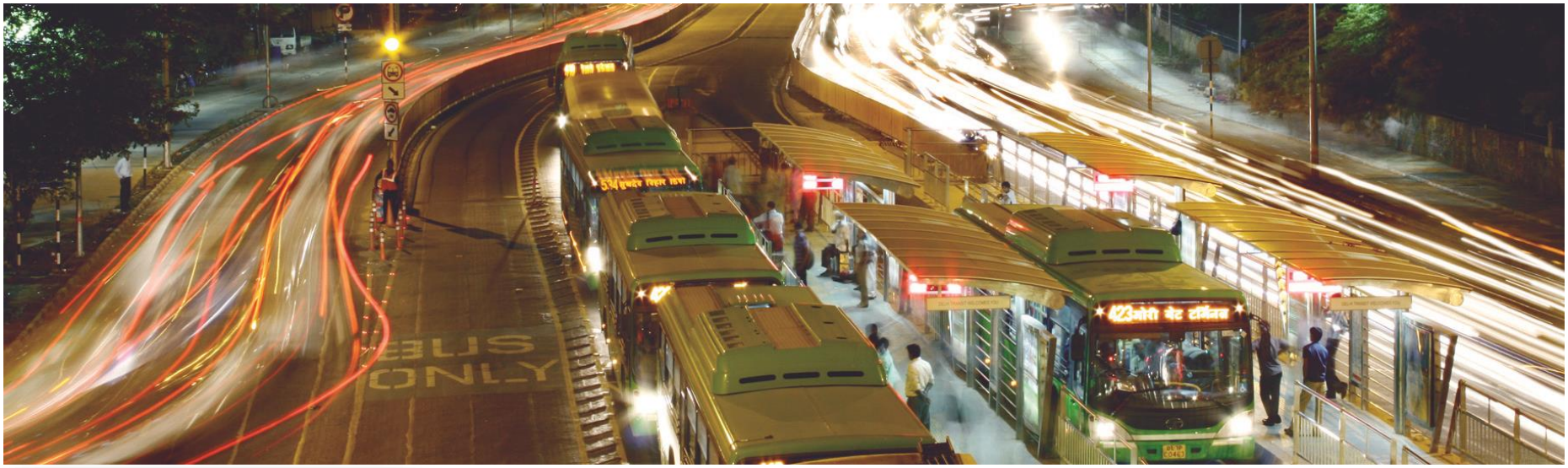


ITS Applications in Smart Cities

Presented By.

Alok Sethi

GM – *Transportation Technology Solutions*

DIMTS
We help people move

Joint Venture of Govt. of NCT of Delhi and IDFC Foundation

ITS and Smart cities- Key Application Areas

Key Application Areas

Travel & Traffic Management

Public Transportation Management

Information Management

Electronic Payment

Commercial Vehicle Operations

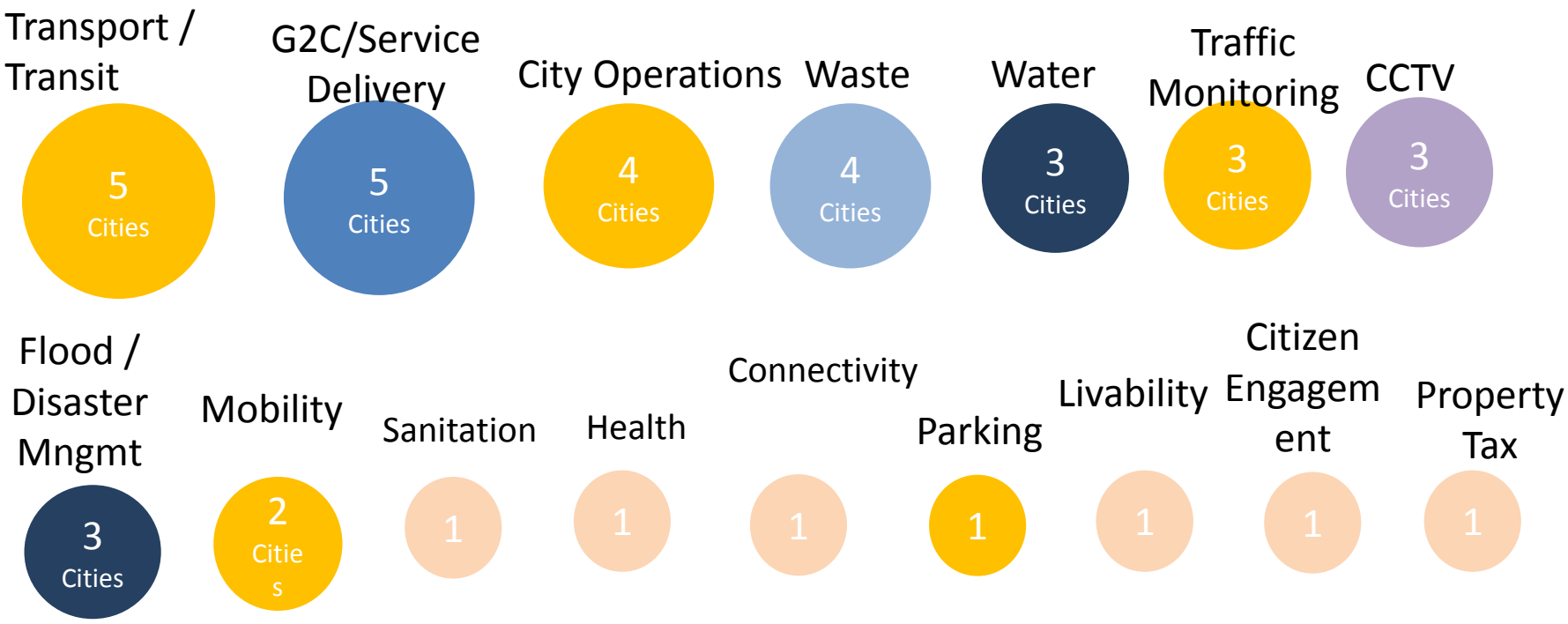
Emergency Management

Typical Benefits of ITS

- **Improved Service Quality**
  - On time departures, even headways, better reliability
- **Improved productivity and resource allocation**
  - Achieve more with the available bus and crew resource
  - Less slack time in schedules, less overtime needed, less lost-kms
  - Reassign dispatchers etc. to where they are more effective
- **Improved operational discipline**
  - Better driving, less accidents, better customer perception
- **Accurate and extensive information for passengers**
  - Waiting times reduced, passenger will wait for a good service
- **Extensive information for planning and management**
  - Improved corporate management, ability to track
- **Complete, timely and error-free data to support administrative systems, reduced processing costs**
  - Reliable means to implement contract monitoring and payments

ITS in Smart Cities- Recent Govt. Intervention

- Around 15 cities out of first 20 have major ITS intervention at PAN City level.
- 80% of cities have Intelligent Transport(Mobility components)



Pan City Solutions identified by the 20 Smart Cities

ITS Implementations in India

Transit Based ITS in Indian Cities

ITS already implemented
• Delhi (Cluster buses) • Bangalore • Ahmedabad (Janmarg BRT) • Mysore • Bhopal • Mumbai • Naya Raipur (BRT) • UPSRTC • RSRTC • Himachal roadways
IN Process of Implementation/ Partial
• Chandigarh • Jaipur • Bhopal • Mira Bhayandar • Hubli Dharwad (BRT) • Indore (BRT) • Naya Raipur (BRT) • Kolkata (CSTC

Traffic Implementations

Notable ITS implementations in Traffic:

- Bangalore, Mumbai, Hyderabad have traffic *(as well as transit)* implementation of ITS
- Mumbai, Pune, Kolkata and Chennai have made significant ITS applications for traffic

- Intelligent Signaling
- Surveillance Cameras
- Website: live traffic updates
- Variable Message Signboards
- enforcement cameras used for speeding and red light jumping
- Control Centre

Potential Application Areas

Smart City - ITS Platform for Public Transport

Better management of resources and Efficient interface with Related City services

Smart Transport Planning

Smart Congestion management

Intelligent decision support

Live tracking feeds

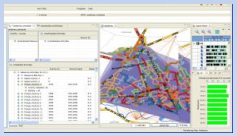
Fare Collection Analysis

Intelligent Transport System

Intelligent Bus

Connected Bus

Efficient Transport Operations



Route Optimization

Connected Bus Stops

Enhanced Passenger Service Experience

Optimized transport Operation, offering reliable and safe Transportation services

Passenger Information System

Personal Travel Planner

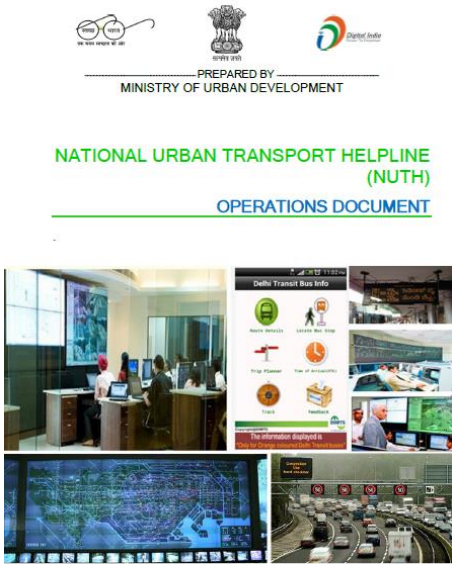
Personal Travel Assistant

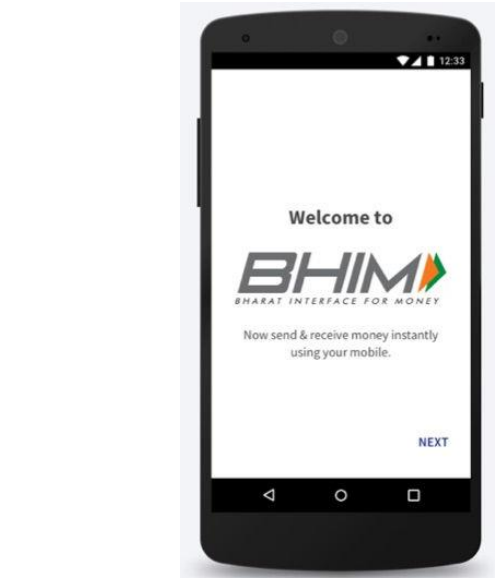
Complete Visibility for effective Travel Plan for passengers

Smart City – Unified Transport Example

Govt. Guidelines

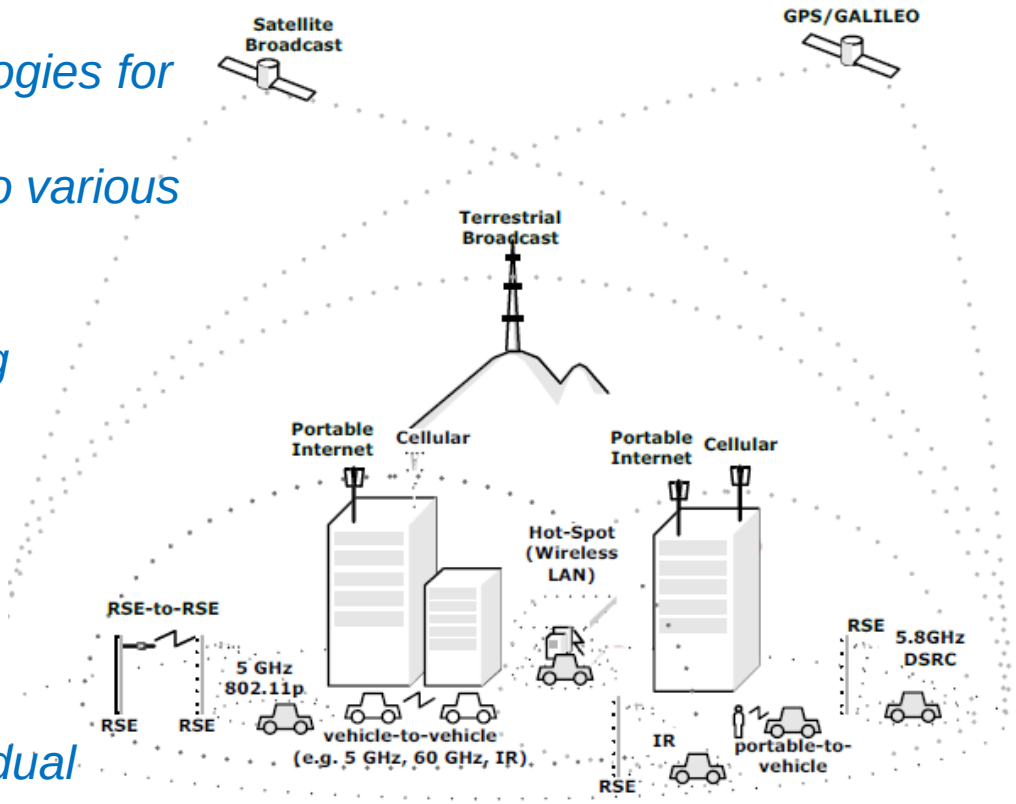
- MoUD – National Urban Transport helpline framework published.
  - Enables framework for Passenger information via various modes phone (155220), Mobile app, web sites.
- MoRTH guideline for eTolling, Vehicle Tracking devices.
- MHA 102 emergency helpline.
- Govt. Digital Payment infrastructure push – BHIM, UPI payment interface, NPCI common card specifications.





Application Areas in ITS

- ***The Rise of IoT networks.***
  - *Multiple communication technologies for data transfer to central apps.*
  - *Same sensors can give inputs to various departments..*
  - *Key application in Parking, Fare collection, Road charging, tolling*

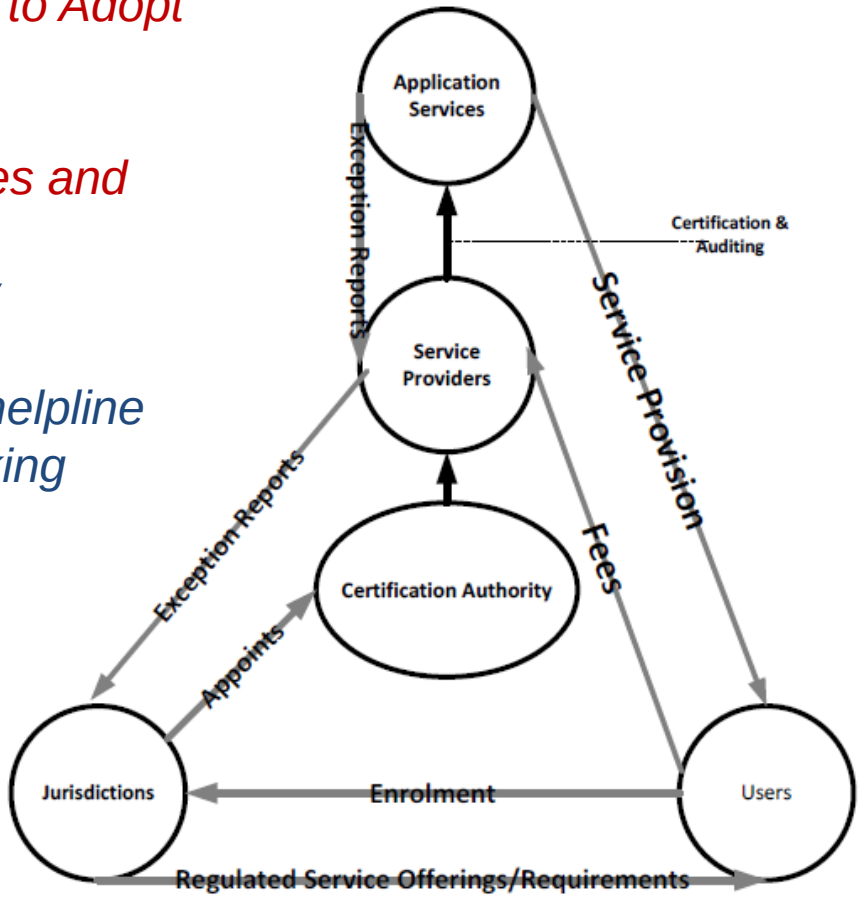


- ***Technology the enabler >>>> to technology the equaliser***
  - *Adopting of technology at Individual operator level assisted by Open transparent data platforms, breaking the artificial entry barriers by technology leaders.*
  - *Key application : Shared Mobility, road safety, road charging*

Application Areas in ITS

- ***Framework for collaborative Telematics Applications***
  - *Govt. regulations making it mandatory to Adopt Technology platform*
    - *Eg. Etolling, emergency Buttons*
  - *Need to integrate multiple data sources and share data for multiple uses..*
    - *MHA mandate for 102 emergency services.*
    - *MoUD National Urban Transport helpline*
    - *MoRTH mandate for Vehicle tracking*

The Emergence for Govt. regulated Commercial Transport application platforms ..



Key Technology from ITS (VTS) for Road Safety

The AIS-140 certified VLT device transmits the following to the State Backend which can be used to identify offenders hence ensuring road safety

Harsh Acceleration

Harsh Breaking

Over Speeding

Route Deviation

Sharp Turning

Roadmap

Endless possibilities benefiting the commuters….

Thank You

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