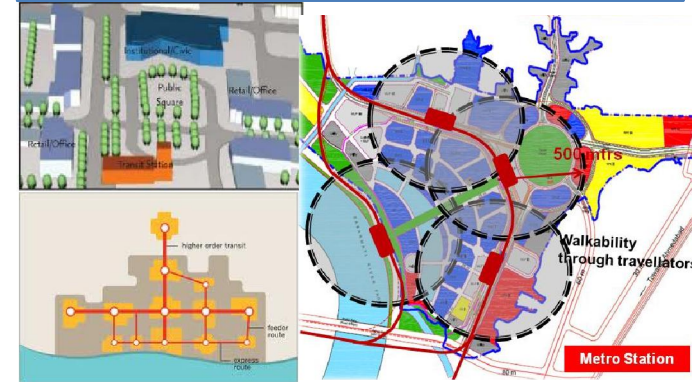
Interactive road maps



Automatic vehicle location and tracking



Transit Node Management



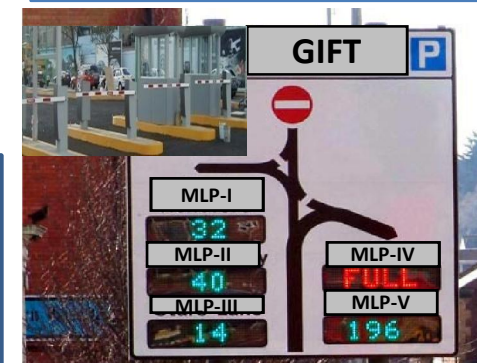
Road condition system



Real Time Travel Response



Parking Management



Ridership analysis

Accident reporting

Vehicle emission monitoring

Safety management

Asset Management

SMART CITY PROGRAMME INCLUDES

- **Efficient Integration of Transport System & land Use**
- **Demand Management for Transport Services**
- **Value Addition in Real Estate**

APPLICATION OF TECHNOLOGY

**Judicious use of Appropriate
Technology can assist in
Integration & Efficient Operation
of the Various elements of
Transport System**

CONCLUSIONS

- 1. A City has several elements of transport system**
- 2. Smart City Programme provides for use of appropriate technology for City Transport System to increase throughput of the system in a cost effective manner**

THANK
YOU