



*We help people move*

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

**An ISO 9001, 14001, OHSAS 18001 and ISO 27001 certified company**



# Delhi Integrated Multi-modal Transit System Limited (DIMTS)

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# Use of ITS for Efficient Monitoring of Public Transport Operations

**Presenter: Ravi Prakash Gupta. Head Information Technology DIMTS**

Nov 27, 2014



# Corporate Profile

## Company Overview

- **50:50 Joint Venture**
- Government of National Capital Territory of Delhi (GNCTD) and Infrastructure Development Finance Company Ltd. (IDFC; USD 10 billion assets under management; power, highways, ports, etc.)
- To provide expert services in urban transport & infrastructure development



# Quality Certification

**BUREAU VERITAS**  
Certification



*Certification*  
Awarded to

**DELHI INTEGRATED MULTI MODAL  
TRANSIT SYSTEM LTD.**

1<sup>st</sup> / 2<sup>nd</sup> / 6<sup>th</sup> FLOOR, ISBT, KASHMIRI GATE, DELHI - 110 006, INDIA.

*Bureau Veritas Certification (India) Private Limited certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the standards detailed below*

STANDARDS

**ISO 9001:2008 & ISO 14001:2004**

SCOPE OF SUPPLY

Provide Urban Transport Consultancy Services in areas of Transport Planning, Advisory Services, Intelligent Transport Systems, Engineering & Transport Operations.

PERMITTED EXCLUSIONS (UNDER ISO 9001:2008)  
7.5.2 - Validation of processes for production and service provision

Original Approval Date: 03 September 2011  
Next Recertification Due Before: 01 August 2014

*Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until: 02 September 2014*

To check this certificate validity please +91 22 8695 6300 call:

*Further clarifications regarding the scope of this certificate and the applicability of the Management System requirements may be obtained by consulting the organisation.*

Certificate Number: **IND11.6727NQE**




R. K. SHARMA  
Director



Certification / Managing Office Address: "Marwah Centre" 6th Floor, Kishanlal Marwah Marg, Opp. Ansa Industrial Estate, Off Saki Vihar Road, Andheri (East), Mumbai - 400 072, India.

**BUREAU VERITAS**  
Certification



*Certification*  
Awarded to

**DELHI INTEGRATED MULTI MODAL TRANSIT SYSTEM LTD.**

1<sup>st</sup> FLOOR, ISBT BUILDING, KASHMIRE GATE, DELHI - 110 006, INDIA.

*Bureau Veritas Certification (India) Private Limited certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the standard detailed below*

STANDARD

**ISO/IEC 27001:2005**

SCOPE OF SUPPLY

ISMS (INFORMATION SECURITY MANAGEMENT SYSTEM) COVERING MANAGEMENT, OPERATIONS, AND MAINTENANCE OF INFORMATION SYSTEMS, ASSETS AND ASSOCIATED PROCESSES THAT ENABLE TO PROVIDE BUSINESS SERVICES TO OUR CUSTOMERS FROM DIMTS OPERATIONAL CONTROL CENTRE & DATA CENTRE INCLUDING SUPPORT FUNCTIONS OF HR & ADMINISTRATION.

STATEMENT OF APPLICABILITY: VER 2.0 DATED 20-MAY-2012

Certification Cycle Start Date: 26 June 2012  
Next Recertification Due Before: 26 March 2015

*Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on : 24 June 2015*

Certificate Number: **IND12.0052U**



R. K. SHARMA  
Director



Bureau Veritas Certification using the accreditation certificate number 038 008

Certification Body Address: Brandon House, 180 Borough High Street, London SE1 1 LH, United Kingdom.  
Local Office Address: "Marwah Centre" 6th Floor, Kishanlal Marwah Marg, Opp. Ansa Industrial Estate, Off Saki Vihar Road, Andheri (East), Mumbai - 400 072, India.  
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To check this certificate validity please call: +91 22 8695 6300

**BUREAU VERITAS**  
Certification



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TRANSIT SYSTEM LTD.**

1<sup>st</sup> / 2<sup>nd</sup> / 6<sup>th</sup> FLOOR, ISBT, KASHMIRI GATE, DELHI - 110 006, INDIA.

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STANDARD

**BS OHSAS 18001:2007**

SCOPE OF SUPPLY

Provide Urban Transport Consultancy Services in areas of Transport Planning, Advisory Services, Intelligent Transport Systems, Engineering & Transport Operations.

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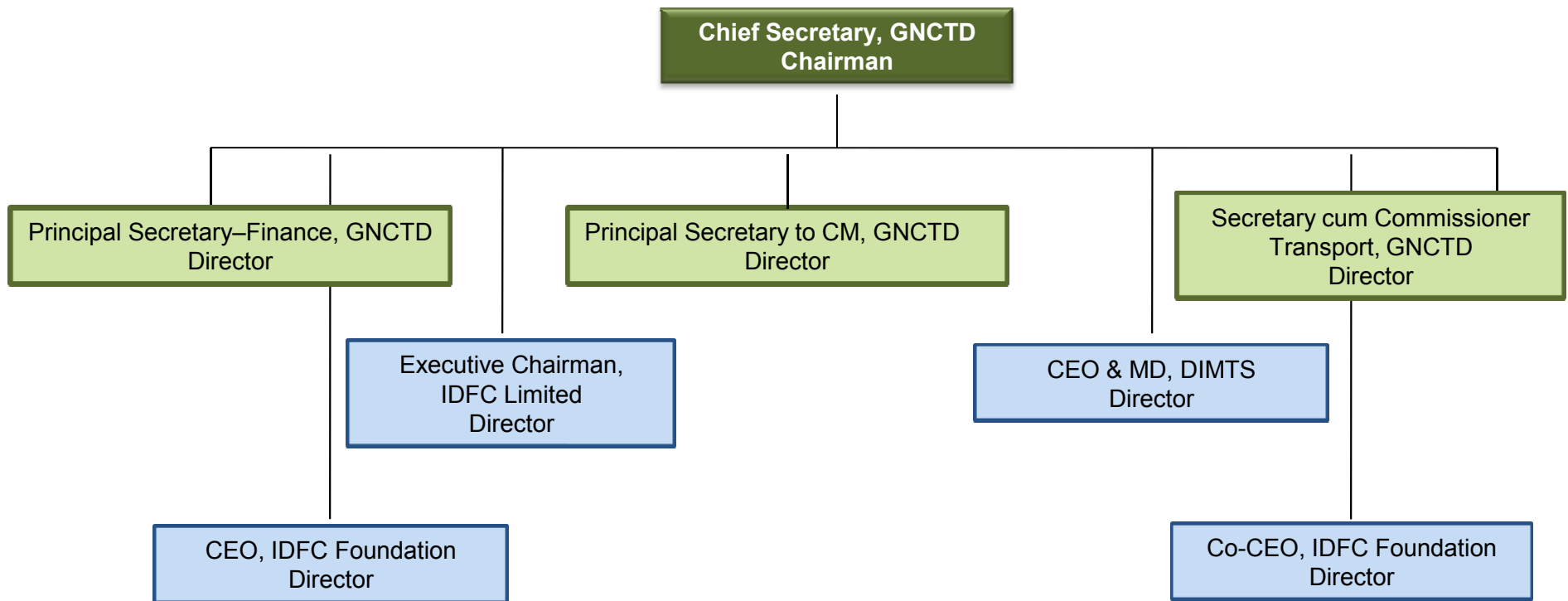
Certificate Number: **IND11.6727NHS**



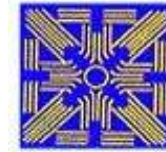
R. K. SHARMA  
Director

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# Board of Directors



# Clients



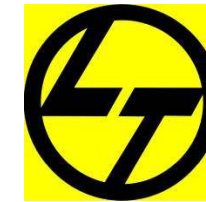
**MMRDA**  
Mumbai Metropolitan Region Development Authority



Haryana Urban  
Development Authority



Municipal  
Corporation  
of Delhi



Ministry of Urban Development  
Government of India



Ahmedabad  
Municipal  
Corporation



# Partners



IIT  
DELHI



TRIPP



CAPITA SYMONDS



# Business Divisions

DIMTS has a team of experts who have worked in various Government departments as well as leading private companies such as IDFC, IL&FS, TCS, IBM, L&T, DMRC etc.

Transport Planning	Advisory Services	Engineering	Operations	Transport Technologies
<ul style="list-style-type: none"><li>• Comprehensive mobility planning</li><li>• Route Rationalization</li><li>• Urban Mass Transit Corridor Planning and Design</li><li>• Traffic simulation</li></ul>	<ul style="list-style-type: none"><li>• Feasibility Analysis</li><li>• Project Structuring</li><li>• PPP Advisory</li><li>• Bid documentation</li><li>• Bid process management</li></ul>	<ul style="list-style-type: none"><li>• Design</li><li>• Project Management</li><li>• Construction Supervision</li><li>• Independent Engineering Services</li></ul> <p>Railways</p> <ul style="list-style-type: none"><li>• Alignment and Track design</li><li>• Signaling</li></ul>	<ul style="list-style-type: none"><li>• Bus Concession Management</li><li>• BRT Corridor Management</li><li>• Operations Control Centre</li><li>• Smart-card issuance management</li></ul>	<ul style="list-style-type: none"><li>• Automatic Vehicle Location</li><li>• Electronic Ticketing</li><li>• Passenger Information Systems</li><li>• Intelligent Signaling</li><li>• Identity Management</li></ul>

# Digital INDIA Blueprint

The 'Digital India' blueprint revolves round 'nine pillars' — broadband highway, e-governance, electronics manufacturing leading to 'zero import', universal phone access, electronic delivery of services, jobs, rural internet, information for all and 'early harvest' programmes.

## Some Challenges:

- High speed broadband
- Smart payment system that works for government services.
- Investment is another big test.

**THE DIGITAL INDIA DREAM**

**RURAL BROADBAND FOR ALL**  
Target: 2.5 lakh villages, up from current 1.3 lakh  
Cost: **₹32,000cr**  
Deadline: March 2017

**UNIVERSAL MOBILE ACCESS**  
Target: 42,300 villages  
Cost: **₹16,000cr**  
Deadline: 2018

**WiFi IN VARSITIES**  
Target: 400 institutions  
Cost: **₹790cr**  
Deadline: 2015

**PUBLIC WiFi HOTSPOTS**  
Target: All cities with 1m population or more  
Deadline: 2015

**₹1,13,000cr**  
Total investment (the bulk for existing projects and ₹13,000cr for new ones)

# Where Should Investments Go for Digital India?

## Transport System



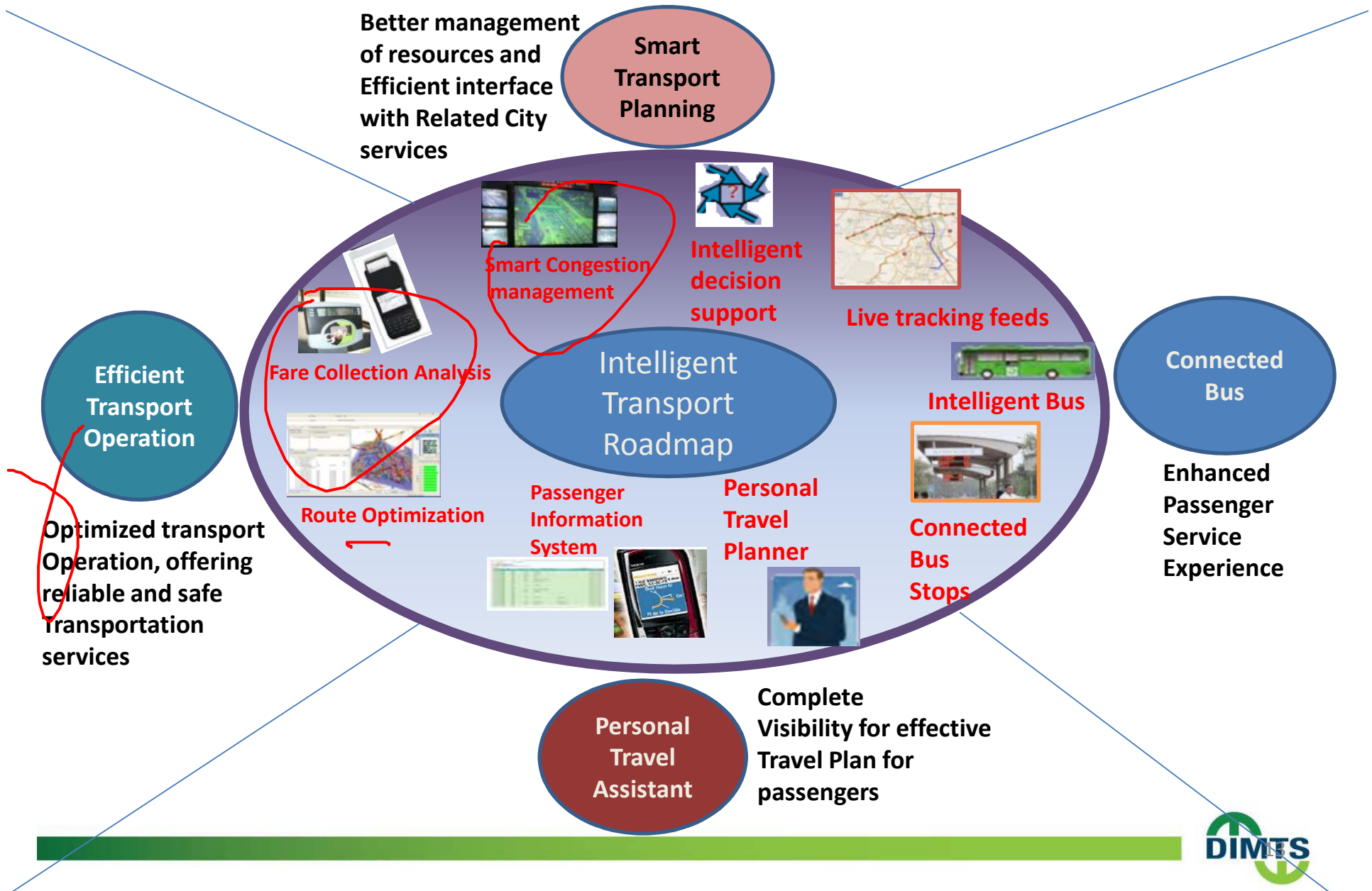
## Transport Infrastructure



## IT Infrastructure

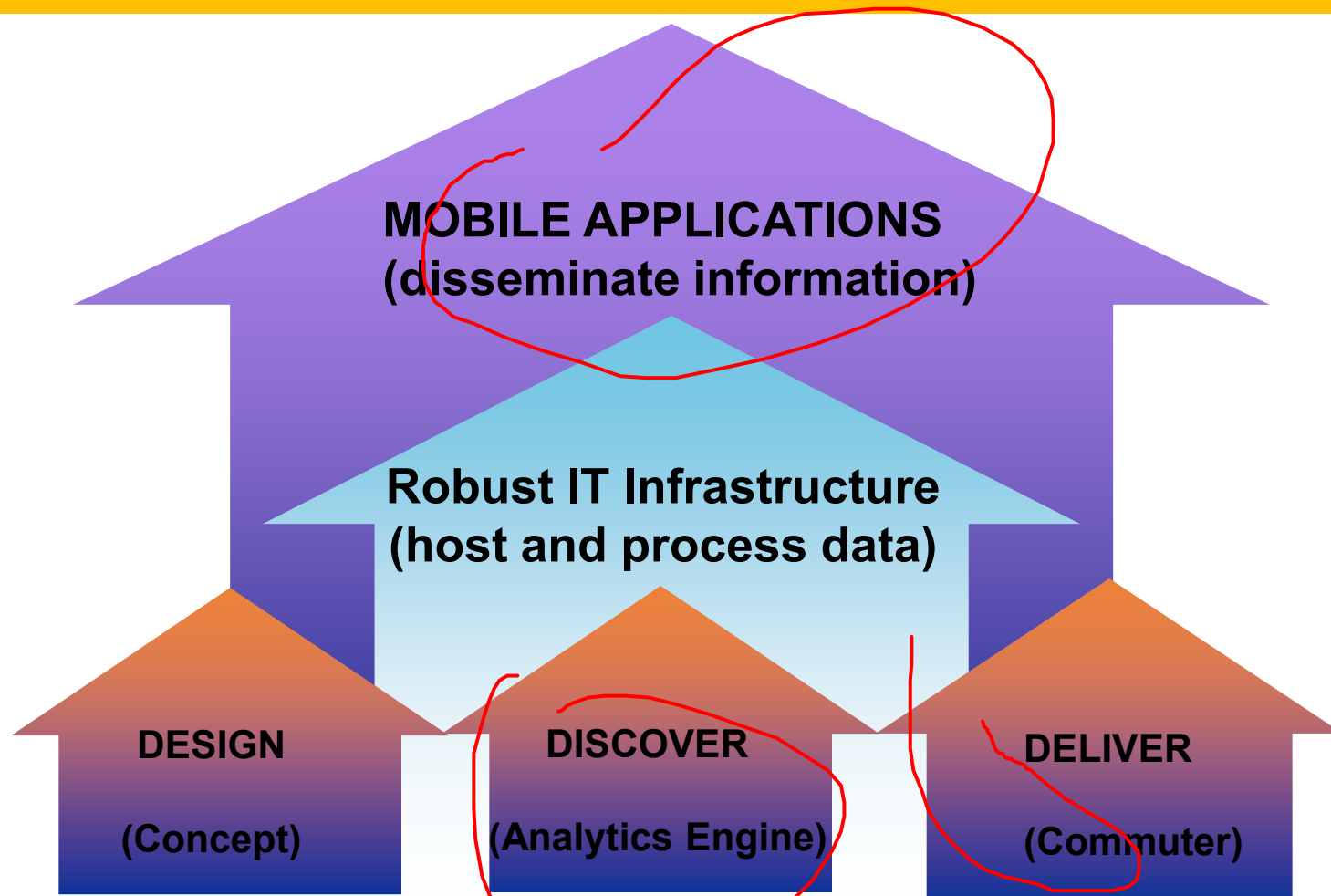


# Efficiency Enabler in Urban Transport



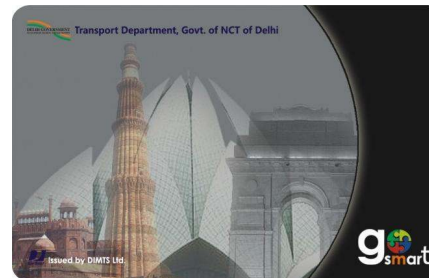
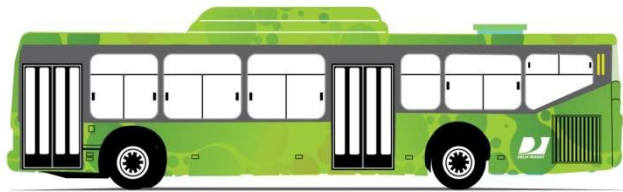
# Digitising the Consumer journey

## URBAN Transit in SMART CITIES



# Our Expertise

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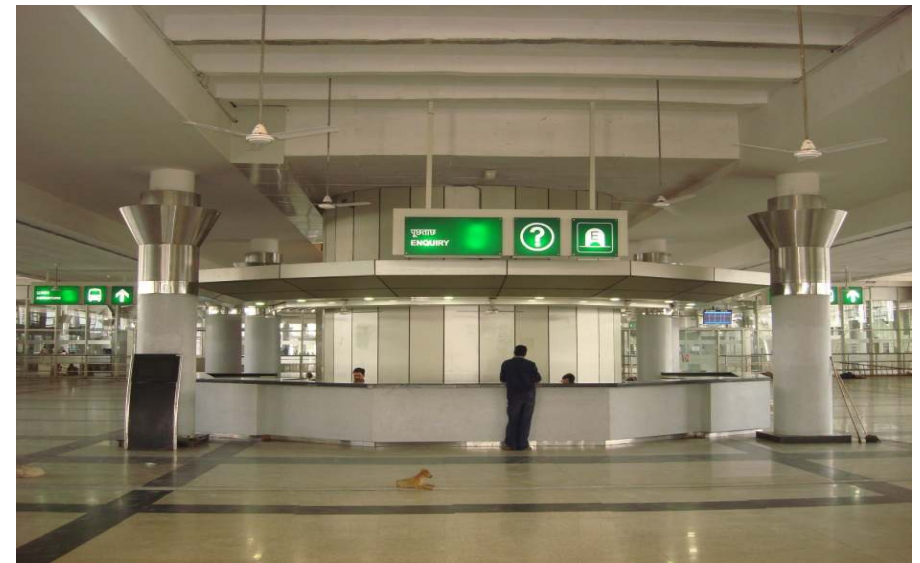
# Infrastructure Development and Engineering

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## Key Services

- Project Consulting
- Project Management Consultancy
- Independent Engineer
- Engineering, Surveys, Investigations and Restoration Engineering
- Technical Vetting / Quality Inspection
- Turnkey Execution
- Asset Management

# Multi-Modal Transit Centres



# Foot Over Bridges (FOBs)



# Underpasses



## Depot Planning and Development



- Depot design and circulation planning
- Equipment sizing
- Contractor selection
- Construction supervision and quality monitoring



# Bus Queue Shelters



- 1200 BQS have been developed on various modes:
  - PPP Mode (transaction advisor)
  - Construction Contracts (Project Monitoring Consultant)
  - As Construction agency



# Automatic Multi Level Car Parking

Engaged as the Independent Engineer for the development of automatic multi-level parking at two locations:

- Baba Kharak Singh Marg
- Sarojini Nagar



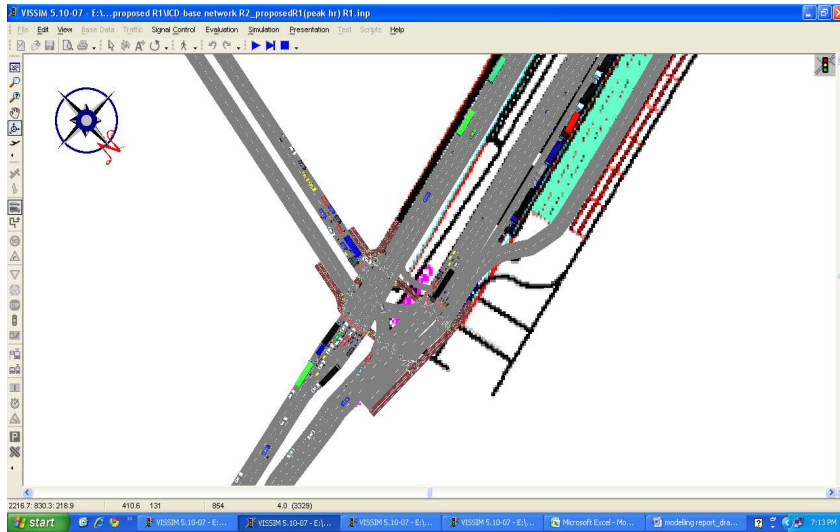
# Transport Planning

## Key Services

- Comprehensive Mobility Planning (CMP)
- Transport Policy and Planning
- Traffic Simulation and Impact Assessment
- Bus Rapid Transit (BRT) Planning and Design
- Mass Transit Planning
- Bus Route Optimization and Rationalisation
- Public Transit Terminal and Depot Planning and Design
- Urban Streetscaping, Street Furniture and Signage Planning
- Parking Demand Management & Layout Design
- Traffic Management Studies
- Traffic and Revenue Forecast (Studies / Investment Advisory Studies)
- Road Corridor Development Plans
- Feasibility Studies of flyovers and underpasses
- Planning of pedestrian and non-motorized vehicle infrastructure

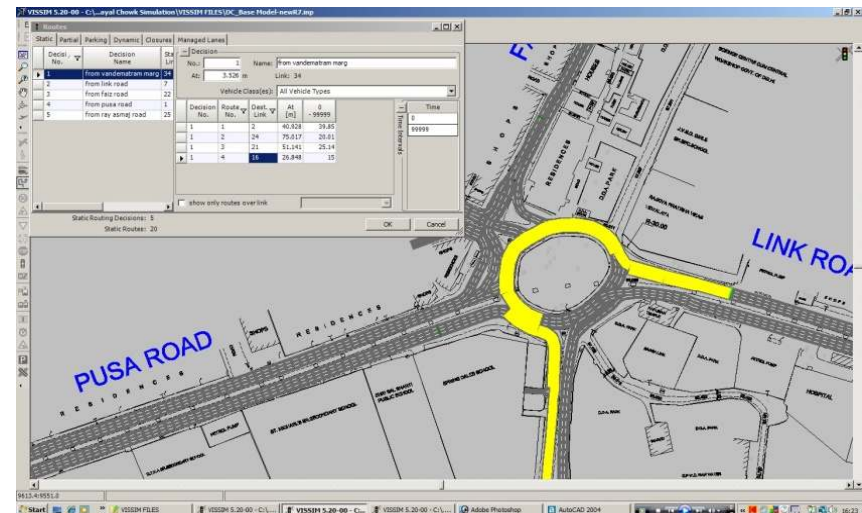
# Traffic Simulation & Modelling Expertise

## Traffic simulation and modeling using Visum, Vissim and Cube.



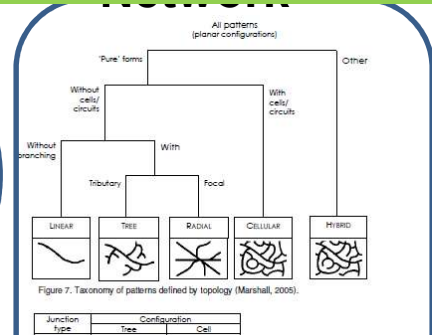
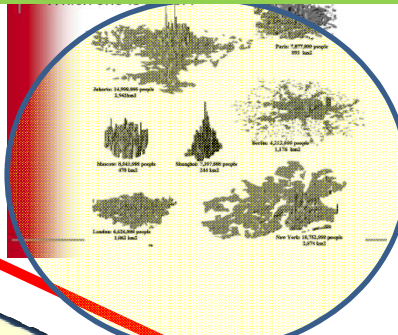
- **Simulation for transport facilities**

- Preparation of base (as-is scenario) micro-simulation model
- Impact assessment of the proposed facility
- Traffic simulation and modeling using Visum, Vissim and Cube
- Traffic Circulation Plan for inter-state bus terminals at Anand Vihar and Sarai Kale Khan



# Urban Planning and Transport Planning is Complex

Density  
( Vertical,  
Horizontal)



## Several Alternatives... Which Combination – Most Efficient ?

Local Future Land Use Plans

Employment & Household Projections

Urban Form

Mono Nuclii, Poly Nuclii

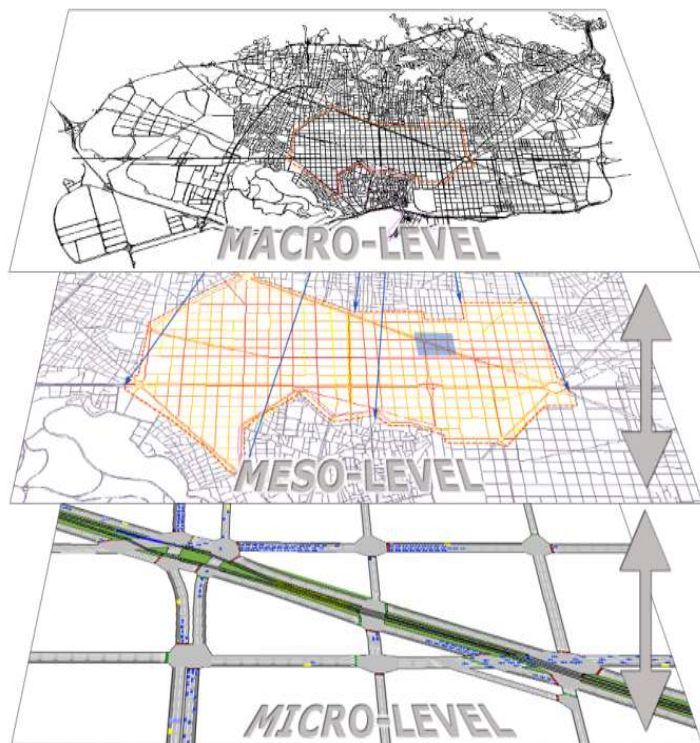
Land-use ( Single, Multi)

Projected Deficiencies (congestion) and Alternatives Analysis

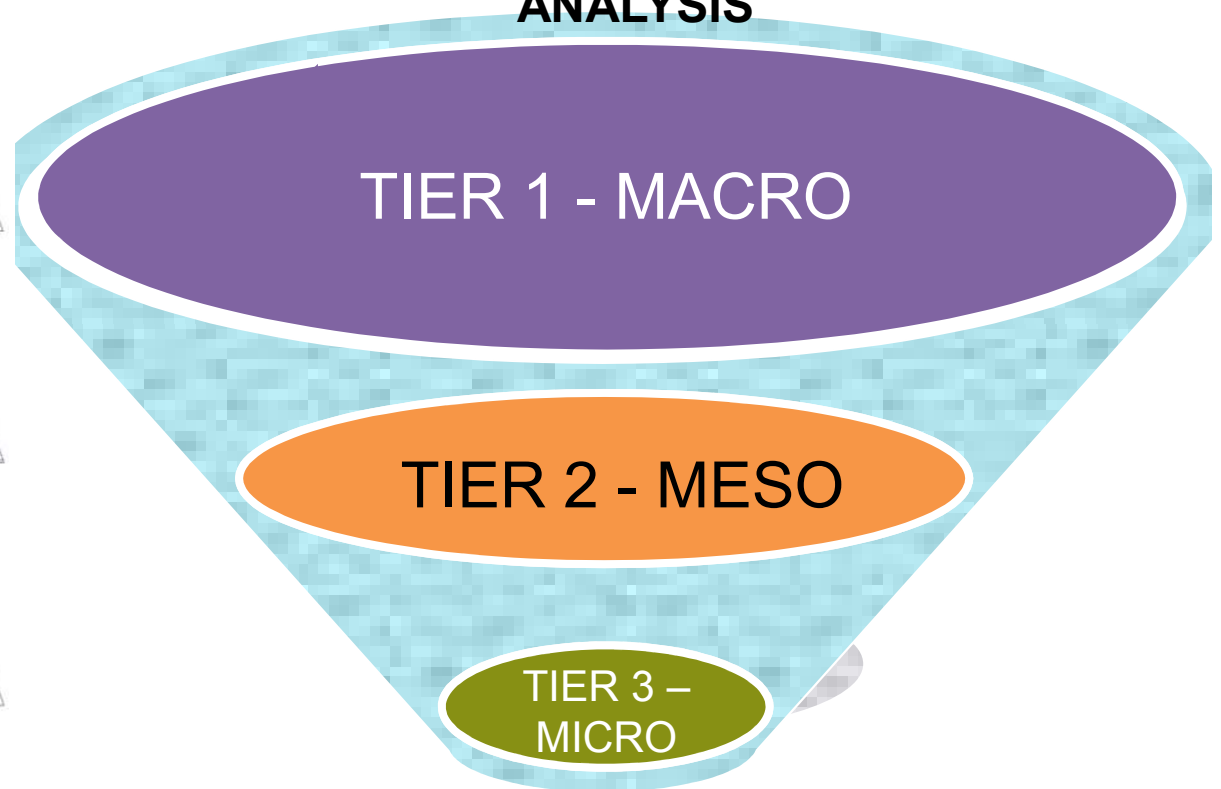
Recommended Changes – typically to add capacity

Which grid efficient?

# Do We Have Tools to Make These Decisions Scientifically



## AVAILABLE MODERN TOOLS FOR ANALYSIS



## Three Tier Simulation Modeling Tools

# Comprehensive Traffic & Transport Studies



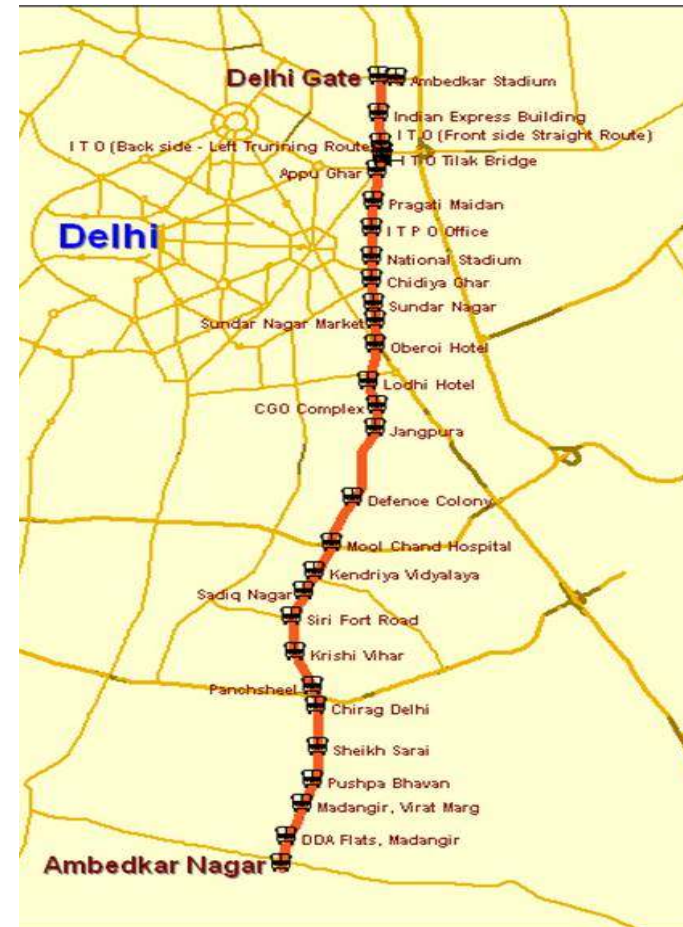
- **Transport Demand Forecast Study 2008 for City of Delhi**
  - Perspective: 2021 and beyond
- **Comprehensive Mobility Plans**
  - Dehradun, Mussoorie, Thootukudi, Rohtak, Bhopal, Puducherry
- **Parking assessment and planning**
  - Both strip parking and multi-level parking (Karol Bagh, Paharganj, Lajpat Nagar)
- **Traffic Management Plan**
  - New Delhi, Patna



# DTC Route Rationalization

## Scope of Work:

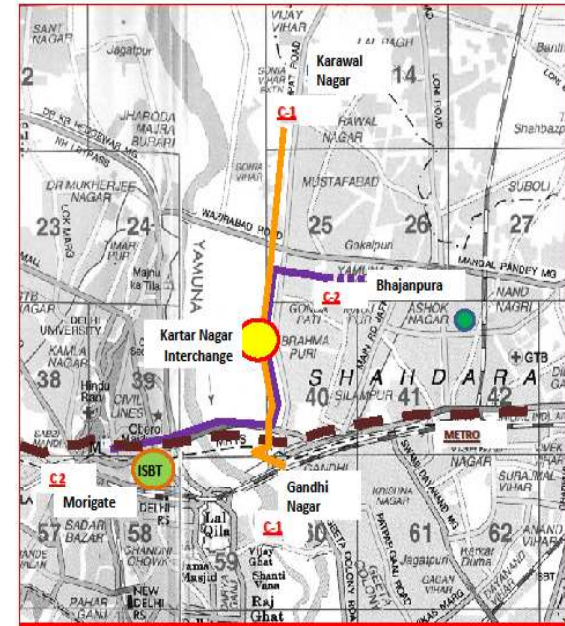
- Rationalized Routes in line with the passenger demand patterns.
- Introduction of new routes particularly feeder routes to serve the passenger demand.
- Allocation of buses to a route in line with the passenger demand.
- Improvement in financial performance of the routes thereby reduction in losses to DTC
- Suggestion on route planning review as a continuous process.



## BRT Corridor Studies

- DIMTS assigned DPR work for seven corridors :
  - Shastri Park – Karawal Nagar : 15 Kms
  - Karawal Nagar – Chilla : 18.8 Km
  - Karkari Mor –Gokulpuri : 8 Km
  - Mukundpur-Kondli: 25.4 Km
  - Badarpur –Airport : 25 Km
  - Dhaula Kuan – Chhawala : 20.3 Km
  - Dilshad Garden – ISBT KG : 8 Km

**Total : 120.5 Kms**



# Transportation Technology and IT Solutions

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## Key Services

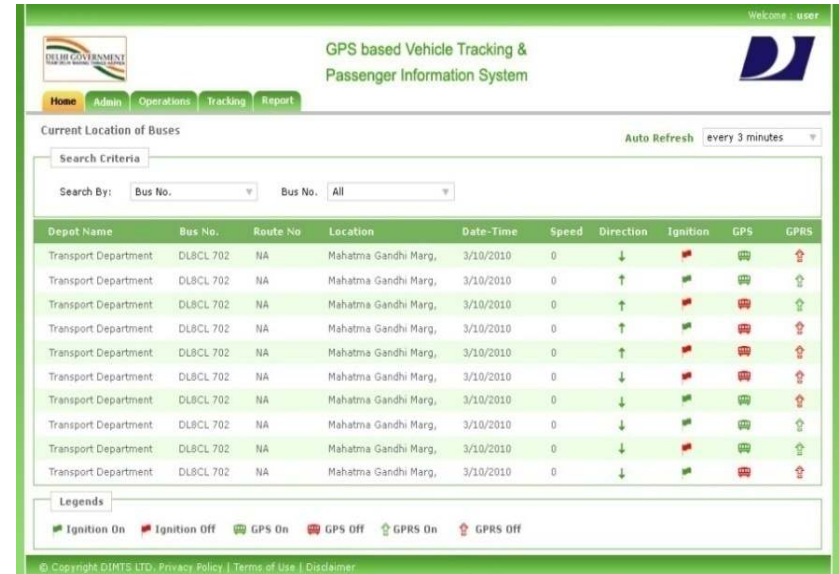
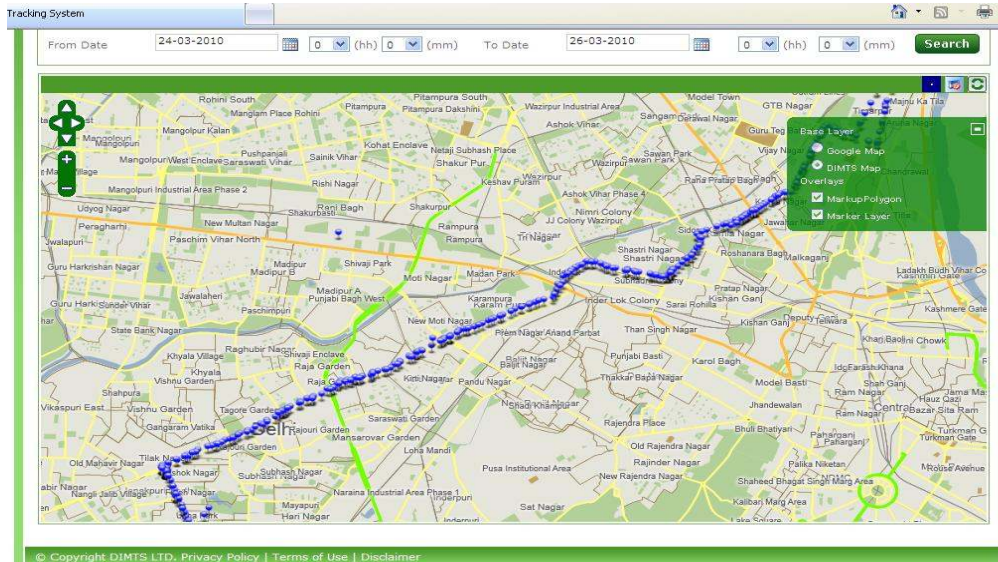
- Intelligent Transportation System
- Vehicle Tracking and KPI Management of Mobile Assets
- Smart Card Applications for Multiple Domains
- Hand-held Device Applications
- RFID and NFC Technologies
- Convergent Delivery Model based E-Governance Solutions
- Integrated Transport Vehicle Operations and Management Systems

## Operations Control Centre (OCC)

DIMTS has set-up a state-of-the-art **Operations Control Centre** for efficient management of traffic flow. It will be the kernel for real-time operation of traffic through Intelligent Signaling System, operation of stage carriage buses, the Automatic Vehicle Location System and more.



# Fleet Management Systems: A V L S



GPS based **Automatic Vehicle Location (AVL) System** has been deployed on all the buses. System is being used to monitor operations of the fleet

Alerts Dashboard manages alerts and responds to deviation/violations

- Over-speeding reports
- Depot, vehicle and route wise reports
- Missed stops reports
- Route deviation reports
- Trip status reports (Cut/Short/Missed)
- Distance travelled



# Snapshot: AVL Programs

## AVL System for Paratransit



- Worlds Largest Paratransit GPS Implementation
- Centralized Control Center equipped for 1 Lac TSR
- Users – Transport, Enforcement, Auto drivers, & Police

## AVL System for Public Service Vehicles



- Pioneering GPS Implementation for PSV segment of NCT of Delhi
- One Platform for all non-metered public service vehicles across the NCT of Delhi
- Chartered Buses/ School Buses
- Gramin Sewa / RTV/ Maxi Cab/ Mega Cab

## AVL System for Buses



- Pioneer for enabling GPS program in Government / Semi Government Bus fleet across the state of NCTD
- Route / Speed Tracking
- Duty Management

## Water Tanker Distribution Management System



- Vehicle Tracking
- Water Distribution Monitoring
- Smart Card Based Hydrant Automation

# Passenger Information System (PIS)



## ▪ Bus-Mounted PIS Boards

- Display and announcement of the next stop details
- Announcement in two languages, before reaching and at the bus stop

## ▪ Bus-Q-Shelter-Mounted PIS Boards

- Display the following details for the buses that would arrive in the next 30 minutes
  - Bus Route Number
  - Expected time of arrival (ETA)



# Automatic Fare Collection Systems: E T M

We have deployed New Generation Electronic Ticketing Machines (ETMs)

- Real Time data transfer through GPRS
- Smart Card Enabled
- Over the air configuration & update of master data, configuration data and application



Electronic Ticketing Machines

Home Depot Operations Reports ETM Tracking

You are here: ETM Tracking: ETM Alert Dashboard

Total No of Records:- Status as of Date at : 16-04-2012 12:39:32 PM Depot Name: MILLENIUM DEPOT

Total ETM : Total ETM Deployed : ETM Deployed but Not Cleared: 0

Total Red ETM : 1 Total Amber ETM Total Green ETM :

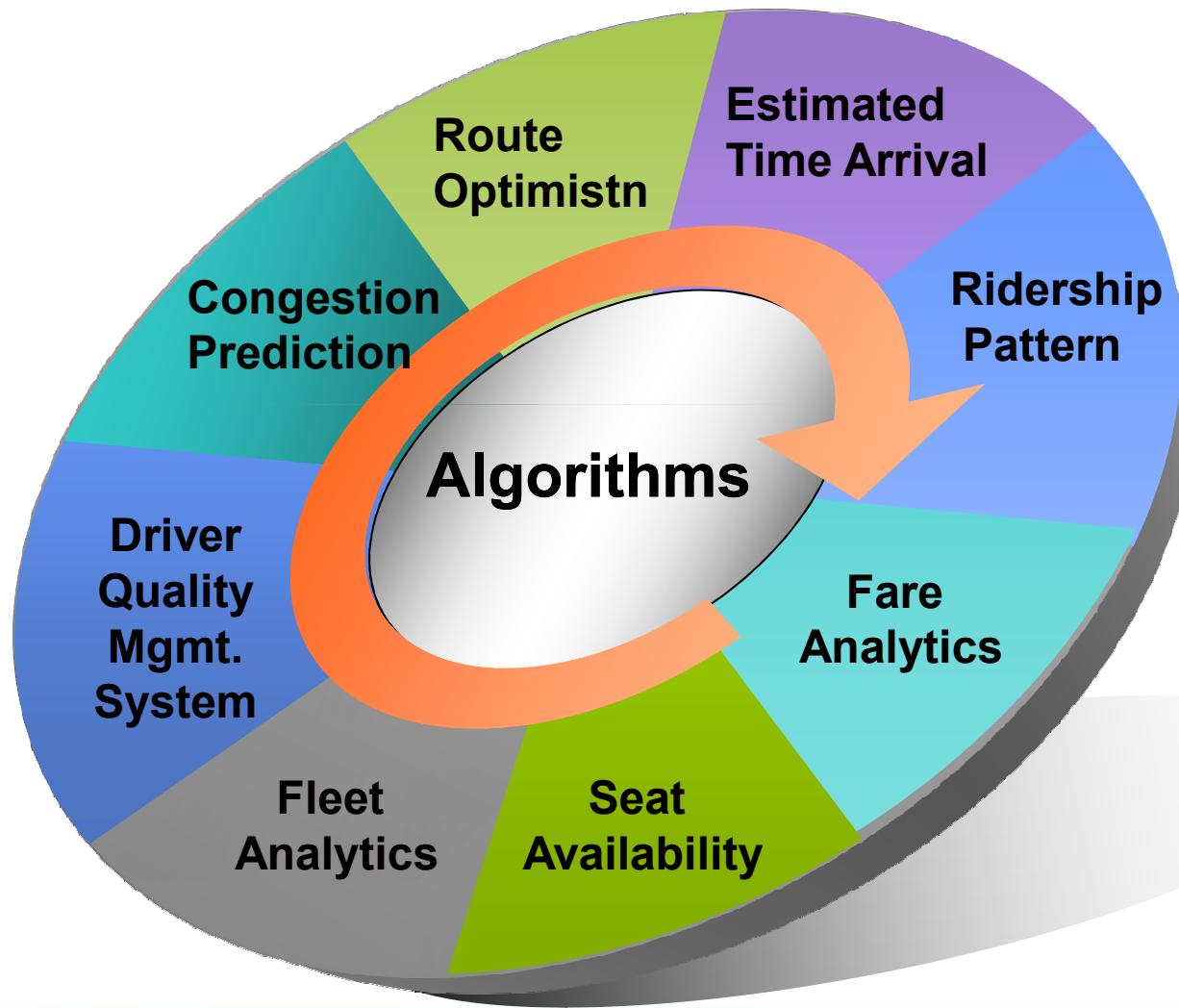
ETM ID	ETM STATUS	CONDUCTOR ID	CONDUCTOR NAME	CONDUCTOR PHONE NO.	DOITY ID	DOITY NAME	BUS NO.	LAST TICKETING TIME	TICKETING STATUS	ISSUES STATUS	BATTERY STATUS	DEPOT NAME
320121452	Red	01255	Amit Kumar	9882821152	53412M	534DOVN	DL1PC3954	16/04/2012 9:56:08 AM	NO	NO ERROR	72%	MILLENIUM DEPOT
3201214307	Amber	01201	Viresh Derman	9073140769	49922M	499UP	DL1PC3974	16/04/2012 12:04:17 PM	YES	NO ERROR	30%	MILLENIUM DEPOT
3201214119	Amber	01316	Iqbal Mohammad	9719108747	53414M	534UP	DL1PC3956	16/04/2012 12:07:14 PM	YES	NO ERROR	49%	MILLENIUM DEPOT
3201214449	Amber	01224	Manoj Kumar	9809826951	53424M	534DOVN	DL1P9941	16/04/2012 12:09:11 PM	YES	NO ERROR	35%	MILLENIUM DEPOT
3201214157	Amber	01837	MANJEET SINGH	9013328555	41931M	419UP	DL1PC3952	16/04/2012 11:09:57 AM	NO	NO ERROR	49%	MILLENIUM DEPOT
3201214134	Amber	01049	ANIL KUMAR	9952072425	41904M	419UP	DL1PC3930	16/04/2012 12:03:03 PM	YES	NO ERROR	30%	MILLENIUM DEPOT
3201214349	Amber	01495	ARUN KUMAR	7838869490	41904M	419UP	DL1PC3954	16/04/2012 12:02:08 PM	YES	NO ERROR	39%	MILLENIUM DEPOT
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3201214323	Amber	01311	Anand Kumar	9212490429	46534M	465DOVN	DL1PC3880	16/04/2012 12:04:01 PM	YES	NO ERROR	47%	MILLENIUM DEPOT
3201214330	Amber	01021	ANISH ALI	9910693020	53404M	534UP	DL1PC3930	16/04/2012 12:03:01 PM	YES	NO ERROR	21%	MILLENIUM DEPOT
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3201214329	Amber	01877	DHARAN DASS	9728349254	41912M	419UP	DL1PC3959	16/04/2012 12:09:21 PM	YES	NO ERROR	41%	MILLENIUM DEPOT
3201214357	Amber	01241	Vikash Kumar	9071937301	52209M	522DOVN	DL1PC3985	16/04/2012 11:06:08 AM	NO	NO ERROR	39%	MILLENIUM DEPOT
3201214309	Amber	01638	VINAY	874383797	53408M	534UP	DL1PC3952	16/04/2012 12:07:54 PM	YES	NO ERROR	41%	MILLENIUM DEPOT
3201214388	Amber	01441	Nandira Pal	9891635115	41930M	419DOVN	DL1PC3970	16/04/2012 11:54:08 AM	YES	NO ERROR	72%	MILLENIUM DEPOT
3201214344	Amber	01655	Sanjay Kumar	9658722120	41104M	411UP	DL1PC3940	16/04/2012 12:07:41 PM	YES	NO ERROR	38%	MILLENIUM DEPOT
3201214326	Amber	01181	Prakash	9998239288	46912M	469UP	DL1PC3870	16/04/2012 12:08:01 PM	YES	NO ERROR	37%	MILLENIUM DEPOT
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# Automatic Fare Collection Systems



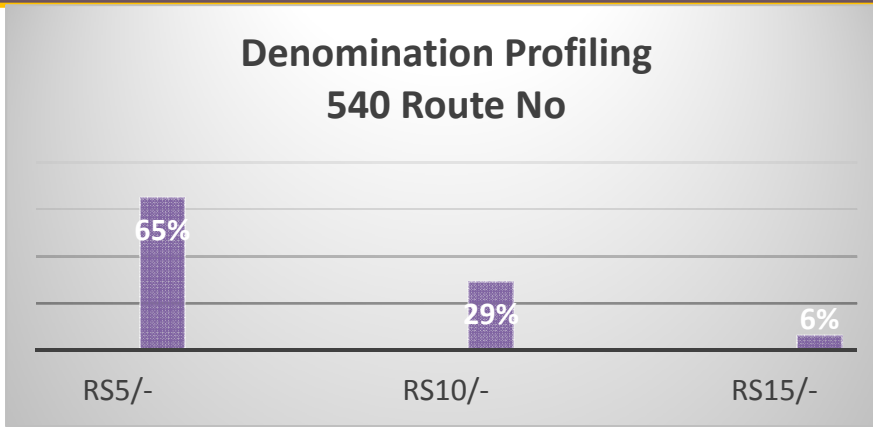
# Transit Analytics – a broad spectrum



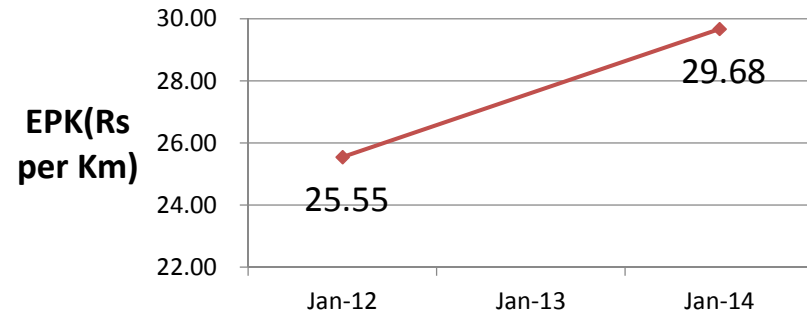
# Cluster Buses - Analytics

## Detailed Analysis of Low Ridership Sectors

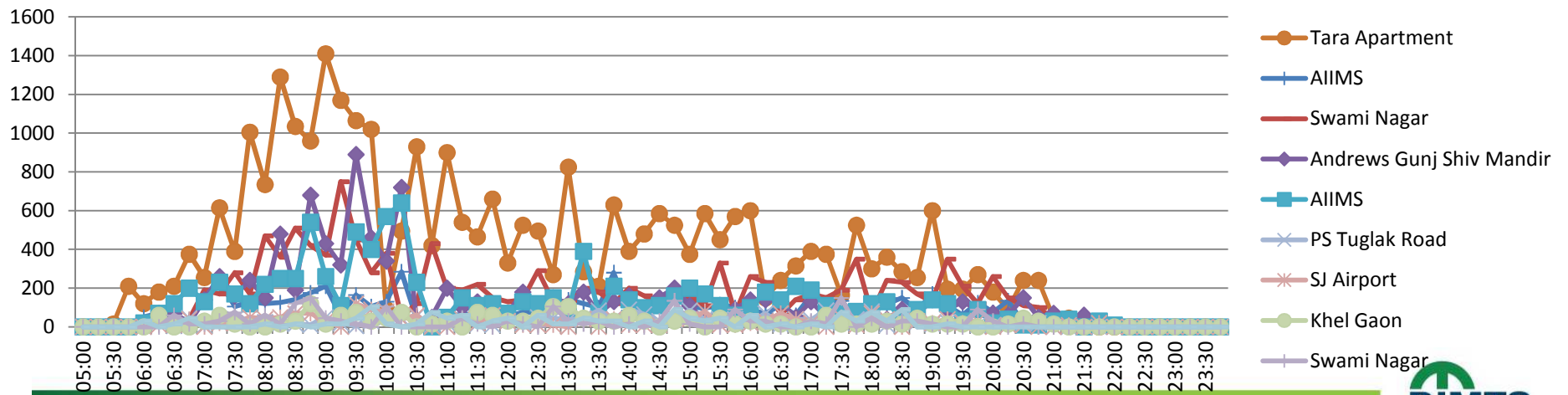
Denomination Profiling  
540 Route No



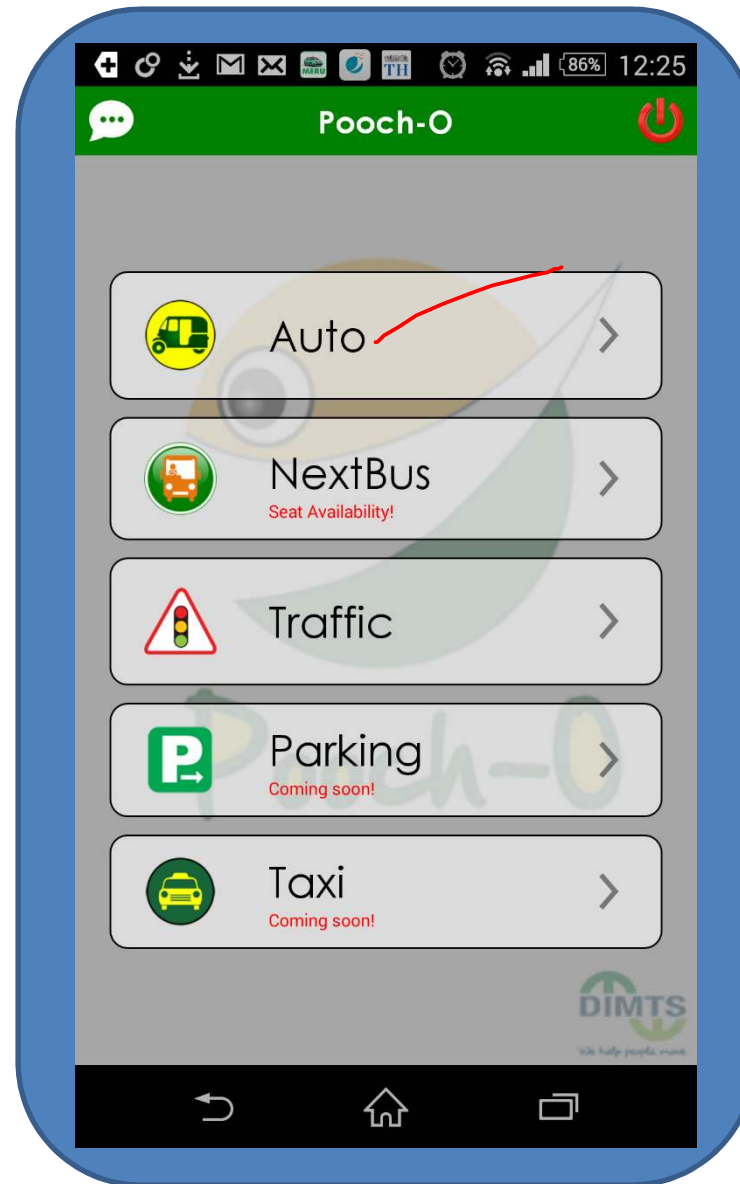
## 540 Earning Improvement After Modifications



Revenue Generation Rate 540DN  
Beyond SJ Airport to Central Secretariat  
segment



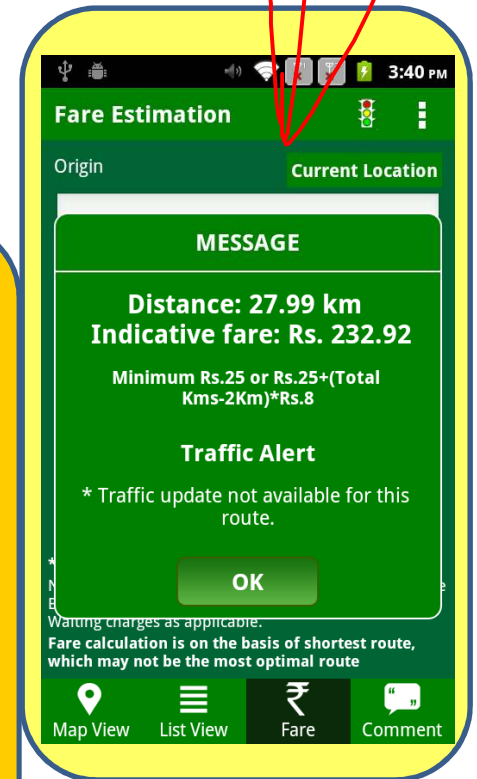
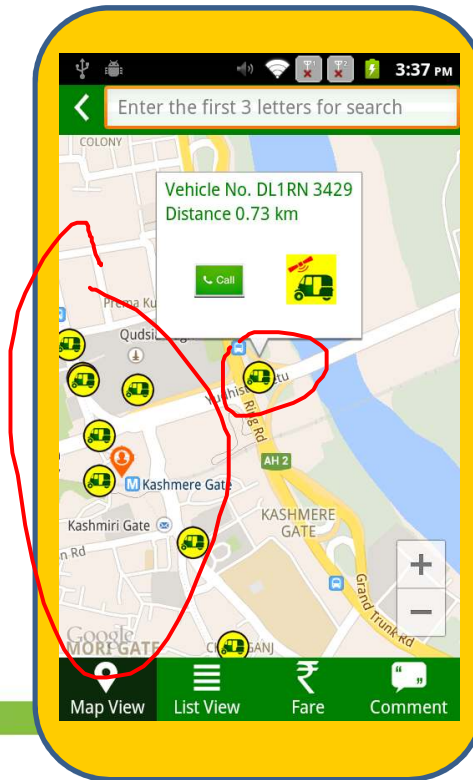
# PoochO – One-stop Transit App for Delhi citizens



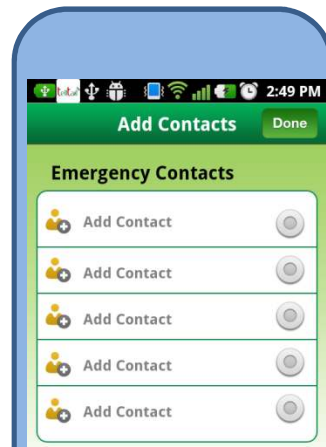
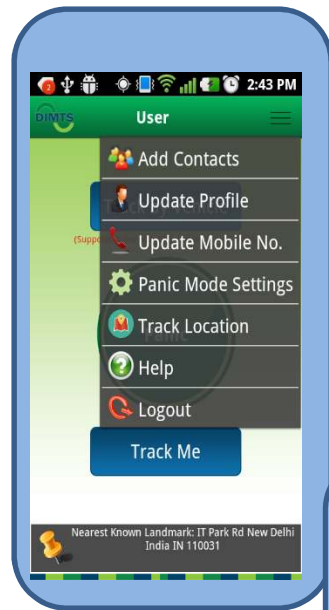
# Mobile Applications



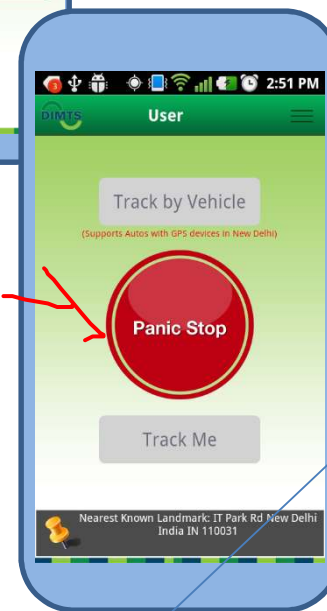
**Occupancy/ (Seat Availability)**



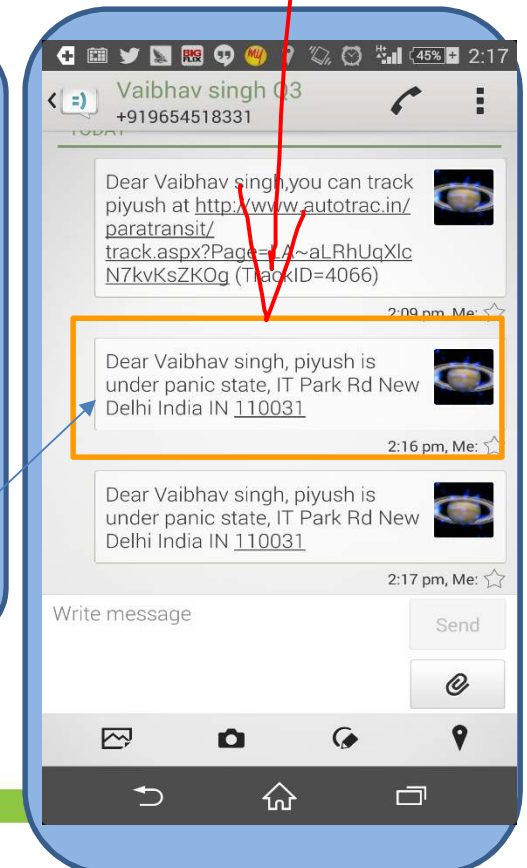
# Mobile Applications (Women and citizen security)



Vehicle tracking started



Panic Button can be pressed in case of Emergency



# Now a mobile app to track buses provide info on seat availability

Google Play Rating

4.0



1,239 total

★ 5	588
★ 4	293
★ 3	178
★ 2	75
★ 1	105

Hindustan Times  
October 15, 2014

**BUS TRACKER** NextBus app to provide information on routes, bus frequency, bus stop location

Atul Mathur

atul.mathur@hindustantimes.com

**NEW DELHI:** Travelling by public transport is set to get easier in the Capital. The Delhi Integrated Multi-Modal Transit System (DIMTS) — an agency that consults with the government on transport issues — has come up with a mobile application that will tell you the exact time of arrival of the next bus at a particular stand. It will also indicate whether the bus is crowded or seats are available.

NextBus, the application, is available on all mobile platforms. The application will initially provide information only on 1200-odd orange-coloured cluster buses run under the brand name of 'Delhi Transit'. However, it will soon include DTC buses.

According to DIMTS officials, commuters can now plan their journey with the help of NextBus. The application will tell them the exact time of arrival of the next bus along with its route number.

"The most exciting feature of the application is 'Occupancy Status'. This feature helps commuters know the availability of seats in orange buses which are arriving. Commuters will get to know in advance if the next bus has 'Seats Available' or 'Standing Available' or if it is 'Crowded'," a DIMTS official said. The offi-



■ The NextBus application will tell commuters the exact time of arrival of the next bus along with its route number and occupancy status.

HT FILE PHOTO

cial said the occupancy status information is relayed real-time to give the correct status to commuters.

Despite the Delhi Government strengthening the fleet of buses in the national capital, frequency and reliability of buses continue to be a major cause of concern. DTC officials claim they follow a timetable and try to maintain the frequency of buses, but commuters complain that buses often fail to turn up at the expected time.

Cluster buses, on the other hand, are better managed, follow a strict timetable and maintain efficiency of more than 95%. While the GPS devices installed in DTC buses have either been stolen or removed, the ones installed in cluster buses send real time status of its location to the central control room to help the centre use that information for the benefit of commuters.

"The NextBus application will also help you with the exact

location of the bus. Commuters can share their location with their family and friends using SMS and social media like WhatsApp, Facebook, Gmail, Hangouts, LinkedIn and Skype to keep their family and friends informed about their location," an official said.

The application also provides information on the estimated fare and the trip distance, estimated travel time and traffic condition on the route.



## 'Pooch-O' app makes it easy for auto commuters

HIMANI CHANDEL  
TRIBUNE NEWS SERVICE

**NEW DELHI, SEPTEMBER 13**  
Calling an autorickshaw has never been easier for people in Delhi, but thanks to "Pooch-O" app travel in three-wheelers has become safe and comfortable.

The recently launched application, designed to track autorickshaws in your vicinity and hail them over phone, has become a hit among Delhiites as the facil-

### Features of the App

- Can see location of the auto
- Shows mobile numbers of the auto drivers
- Calculates estimated travel fare distance and time
- Gives traffic update
- Can track the auto movement
- Can send user location
- Suggests alternative

came to my help," said Rajkishori Singh, lecturer at GGSIP University.

Senior DIMTS official said many women commuters have expressed their satisfaction. Through this application some of them could book autos even as late as 1 am at night.

Kumar Siddharth, student of Bharatiya Vidya Bhavan, said, "I am a regular commuter of auto-rickshaws. But sometimes it becomes

## Google Play Rating

4.0

★ 5 437  
★ 4 173  
★ 3 107



Amar Ujala

Date: 28-08-2014 | Edition: New Delhi | Page: 02, 03

## मोबाइल ऐप से ऑटो बुक कराने में बढ़ी दिलचस्पी

- इसके लिए मोबाइल और ऑटो में जीपीएस का होना जरूरी
- उपराज्यपाल नजीब जंग ने 11 जुलाई को इसे शुरू किया था

अमर उजाला ब्यूरो

नई दिल्ली। दिल्लीवाले अब ऑटो बुक करने के लिए सड़क किनारे खड़े होकर हाथ नहीं दे रहे हैं। वह स्मार्टफोन के जरिए ऑटो को अपने पास बुला रहे हैं। रोज 1500 से ज्यादा लोग ऑटो बुक कराने के लिए मोबाइल एप्लीकेशन एप्लो का इस्तेमाल कर रहे हैं।

इसे हिट कर चुके हैं। बीते माह 11 जुलाई को एलजी नजीब जंग ने इसे लॉन्च किया था। जीपीएस आधारित यह ऐप यात्रियों को सुविधा के साथ सुरक्षा और गड़बड़ियों से भी बचा रहा है। ऐप के माध्यम से लोग इसकी जानकारी अपने दोस्तों और परिवार को शेयर करने के साथ नये ट्रैक भी कर सकते



### ऐप की विशेषताएं

डिजिटल ने ऑटो रिक्शा के लिए एक मोबाइल एप्लीकेशन तैयार किया है। पूछो नाम के इस ऐप को गूगल प्ले स्टोर से किसी भी स्मार्टफोन पर डाउनलोड कर सकते हैं। इसमें ऑटो रिक्शा ट्रैक करना, कॉल करने की सुविधा, किराया व दूरी की जानकारी और फीडबैक की सुविधा भी जुड़ी है। इससे आप अपने मोबाइल पर डाउनलोड करके अपने आस-पास खड़े ऑटो रिक्शा का पता लगाने के साथ

## दिल्ली में अब एक फोन घुमाओ और ऑटो मंगाओ

आईबीएन-7 | Jul 12, 2014 at 09:57am

Share Like Tweet

More on: #Delhi Auto #Mobile #APP #Poocho #Najib Jung #LG



**नई दिल्ली।** दिल्ली में अब एक एप्लीकेशन इस्तेमाल में आ ग- जरिये आसपास मौजूद ऑटो व जानकारी हो सकेगी, बल्कि इत्र करके बुलाया भी जा सकेगा। उ नजीब जंग ने इस एप का लोव हालांकि दिल्ली में ज्यादातर अ हैं जो सवारियों को ले जाने से कर देते हैं और मोटर से भी च जती टोते। ऐमे में तमाम लोगो

दिखा प्रभाव | यात्रियों की सुविधा खासकर महिलाओं के लिए लांच किया गया था यह एप, ओवरऑल रेटिंग 4.1 के पार, ऑटो चालकों को भी हो रहा फायदा

## 'पूछो' ऐप को मिल रहे हर दिन 5500 हिट्स

निर्भय कुमार पाण्डेय, नई दिल्ली

दिल्ली इंटीग्रेटेड मल्टी ट्रांजिट सिस्टम (डिम्स) ने ऑटो में सफर करने वाले यात्रियों खासकर महिलाओं की के लिए एक विशेष प्रकार के ऐप (पूछो) को लांच किया था। इस ऐप के माध्यम से जहां राजधानी में चलने वाले ऑटो के बारे में सभी जानकारी मिल जाती है। निर्धारित किराया, ऑटो चालक का

के उपराज्यपाल जंग द्वारा किया गया था। उस वक्त उपराज्यपाल ने कहा था कि यह ऐप जहां एक प्रकार से क्रांतिकारी साबित होगा। वहीं, सुरक्षा की दृष्टि से भी मददगार होगा। यही कारण है कि आज एप को हिट करने वालों की संख्या 5500 के पार पहुंच चुकी है। साथ ही इस एप की



करने वालों में महिलाओं, लड़कियों की संख्या अधिक है यही कारण है कि इस एप पर महिलाओं व बुजुर्गों का भरोसा दिनों-दिन बढ़ता ही जा रहा है और महिलाओं के बीच यह एप लोकप्रिय बनाता जा रहा है।

### आधी रात को भी ऑटो बुक

प्रवक्ता का कहना है कि यही नहीं जब यह एप अस्तित्व में आया था। उन दिनों में एप को इतनी अहमियत नहीं मिली थी, लेकिन

### बहस से मिल रही निजात

इसके माध्यम से यात्रियों को किराए की भी जानकारी मिल जाती है। मान कर चलें कि यदि कोई महिला या फिर पुरुष यात्री रात के वक्त अपने ऑफिस से निकला और उसने घर जाने के लिए ऑटो बुक किया तो उसे इसके माध्यम से यह भी पता चल जाता है कि उसके घर तक किराया कितना है।

कैसे करें आप का सफर

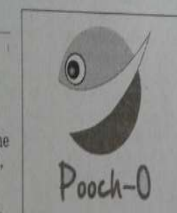
### अन्य विशेषताएं

- अपने निकटतम ऑटो का पता लगाएं
- ऑटो चालक के मिजी नंबर पर फोन कर अपनी ट्रिप बुक कराएं
- अनुमानित किराया पता करें
- यात्रा की अनुमानित दूरी का पता लगाएं

Statesman Aug 25, 2014

## Mixed response to Pooch-O app

SHARBANI BANERJEE  
sharbo-  
ni.banerjee@thestatesman.net  
New Delhi, 25 August



After more than a month, the Pooch-O mobile application, which was launched by the Delhi Integrated Multi-Modal Transit System (DIMTS) has drawn quite a good response with the website registering around 1000 calls per

about the app. According to Mr Gupta, while 316 people have ranked

press the button from that app, it will straight connect to that auto driver's personal mobile number. But most of the times, the commuters find these numbers to be wrong which leads to wastage of time," said the official.

However, Mr Gupta said that many people especially women commuters liked it. "Through the review, we got to know that there were no-

same, the auto driver sends his vehicle's registration number along with his mobile number to 955894311 and get registered with the app and passenger could easily connect with him," added Mr Gupta.

Meanwhile, it is a free app which is available only on android phones, which can be easily downloaded from Google Play store. Through this, the commuters

# Bus Management System (BMS)

A **Bus Management System (BMS)** has also been developed – a single application for integration all the sub-systems of cluster operation, such as AVLS, AFCS, WBS, Biometric verification, infraction monitoring, DQM(Driver Quality management) etc.

The screenshot shows the BMS dashboard with a search filter and a table of bus routes. The search filter includes fields for Duty No., Date, Cluster, and Duty Type. The table lists 7 routes with columns for SNo, Vehicle No., Actual SNo, Schedule, Actual SNo, Status, Remarks, and Trip Type.

SNo	Vehicle No.	Actual SNo	Schedule	Actual SNo	Status	Remarks	Trip Type
1	26-4212885190	14 42131804190	20:20:00	20:20:00	OK		NORMAL
2	17-19490328044	17 19490338014	21:00:00	21:00:00	OK		NORMAL
3	17-971	17 971	21:00:00	21:00:00	OK		NORMAL
4	17-19490328044	17 19490338014	21:00:00	21:00:00	OK		NORMAL
5	17-971	17 971	21:00:00	21:00:00	OK		NORMAL
6	17-19490328044	17 19490338014	21:00:00	21:00:00	OK		NORMAL
7	17-971	17 971	21:00:00	21:00:00	OK		NORMAL

The screenshot shows the BMS login page with a search filter and a table of bus routes. The search filter includes fields for Duty No., Date, Cluster, and Duty Type. The table lists 7 routes with columns for SNo, Vehicle No., Actual SNo, Schedule, Actual SNo, Status, Remarks, and Trip Type.

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7	17-971	17 971	21:00:00	21:00:00	OK		NORMAL

# Enterprise Resource Planning (ERP)

An ERP system for efficient management of Cluster buses has been developed.

The payment module uses various parameters of performance such as

- No. of buses
- Service kms
- Service hours
- Missed trips
- Infractions (over-speeding etc.)

Payment Id	Cluster No.	Name	Year	Month	Calculate payment for	TDS (%)	Total Net Amount P.	Date of Invoic...	Bill Amount
C5-August2012-III	5	Cluster5	2012	August	Before 10th of month succeeding PFI	2.00	4,577,263.99	10/09/2012	15,782,363.8
C4-August2012-III	4	Cluster4	2012	August	Before 10th of month succeeding PFI	2.00	4,492,132.29	10/09/2012	15,024,324.9

Normal		STMR	
Capital charges:	3,996,259.51	Capital charges:	18,631.21
Consumable charges:	5,997,058.65	Consumable charges:	30,654.55
Manpower and Overhead charges:	3,190,003.63	Manpower and Overhead charges:	15,878.24
Total C/P for PFI	13,183,321.79		
Total amount (C/P + STMR)	13,249,465.79		
Amount Payable	5,102,532.66		

Adjustment amounts		Adjustment amounts	
Incentive/Deduction for online performance:	0.00	Incentive/Deduction for online performance:	0.00
Deduction for Missed trips:	-404,205.52	Deduction for Missed trips:	0.00
Incentive/Deduction for Infractions:	-27,658.00	Incentive/Deduction for Infractions:	0.00
		Adjustment amount:	0.00
		Adjustment amount - C/P Adjusted:	0.00

Description	Unit	Quantity	Unit Rate	Total per month (Rs.)
Capital Charges	Bus Days	1,480.00000	2,700.17534	3,996,259.51
Consumable Charges	Service Kms	309,120.60000	19.40039	5,997,058.65
Manpower and Overhead Charges	Service Hours	19,384.22583	164.56699	3,190,003.63
STMR Capital Charges	Bus Days	6.00000	3,105.20164	18,631.21
STMR Consumable Charges	Service Kms	1,374.00000	22.31044	30,654.55
STMR Manpower and Overhead Charges	Service Hours	83.90000	189.25202	15,878.24

# Identity Management Products



Transport Department Govt of NCT of Delhi  
PSV DRIVERS BADGE (U/R OF DMVR 1993)

**MUNNA KUMAR SINGH**

**DRIVER**



Badge No: **P071000001**

Veh. Category: **LMVCAB**

Valid UPTO: **15/06/2010**

Issue Date: **16/04/2010**

*(Holder's Sign.)*

*Sign. of Issuing Auth.*

**Driving License**

**REGN. NO : DL6CP 0376**

REG. DT : 21/03/2014

O SNO : 01

CH. NO : MA3FJEB1S00490597

MFG CD : MUL

E NO : D13A2328415

COLOR : G GREY

CLASS : L.M.V.



NAME : AMIT KUMAR

SN/W/D OF : AMARJEET SINGH

ADDRESS : 7937 NAI BASTI ARAKASHAN  
ROAD PAHAR GANJ

NEW DELHI

110055

MODEL : SWIFT DZIRE VDI BS4 M

BODY : SALOON

NO. OF CYL : 4

WHEEL BASE : 0

UNLADEN WT : 1060

MFG. DT. : 02/2014

SEATING C : 5

FUEL : DIESEL

STANDING C :

REG UPTO : 20/03/2029

CU.CAP : 1248

TAX UPTO : OTT

*(Signature)*

Signature  
Registering Authority  
S.KALE KHAN

**Registration Certificate**

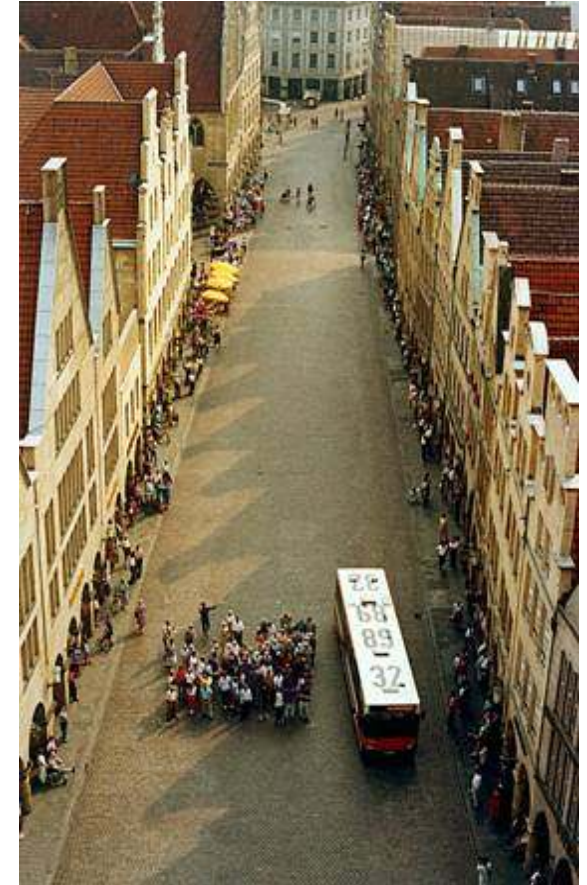
# Comprehensive Management of Bus Transit

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## Key Services

- Project Conceptualization
- Feasibility Study
- Clustering of Bus Routes
- Economic Analysis & Business Modelling
- Bid Process Management
- Contract Management
- Operations Management

## Construction of the Public Transport Oriented Infrastructure



**50 cars or 60 bicycles or *1 bus***

# Characteristics of the Corporatization of Private Stage Carriage Scheme

## Key Facts

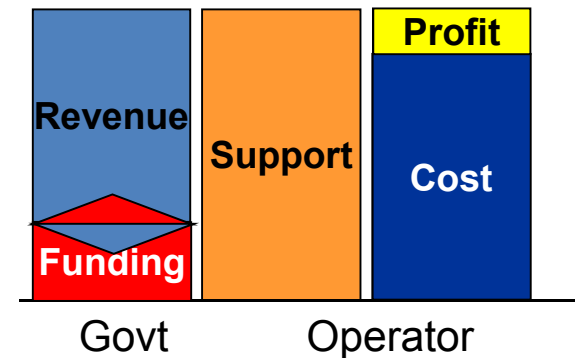
- Routes clustered (657 bus routes classified in 17 Clusters) so as to leverage network synergies.
- Public Operator (DTC) and Private Operator will run the operation in the ratio of 50:50.

## Unified Time Table (UTT)

- Public and Private operators will follow Unified Time Table to ensure timely and reliable bus service to public.

## Contract Type – Gross Cost

- Resource contract
- No transfer of revenue risk
- Revenue paid to Government



## Outcomes

- Passenger perspective
  - Reliable and Punctual service
  - Well informed passenger (In-bus voice announcement, Passenger Information Systems at the BQS, Bus Transport Mobile Application)
- Government perspective
  - Reliable, safe and presentable service to citizens
  - Revenue leakages plugged through use of electronic ticketing systems
  - Methodical planning of routes
- **Feedback being taken from several sources and acted upon:** website, mobile app, complaints book at the bus, direct calls from users, Transport Department helpline etc.
- **1000+ passengers per bus per day per bus**



# Transaction Advisory

## Key Services

- Techno-economic Feasibility
- Financial Analysis
- Business Planning
- Project Structuring - PPP
- Bid Process Management
- Debt Syndication
- Outdoor Media Advertising

# Regional Rapid Transit System



*Pic: RRTS – Station Design*



Feasibility study and detailed project report for two corridors.

This system is expected to integrate and connect the National Capital Region of Delhi with the other modes of transport such as bus and metro as well.

DIMTS has prepared the reports for,

- **Delhi- Ghaziabad-Meerut : 90 kms**
- **Delhi- Sonapat- Panipat : 108 kms**

# Mono Rail Projects

## Delhi:

Prepared the Feasibility Report for development of Mono Rail in Delhi for the following corridors:

- Rohini– Delhi Gate : 28.5 km
- Kalyanpuri - Old Delhi Railway Station : 15.5 km
- Gulabi Bagh – GTB Road : 3.8 km

## Mumbai:

Technical and financial feasibility study for 11 Km monorail line in Bandra Kurla complex Mumbai. The scope of work includes

- Estimation of Transit Ridership
- Geotechnical & Topographical survey
- Design of the alignment
- Business Planning

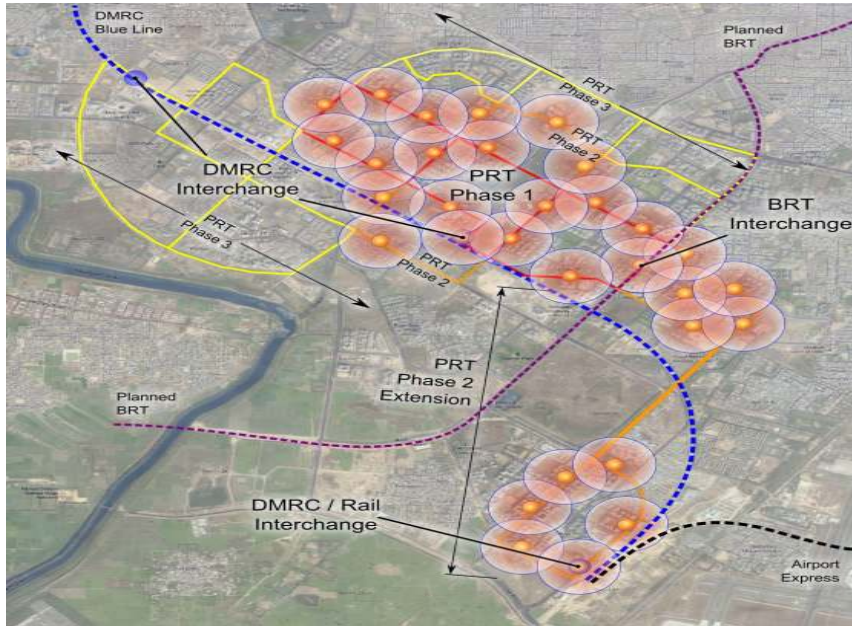
## Bangalore:

Provided assistance in preparation of a Feasibility Study for LRT/Monorail in Bangalore

- In partnership with Capita Symonds
- Traffic Forecasting
- Financial Analysis/ PPP aspects



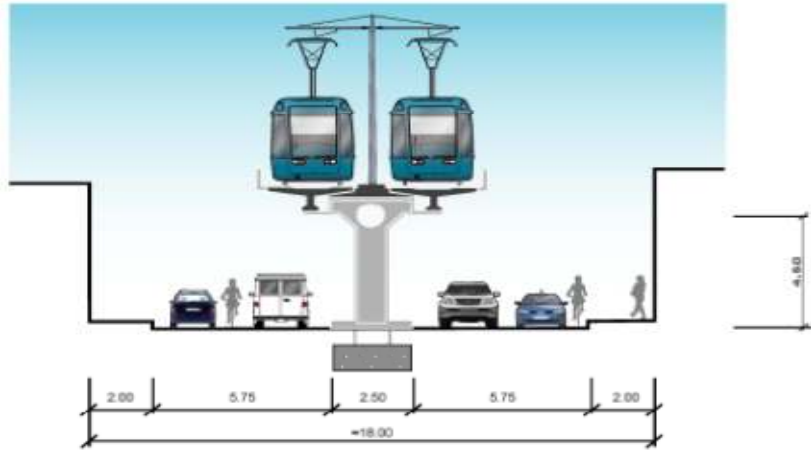
# Personal Rapid Transit System



The Personal Rapid Transit (PRT) is a public transport concept that offers passengers an on-demand and non-stop service, using vehicles of 4-6 people running on a network of specially-built guide-ways.

- Low vehicle emissions.
- Better value for money
- Efficient use of space

# Feasibility Report for Development of LRT



## Feasibility Report for Development of Light Rail in Delhi for the following corridors:

- Mehrauli – IG Stadium : 16 km
- Mehrauli – Badarpur : 11.5 km
- Mehrauli – Dwarka : 17.5 km

## The study included

- Transport demand forecast
- Review of corridors and choice of mode
- Preliminary design of guide-ways and other structures
- Selection of appropriate technology and system design
- Project implementation and procurement strategy.

# Advertising Policy Advisory



- DIMTS has experience in policy making, conceptualizing, developing, constructing, marketing, operating and maintaining out door media spaces
- DIMTS has experience
  - As outdoor media marketing agency for government
  - Advising Government Departments (Transport Department, Municipal Corporations, Statutory Authorities)



*Perhaps the only company in India with such wide experience  
– Currently providing policy advisory for 5 cities*

## F1 - Track Mumbai



Business Plan

Geotechnical Surveys

Bid Process Management

## ISBT Loan Syndication (NCRPB & HUDCO)

- DIMTS did the loan syndication work to obtain loans of more than Rs. 400 Crores for the three MMTCs – Kashmere Gate, Anand Vihar and Sarai Kale Khan
  - Funds were sanctioned by ADB for Sarai Kale Khan and Anand Vihar & HUDCO for Kashmere Gate.
- Loans were sanctioned after a rigorous process and meeting stringent norms laid down by ADB
  - These loans were back-to-back funded by Asian Development Bank (ADB), after conducting a detailed study of processes, engineering execution and operations & maintenance capabilities of DIMTS before sanctioning the loans.
- Bus Cluster
- Bus Queue Shelters

## Radio Taxi Schemes & Vehicle Tracking Systems

Introduce e-governance mechanism for transport department's processes such as driving license; vehicle registration and border check post management by conceptualizing and identifying appropriate technology platform followed by the selection of an agency to undertake the automation.

Undertake preparation of the project report and identify delivery mechanism for tracking of all commercial vehicles registered in the state.

Conceptualize and implement radio taxi services in the entire state.



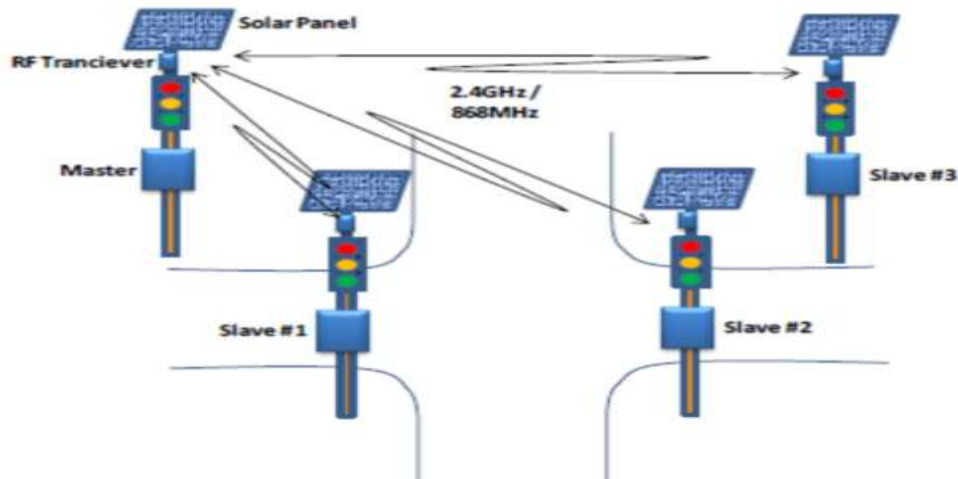
# Intelligent Transport System Solutions

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## Key Services

- Wireless Traffic Signal Controller (Wi-Trac)
- Red Light-Stop Line Violation & Detection System (RLSVDS)
- CCTV Junction Surveillance
- Variable Message Sign (VMS)
- Video Incident Detection
- Control and Command Centre

# Wi-TraC (CDAC Technology Transfer)



**DIMTS is an authorized Technology Partner of CDAC to manufacture, market & support WiTraC in India & abroad**

- Concept of controlling the Road Traffic Signal without a physical connection between the Traffic Controller equipment and the signal lamps
- Feature for Solar Power thereby completely getting rid of road cutting and issues related to road cutting
- Distributed Architecture having 1 Master Controller and up to 16 Slave Controllers
- Plans to implement at one junction in Delhi on Pilot Mode.

# Intelligent Signalling System



- First of its kind in India
- Commissioned at 17 junctions in Delhi
- Three levels of intelligence
  - Vehicle Actuated Radar optimizes signal cycle locally
  - SCOOT algorithm optimized throughput over the network
  - High resolution cameras record and display video
- System designed for 750 junctions – enough to cover entire City of Delhi



## BRT - Ahmedabad



DIMTS has been nominated for revamping the entire signalling system in Ahmedabad

- Restoration of 186 signalised intersections
- Up-gradation of Control Room
- Remote monitoring

## BRT - Surat

Development, Supply, Installation, Maintenance & Operation of ATCS for BRTS Junctions in Surat City

- Wireless Traffic Controller based Traffic Signals at 52 Junctions.
- Vehicle Detection Cameras at each Junction.
- Area Traffic Control System (ATCS) with state of the art Control Room.



# Highway Traffic Management System (HTMS)

- Evaluation of Technical and Price Bids.
- Detailed Site Reconnaissance
- Evaluation of Work Plan
- Review of Strategic Locations for installation of Field Equipments
- Weekly Progress Reports
- Verification of Technical Specification of supplied material/equipment as per BOQ.
- Inspection of installed Field Equipments
- FAT visits to OEM Facility, Certification for satisfactory commissioning of HTMS sub-systems and control room.



# Operations and Management

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## Key Services

- Asset Security and Management
- Process Management
- Traffic Management

## BRT Operation for Ambedkar Nagar to Delhi Gate

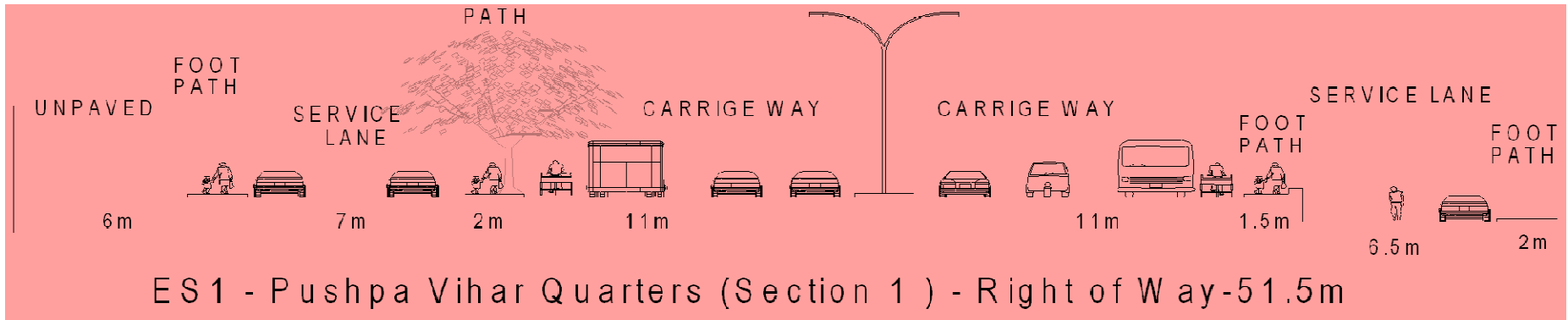
- The stretch from Dr. Ambedkar Nagar to Moolchand (5.8 km) is operational since April 2008.
- The second phase (Moolchand to Delhi Gate – 8.7 km) was taken over in July 2010.



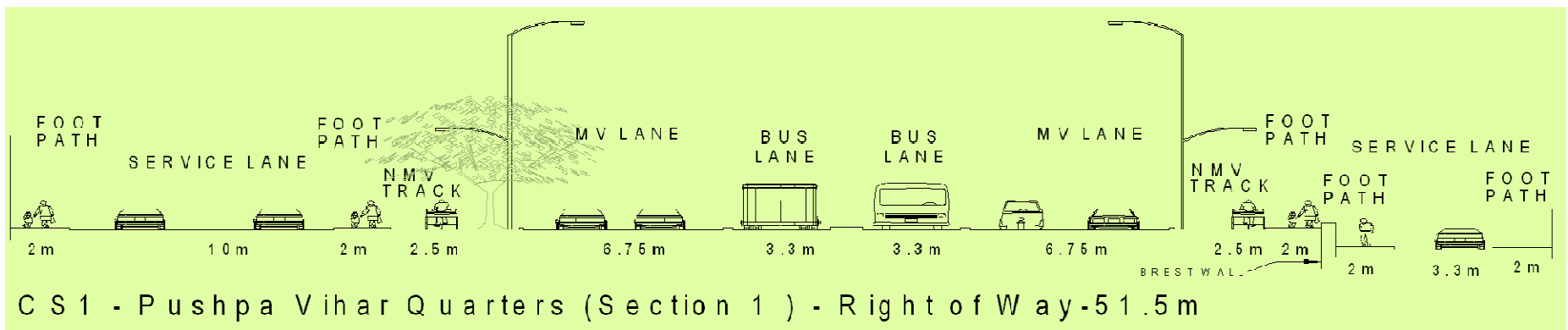
# Standard Sections

Delhi BRT System helps to use road space in more democratic and efficient way.

## Before BRT - Sections



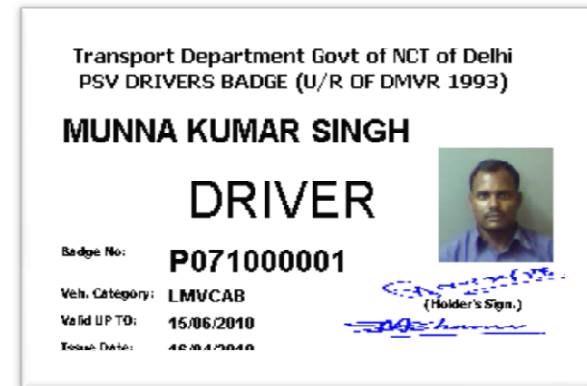
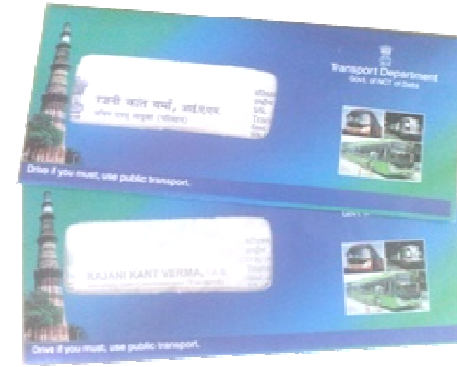
## After BRT - Sections



# Delhi BRT – Best Facilities for Cyclists & Physically Challenged in Delhi



# Identity Management Products – Driving Licenses




More than 32,00,000 Smart Card Driving Licenses issued

# Identity Management Products – Registration Certificates

**REGN. NO : DL6CP 0376**


REG. DT : 21/03/2014      O SNO : 01  
CH. NO : MA3FJEB1S00490597      MFG CD : MUL  
E NO : D13A2328415      COLOR : G GREY  
CLASS : L.M.V.

 NAME : AMIT KUMAR  
S/W/D OF : AMARJEET SINGH  
ADDRESS : 7937 NAI BASTI ARAKASHAN  
ROAD PAHAR GANJ


NEW DELHI      110055

MODEL : SWIFT DZIRE VDI BS4 M  
BODY : SALOON      NO. OF CYL : 4  
WHEEL BASE : 0      UNLADEN WT : 1060  
MFG. DT. : 02/2014      SEATING C : 5  
FUEL : DIESEL      STANDING C :  
REG UPTO : 20/03/2029      CU.CAP : 1248

TAX UPTO : OTT


  
Signature  
Registering Authority  
S.KALE KHAN

20178016 Form-23A

 **GOVERNMENT OF NATIONAL CAPITAL  
TERRITORY OF DELHI**

**VEHICLE REGISTRATION CERTIFICATE**

Particulars not to be used as Residence Proof

my delhi  
  
I Care

Wear Helmet/Seat belt while driving

**Registration Certificates issued till date 165000**

## Development and Management of Parking Lots in NDMC Area.



**94 sites are managed till date**

# Railway Engineering

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## Key Services

- Project Management Consultancy
- Bid Process Management
- Contract Management
- Execution and Commissioning
- Detailed Design Engineering
- Value Engineering

## Railway Projects for Moserbaer



Project Management Consultancy Services for construction of private dedicated railway siding from Jaithary railway station to Anuppur District, MP

Providing value engineering services for review of Detailed Project Report (DPR) and suggest modification for the proposed private railway siding for Jaithary railway station of SEC railways to Annupur District, MP

Consultancy services for tendering and detailed design engineering for the proposed private railway siding Jaithary railway station of SEC railways to Annupur District, MP

# Railway Doubling Projects



## Project Management Consultancy:

- Doubling between Salka Road – Khongsara in state of Chhattisgarh (India)
- Doubling between Abu Road – Palanpur in NWR
- DPR for Construction of New BG Electrified Double line Gevra Road to Pendra Road
- DPR for Construction of New BG Electrified Double line from Korba to Dharamraj Nagar

## Railway Siding Projects



### **Project Management Consultancy Services:**

Remodeling of railway siding at Jalandhar Terminal for Indian Oil Corporation Limited.

Development of Proposal for Construction of Railway Siding portion of Food Grains Silos at various locations

# Awards

**2008**  
(Intl. Asso. of Public Tpt)



**2009**  
(Urban Mobility Conference - IUT)

**2010**  
(Solution for our Future Awards –  
Shanghai Expo)

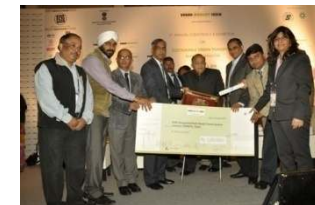


**2010**  
(Urban Mobility Conference – IUT)  
for Best NMT – Green Bike

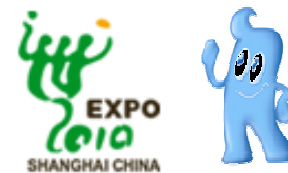
**2011**  
(Urban Mobility Conference – IUT)  
for Bus Cluster Scheme



**2013**  
(UITP 'Grow with Public Transport'  
International Awards: Awards for  
Innovation in public transport  
worldwide)



**2013**  
(Volvo Sustainable Mobility Award)



Thank You