

City Bus Intelligent Transport System(CBITS) in Chhattisgarh



Presented By
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State Urban Development Authority

Current Scenario of City Bus System in Chhattisgarh

- 35 Standard NAC(TATA) & 65 Midi NAC(Mahindra) Buses Procured under JnNURM Phase 1 in 2012- Only for Raipur City
- Under JnNURM –II, Project for Procurement of 451 Buses & Development of Ancillary Infrastructure Sanctioned on 13.01.2014.
- Project sanctioned for 21 Clusters, 70 Cities (21 Core Cities & 49 Link Towns) serving about 80% of Urban Population.
- 21 Clusters are further regrouped into 09 Urban Agglomeration - Duly Notified in Gazette.
- Nine separate SPVs established under chairmanship of Collector of Lead District.
- 09 Urban Public Transport Societies have been registered.
- All the concerned ULBs and department officials like RTO, Supt. of Police etc. are members of SPV.
- The District Collector is the Chairman of the Society and the Municipal Commissioner of the Lead ULB is the Member Secretary.

PROJECT FACT SHEET

| | | | | |
|--|---|----------------|--------------|------------|
| Urban Agglomerations | 09 | | | |
| Clusters | 21 | | | |
| Number of Towns | 70 (21 Core & 49 Link Towns) | | | |
| Financial Structure | Population | Central | State | ULB |
| | < 10 Lacs | 80% | 20% | 0% |
| | >10 Lacs | 50% | 20% | 30% |
| Number of Buses Sanctioned | 451 | | | |
| Typology | 45 Mini, 292 Midi & 11 Standard Non- AC Buses | | | |
| | 52 Midi & 51 Semi Low Floor AC Buses | | | |
| Project Cost | INR 183.945 Crores | | | |
| Cost of Buses | INR 147.39 Crores | | | |
| Ancillary Infrastructure Cost (Depot/Depot Cum Terminal/Workshops) | INR 26.07 Crores | | | |
| Intelligent Transport System(ITS) | INR 7.98 Crores | | | |

CBITS - An Overview

- Real-time monitoring and tracking of buses to reduce road congestion and other transport issues.
- Performance monitoring of Bus Operator.
- Dynamic Passenger Information System (PIS-Bus Q shelter & Citizen interface) based on Geographical Positioning System (GPS)
- Advanced display and communication technologies, Central Control Station (CCS) and intelligent display boards.
- ITS improves passenger safety, fleet efficiency, services and traffic situation through transmission of real time information.
- Audio- Visual Advertisement through ITS.
- Depot and operation management.
- Panic Button for Emergency Response System.
- Bus fare and on board ticketing system.

ITS Overview of Modules



CBITS: Overall Project Status

Inception Report Preparation and Submission

System Detail Design and Conceptualization

Bus OEM's SCU device integration

User Interface and Application Development

Pilot Implementation

Application Testing and System Review

Command Control Centre deployment


Server Setup at State Data Centre (CHIPS)

Training and Orientation


Rollout

Dry run of Total System

Deployment and GO LIVE

 Completed Milestones

 In Progress

 To be Completed

6

CBITS: Command Control Centre Raipur



CBITS: Deployment at Bilaspur



LOCATION: Bilaspur Core City Level UPTS unit at Bilaspur Municipal Corporation



LOCATION: Bilaspur Depot Command Centre at Koni Ramkrishna Ashram



LOCATION: LED Display at Collectorate, Bilaspur



LOCATION: LED Display at Nehru Chowk, Bilaspur

CBITS Application: Main Dashboard



110
100%



54
2 UPTS



10,000
5% increase



23,854
100%

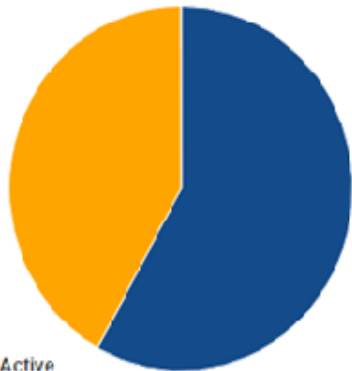


800
100%



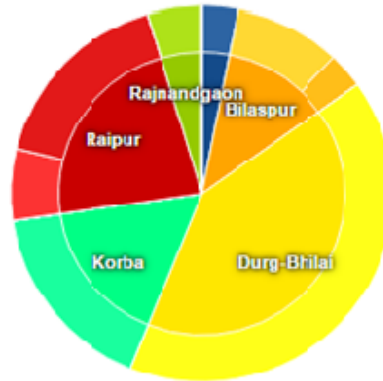
110
Visitors

GPS Data - Vehicles Active / Inactive

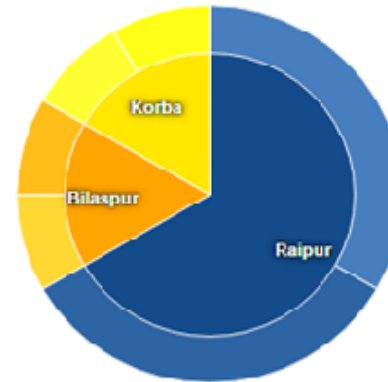


Active
Inactive

Trip On Data - Routes Active / Inactive



UPTS Wise Logged In User



Weather Forecast



Vehicles On Road With Trip On Activity

VHMD Data - Active Vehicles

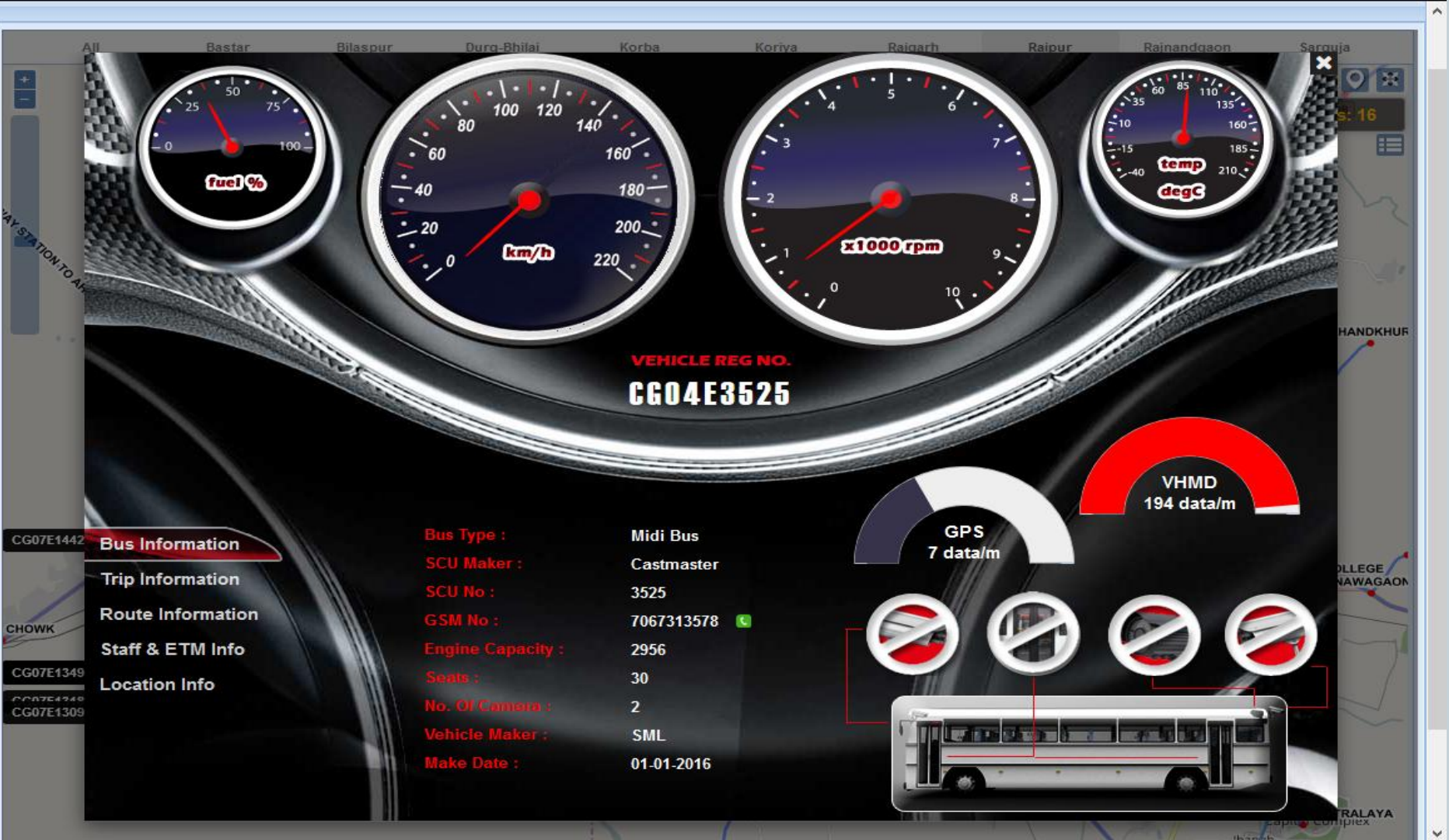
Trip Trend For Past 7 Days UPTS Wise

UPTS Raipur ▼

CBITS Application: Command Control Module

The screenshot displays the CBITS Command Control Module interface. At the top, a navigation bar includes icons for Dashboard, TMS, User Mgmt., Vehicle Tracking (highlighted in red), Utility, HR-Payroll, Inventory, Adv. Mgmt., SLA, Reports, Grievance, AFCS, and CCTV video. Below the navigation bar, the application title "CBITS" is visible. On the left, a "Quick Links" sidebar lists: Track, Control Center, LED Board, History Playback, and CCTV Surveillance. The main area features a map of Bilaspur with various locations and roads labeled, including GEC GATE 2, GEC GATE, USLAPUR RAILWAY STATION, USLAPUR OVER BRIDGE, GREEN PARK, INDU CHOWK, LAGRASEN CHOWK, RAVINDRA NATH TYGORE CHOWK, TARBAHAR CHOWK, BORRA BHATTA, and LALLKHODAN. Numerous vehicle IDs are overlaid on the map, such as CG10G1576, CG10G1357, CG10G1460, CG10G1358, CG10G1455, CG10G1571, CG10G1456, CG10G1454, CG10G1448, CG10G1447, and CG10G1457. A legend in the top right corner identifies symbols for Stoppages (red dot), Route (blue line), Vehicle (blue circle), UPT (blue square), Core City (purple circle), and Depot (pink house). A search bar and a "No. of active vehicles: 28" indicator are also present. The bottom of the interface shows a list of districts: All, Bastar, Bilaspur (selected), Durg-Bilai, Korba, Koriya, Raigarh, Raipur, Rajnandgaon, and Sarguja.

CBITS Application: Vehicle Instant Dashboard



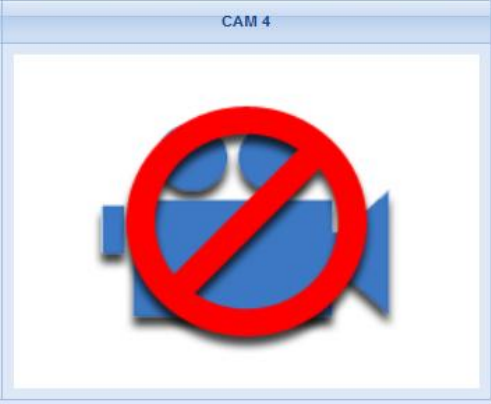
CBITS Application: CCTV Footage Module

CBITS

- Quick Links
- Track
 - Control Center
 - LED Board
 - History Playback
 - CCTV Surveillance

Date: 23-09-2016 Vehicle No: CG04EA0323 UPTS: Raipur Depot: Pandari [Back](#)

| S.No | Time From | Time To | Action |
|------|-----------|----------|----------------------------|
| 1 | 14:01:10 | 14:03:52 | Play Video |
| 2 | 14:01:11 | 14:03:40 | Play Video |
| 3 | 14:01:35 | 14:04:22 | Play Video |
| 4 | 14:03:41 | 14:05:49 | Play Video |
| 5 | 14:03:53 | 14:06:05 | Play Video |
| 6 | 14:04:23 | 14:07:36 | Play Video |
| 7 | 14:05:50 | 14:07:50 | Play Video |
| 8 | 14:06:06 | 14:08:26 | Play Video |
| 9 | 14:07:51 | 14:10:18 | Play Video |
| 10 | 14:08:27 | 14:11:07 | Play Video |
| 11 | 14:10:20 | 14:12:12 | Play Video |
| 12 | 14:11:08 | 14:13:22 | Play Video |
| 13 | 14:12:13 | 14:14:26 | Play Video |
| 14 | 14:13:22 | 14:15:41 | Play Video |
| 15 | 14:14:28 | 14:16:21 | Play Video |
| 16 | 14:15:41 | 14:17:46 | Play Video |
| 17 | 14:16:22 | 14:18:32 | Play Video |
| 18 | 14:17:47 | 14:19:47 | Play Video |
| 19 | 14:18:32 | 14:20:26 | Play Video |



CBITS Application: LED Display Control Module

Dashboard TMS User Mgmt. **Vehicle Tracking** Utility HR-Payroll Inventory Adv. Mgmt. SLA Reports Grievance AFCS CCTV video

CBITS

Quick Links

- Track
 - Control Center
 - LED Board
 - History Playback
 - CCTV Surveillance

All Bastar Bilaspur **Durg-Bhilai** Korba Koriya Raigarh Raipur Rajnandgaon Sarguja

DEPOT STOP

Map: NARMADA GREEN PARK NARMADA

MAHADEVA CHOUK

| LED Board Information | | UP | |
|-----------------------|------------|-------|------|
| LED Board No. | DB1 | | |
| GSM No. | 9713905052 | | |
| Product ID | Stesalit | | |
| Model No. | DB1 | | |
| LED Service Request | | | |
| Last Received Data | NA | | |
| Total Received Data | NA | | |
| LED Diagnostic Data | | | |
| Last Received Data | NA | | |
| SIM Group | NA | | |
| GPRS Group | NA | | |
| Line Group | NA | | |
| Memory Group | NA | | |
| LED Display Messages | | | |
| Vehicle No | Time | Route | ETAs |
| No Records Found! | | | |

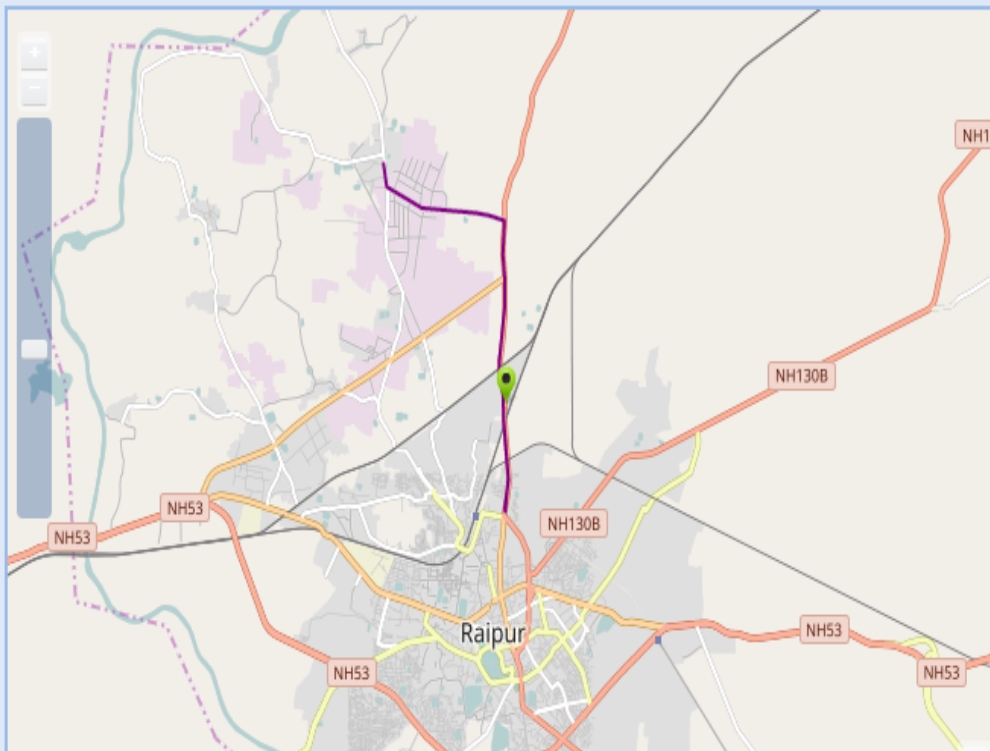
| LED Board Information | | DOWN | |
|-----------------------|------------|-------|-----|
| LED Board No. | DB1 | | |
| GSM No. | 9713905052 | | |
| Product ID | Stesalit | | |
| Model No. | DB1 | | |
| LED Service Request | | | |
| Last Received Data | NA | | |
| Total Received Data | NA | | |
| LED Diagnostic Data | | | |
| Last Received Data | NA | | |
| SIM Group | NA | | |
| GPRS Group | NA | | |
| Line Group | NA | | |
| Memory Group | NA | | |
| LED Display Messages | | | |
| Vehicle No | Time | Route | ETA |
| No Records Found! | | | |

CBITS Application: History Playback Module

History details for vehicle CG04E3524 on 18-10-2016

[Back](#)

| Start time | End time | Distance |
|------------|----------|----------|
| 09:00:00 | 11:00:00 | 11.70 km |



| | | | |
|-----|----------|-------------------------|----------|
| 668 | 10:23:46 | 21.27538833,81.63625 | 11.33 km |
| 669 | 10:23:49 | 21.27567833,81.63620667 | 11.37 km |
| 670 | 10:23:52 | 21.27593667,81.636185 | 11.40 km |
| 671 | 10:23:55 | 21.27616167,81.63616333 | 11.42 km |
| 672 | 10:23:58 | 21.27631167,81.63614167 | 11.44 km |
| 673 | 10:24:01 | 21.27634333,81.63614167 | 11.44 km |
| 674 | 10:24:04 | 21.27637667,81.63614167 | 11.45 km |
| 675 | 10:24:07 | 21.27641833,81.63614167 | 11.45 km |
| 676 | 10:24:10 | 21.27648333,81.63612167 | 11.46 km |
| 677 | 10:24:13 | 21.27654667,81.63612167 | 11.47 km |
| 678 | 10:24:16 | 21.27655833,81.63612167 | 11.47 km |
| 679 | 10:24:19 | 21.27656833,81.63612167 | 11.47 km |



CBITS Application: Route Diversion Reporting

MOOREBUS 18:57:04

Dashboard TMS User Mgmt. Vehicle Tracking Utility HR-Payroll Inventory Adv. Mgmt. SLA **Reports** Grievance AFCS CCTV video

CBITS

Quick Links

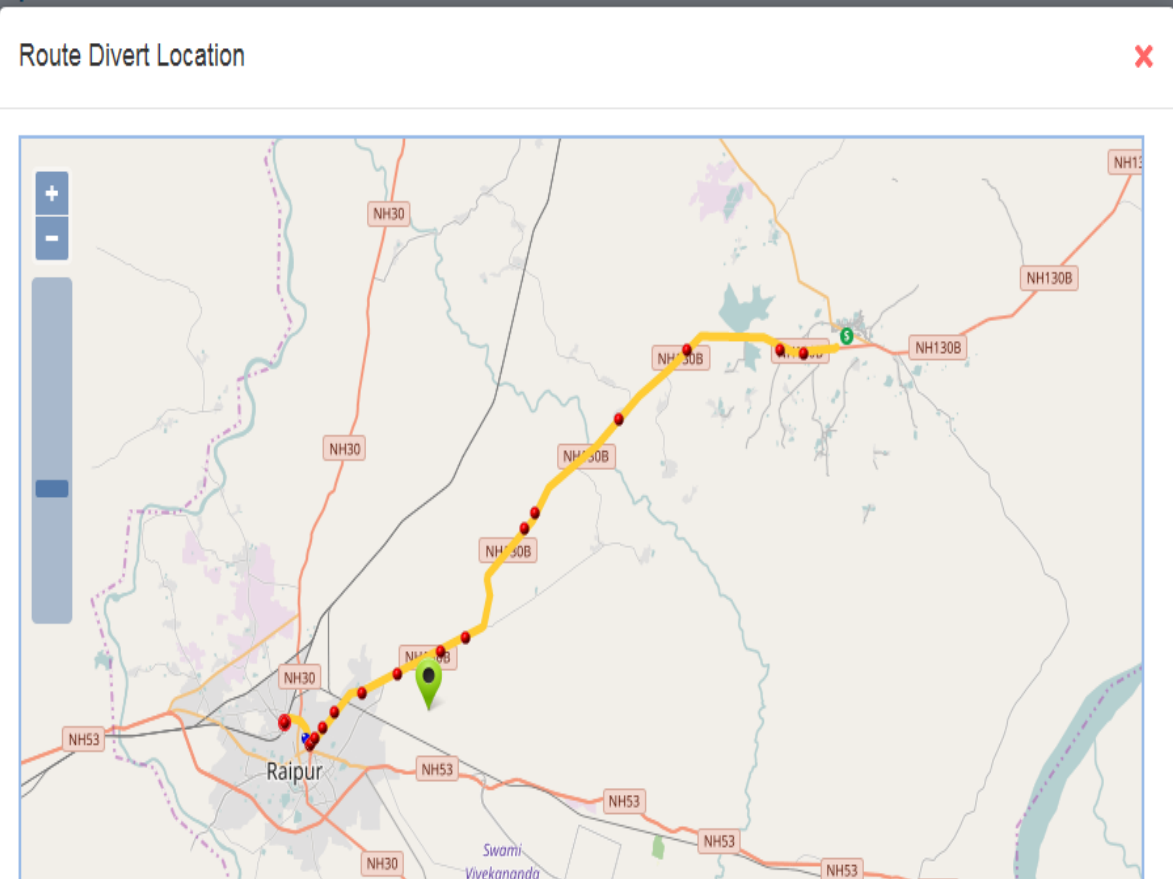
- Standard Reports
 - Vehicle Report
 - Vehiclewise Daily Run
 - Vehiclewise Fuel
 - Vehiclewise Distance
 - Vehiclewise Overspeed
 - Trip Activity
 - Divert Route
 - VHMD Analysis Report
 - VHMD Transmission Report
 - GPRS Transmission Report
 - Panic Alert
 - Fuel Consumption Report
 - Route Report
 - Routewise Daily Run
 - Planned Trip vs Actual Trip
 - Depot Report
 - Depot Fuel Consumption Re

Route Divert Report

Generate report

Date From: 01-0
UPTS Raipur
Vehicle CG0

| Date |
|------------|
| 27-07-2016 |
| 27-07-2016 |
| 27-07-2016 |
| 27-07-2016 |
| 27-07-2016 |
| 27-07-2016 |
| 27-07-2016 |
| 27-07-2016 |
| 27-07-2016 |



CBITS Application: Panic Alert Reporting

CBITS

Quick Links

Standard Reports

- Vehicle Report
 - Vehiclewise Daily Run
 - Vehiclewise Fuel
 - Vehiclewise Distance
 - Vehiclewise Overspeed
 - Trip Activity
 - Divert Route
 - VHMD Analysis Report
 - VHMD Transmission Report
 - GPRS Transmission Report
 - Panic Alert
 - Fuel Consumption Report
- Route Report
 - Routewise Daily Run
 - Planned Trip vs Actual Trip
- Depot Report
 - Depot Fuel Consumption Re

Panic Alert Report

Generate report

Date From: 17-0

UPTS Raip

Vehicle --Sel

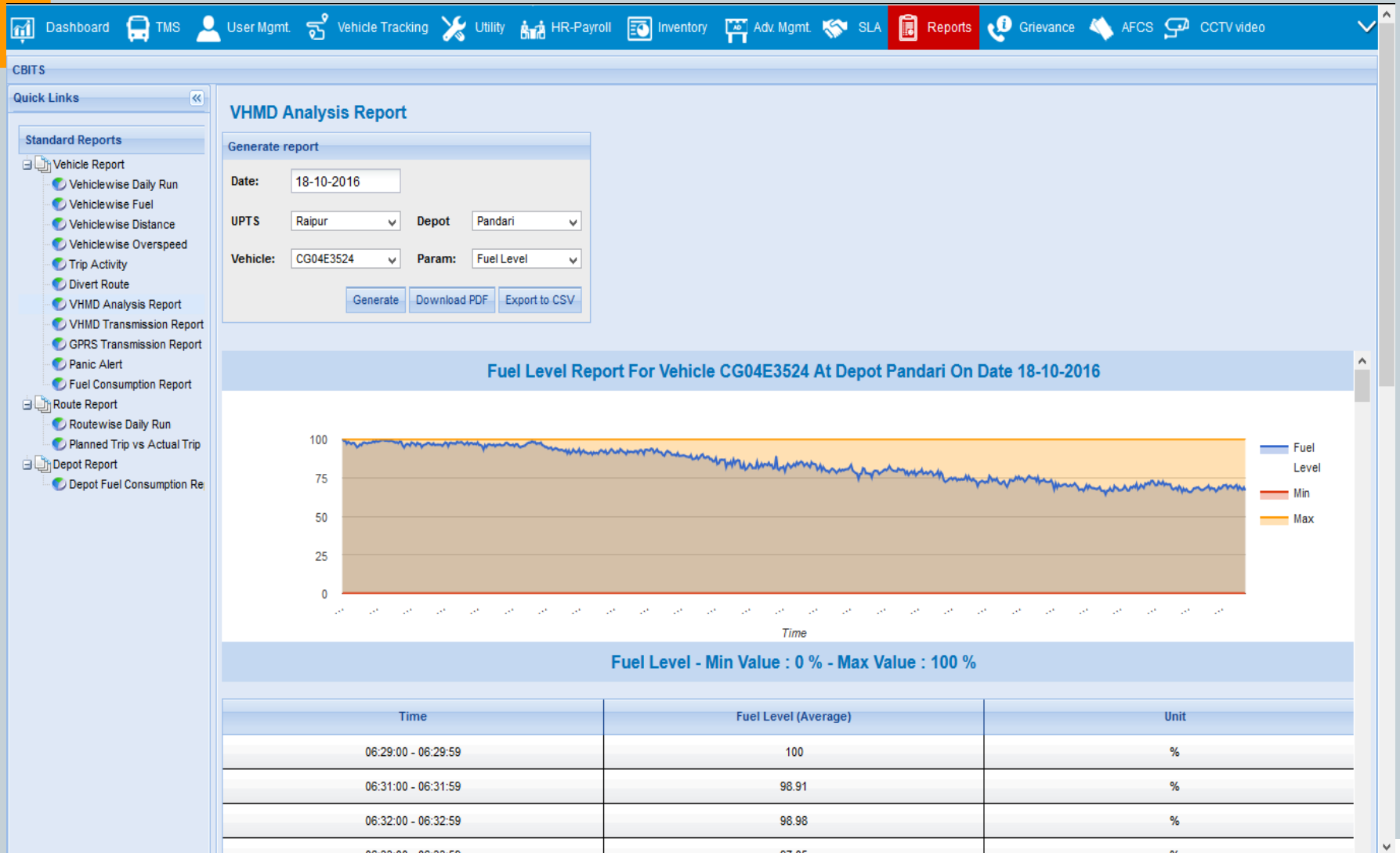
Date

| |
|------------|
| 29-09-2016 |
| 29-09-2016 |
| 29-09-2016 |
| 29-09-2016 |
| 29-09-2016 |
| 29-09-2016 |
| 29-09-2016 |

Panic Alert Location

Swami Vivekananda Airport

CBITS Application: Fuel Consumption Reporting



CBITS Application: Vehicle Scheduling Module

CBITS

- Quick Links**
- Manage Administrator
 - UPTS Management
 - City UPTS Management
 - Depot Management
 - VHMD
 - VHMD Type Management
 - VHMD Management
 - Manage Vehicle
 - Vehicle Management
 - Vehicle Maker Management
 - Manage Route
 - Route Management
 - Manage Display Board
 - Show displayboard
 - Display Board Registration
 - Manage Bus Stoppage
 - Bus Stoppage Creation
 - Manage SCU Device
 - SCU Device Registration
 - SCU Maker Management
 - Manage Schedule
 - Bus Scheduling
 - Dailyjob Scheduling
 - Assign Bus to Jobcard

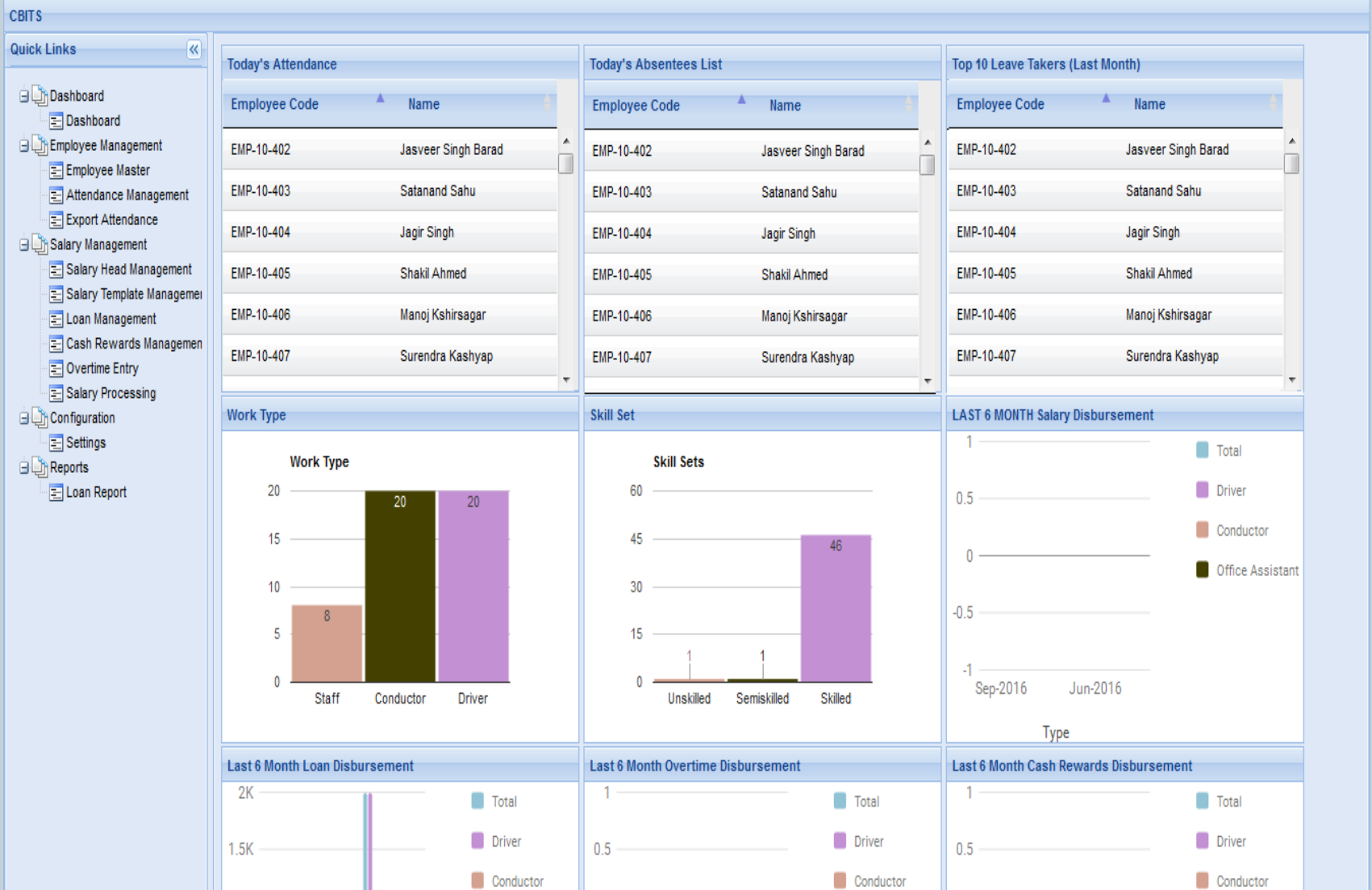
View Schedule

| | | | |
|--|------------|--|-------------|
| Date From | 01-01-2016 | Date To | 31-12-2016 |
| Shift | A | TaskJob No | 0268.R-51-A |
| Up Route | | Down Route | |
| Up-Route: 51U-Korba Railway Station-Rajgamar | | Down-Route: 51D-Rajgamar-Korba Railway Station | |

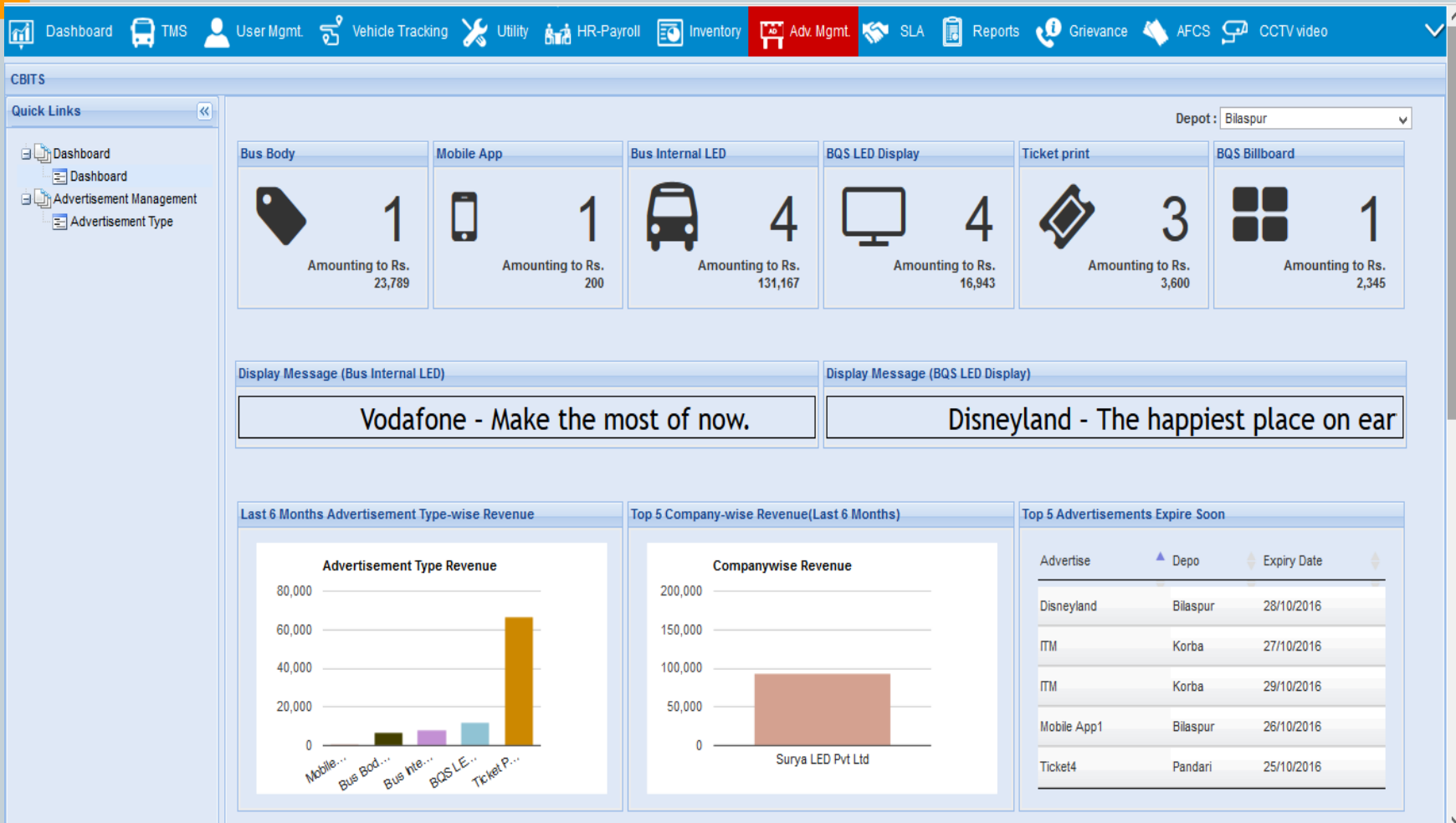
Route Time Schedule

| Departure Time | Arrival Time | Departure Time | Arrival Time |
|----------------|--------------|----------------|--------------|
| 06:00:00 | 06:40:00 | 06:45:00 | 07:25:00 |
| 07:40:00 | 08:20:00 | 08:25:00 | 09:05:00 |
| 09:20:00 | 10:00:00 | 10:05:00 | 10:45:00 |
| 10:55:00 | 11:35:00 | 11:40:00 | 12:20:00 |
| 12:35:00 | 13:15:00 | 13:20:00 | 14:00:00 |
| 14:15:00 | 14:55:00 | 15:00:00 | 15:40:00 |
| 15:55:00 | 16:35:00 | 16:40:00 | 17:20:00 |
| 17:35:00 | 18:15:00 | 18:20:00 | 19:00:00 |
| 19:15:00 | 19:55:00 | 20:00:00 | 20:40:00 |

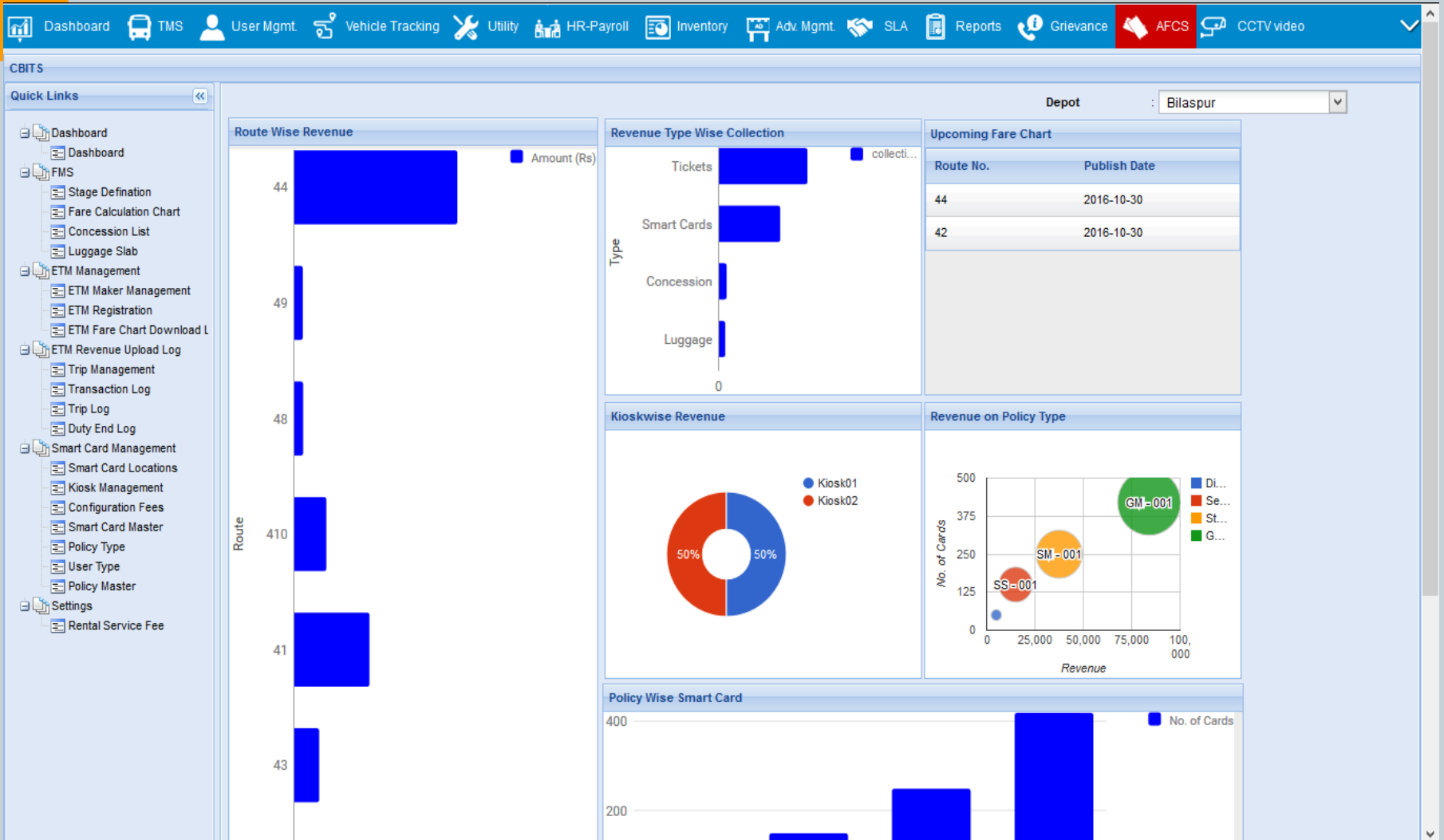
CBITS Application: HR & Payroll Dashboard



CBITS Application: Advertisement Dashboard



CBITS Application: Fare Management Revenue Dashboard



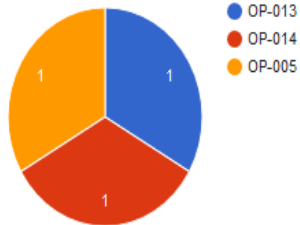
CBITS Application: SLA Dashboard

CBITS

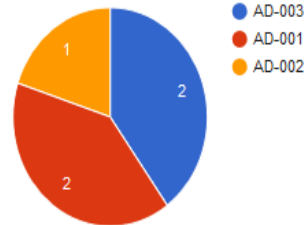
Quick Links

- Dashboard
- Penalty
 - Penalty Logging
 - Penalty Type
- Reports
 - Entitywise Reports
 - Penaltywise Reports

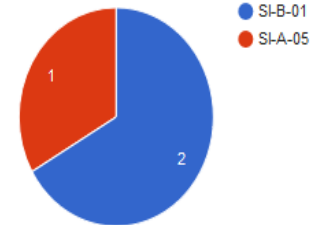
Operators (Penalties Logged Today)



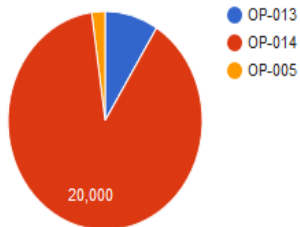
Advertising Agency (Penalties Logged Today)



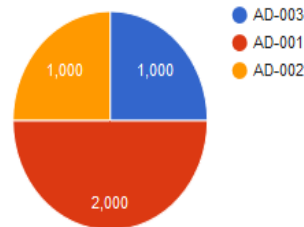
System Integrator (Penalties Logged Today)



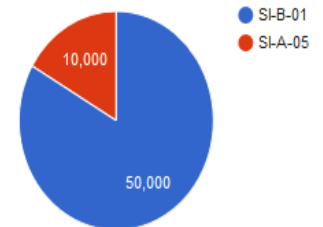
Operators (Revenue Logged Today)



Advertising Agency (Revenue Logged Today)

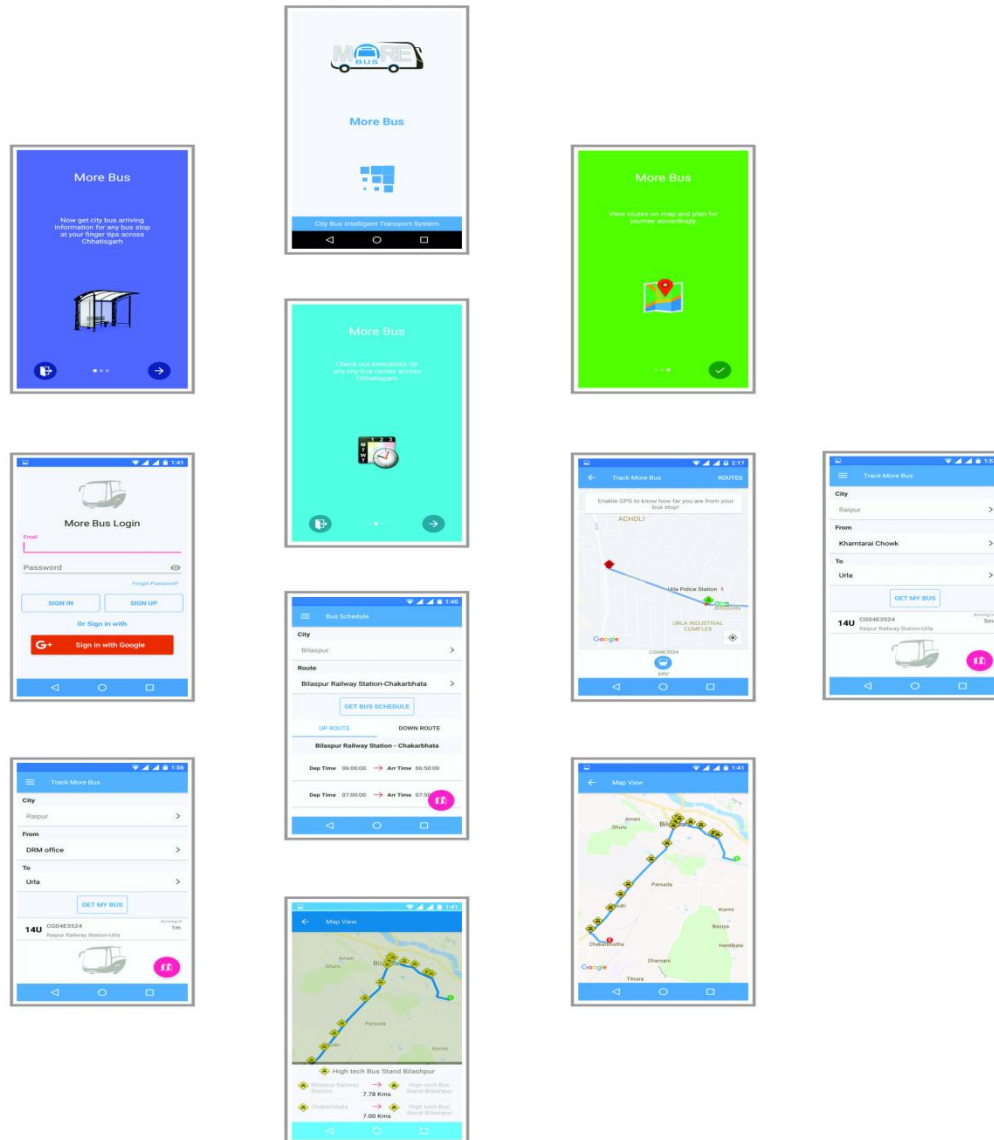


System Integrator (Revenue Logged Today)





MORE BUS APP - AT A GLANCE



Progress of Project

- ✓ A common card for city buses of 4 cities launched.

- ✓ Mobile app has been developed - vendor advised to add
 - Self ticketing
 - QR code/ magnetic card/ contactless card ticketing through NCPI enabled digital wallet modules in the app.

- ✓ First Round discussions with the Financial Institutions for payment gateway /NPCI Card completed.

Next Steps-

- ✓ Primary and legacy Data Collection completed.
- ✓ Parallel real time data analysis ongoing.
- ✓ CBITS application launched on 1st November 2016.
- ✓ A common card for city buses of 4 cities launched.
- ✓ Beta Version of Mobile app launched on 1st November.
 - Data Collection and analysis to be completed by 15 November.
 - Additional modules in the app are in process of development
 - CBITS project -to be rolled out and go-live by December End.
 - NPCI enabled Multimodal payment solution to be onboard by June 2017 under Smart Cities mission.

City Bus Smart Card for 4 Cities



Thank
you