

Intelligent Transportation System

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Increase Operational Efficiency



Reduction in Accidents



Reduction in Travel Time



Objectives



Real Time Information management



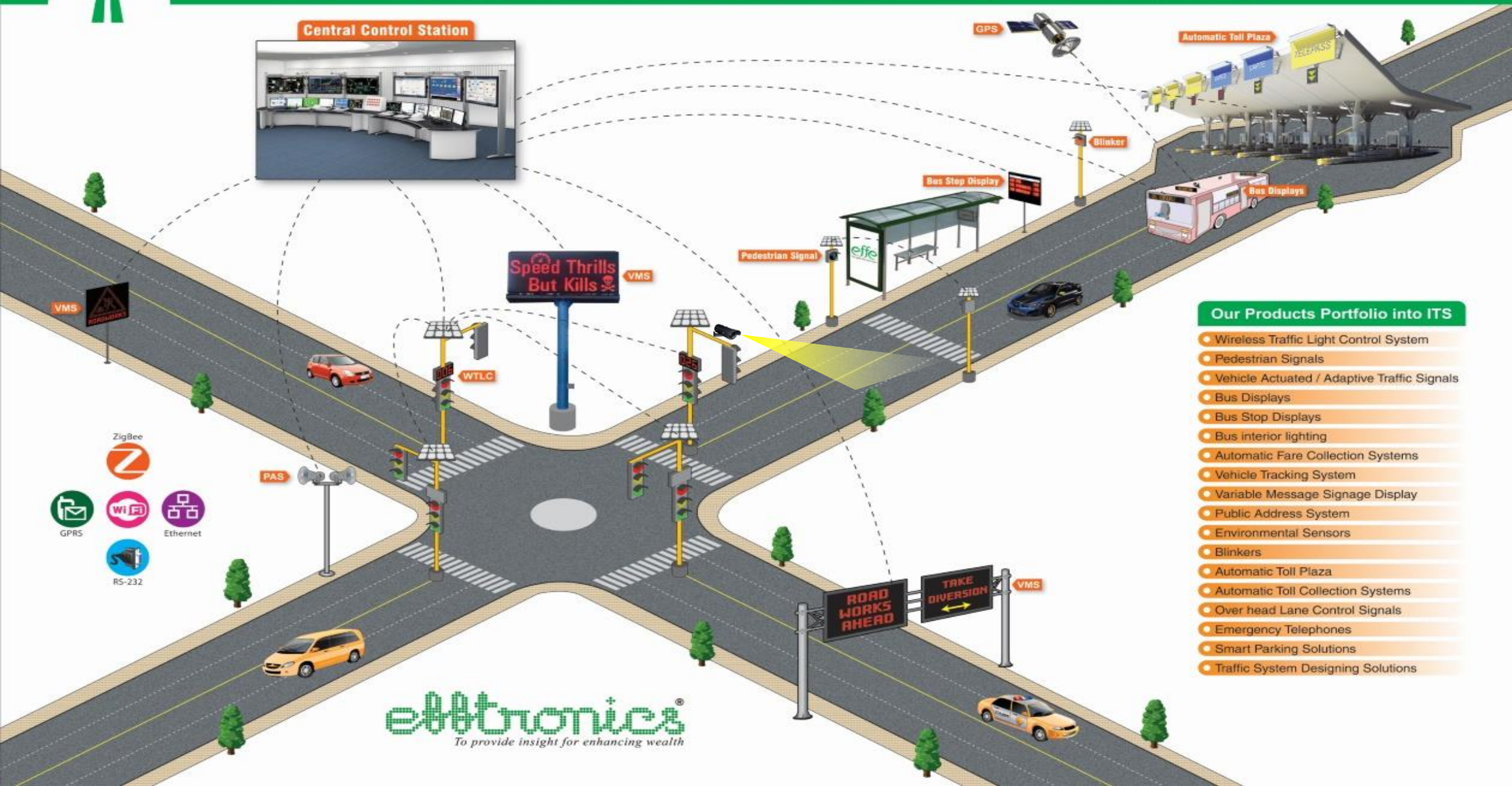
Create a platform for sharing traffic info across the city



Increase Traffic Signal Efficiency



Intelligent Transportation System (ITS)



Our Products Portfolio into ITS

- Wireless Traffic Light Control System
- Pedestrian Signals
- Vehicle Actuated / Adaptive Traffic Signals
- Bus Displays
- Bus Stop Displays
- Bus interior lighting
- Automatic Fare Collection Systems
- Vehicle Tracking System
- Variable Message Signage Display
- Public Address System
- Environmental Sensors
- Blinkers
- Automatic Toll Plaza
- Automatic Toll Collection Systems
- Over head Lane Control Signals
- Emergency Telephones
- Smart Parking Solutions
- Traffic System Designing Solutions

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Traffic signals In INDIA

Our Approach:

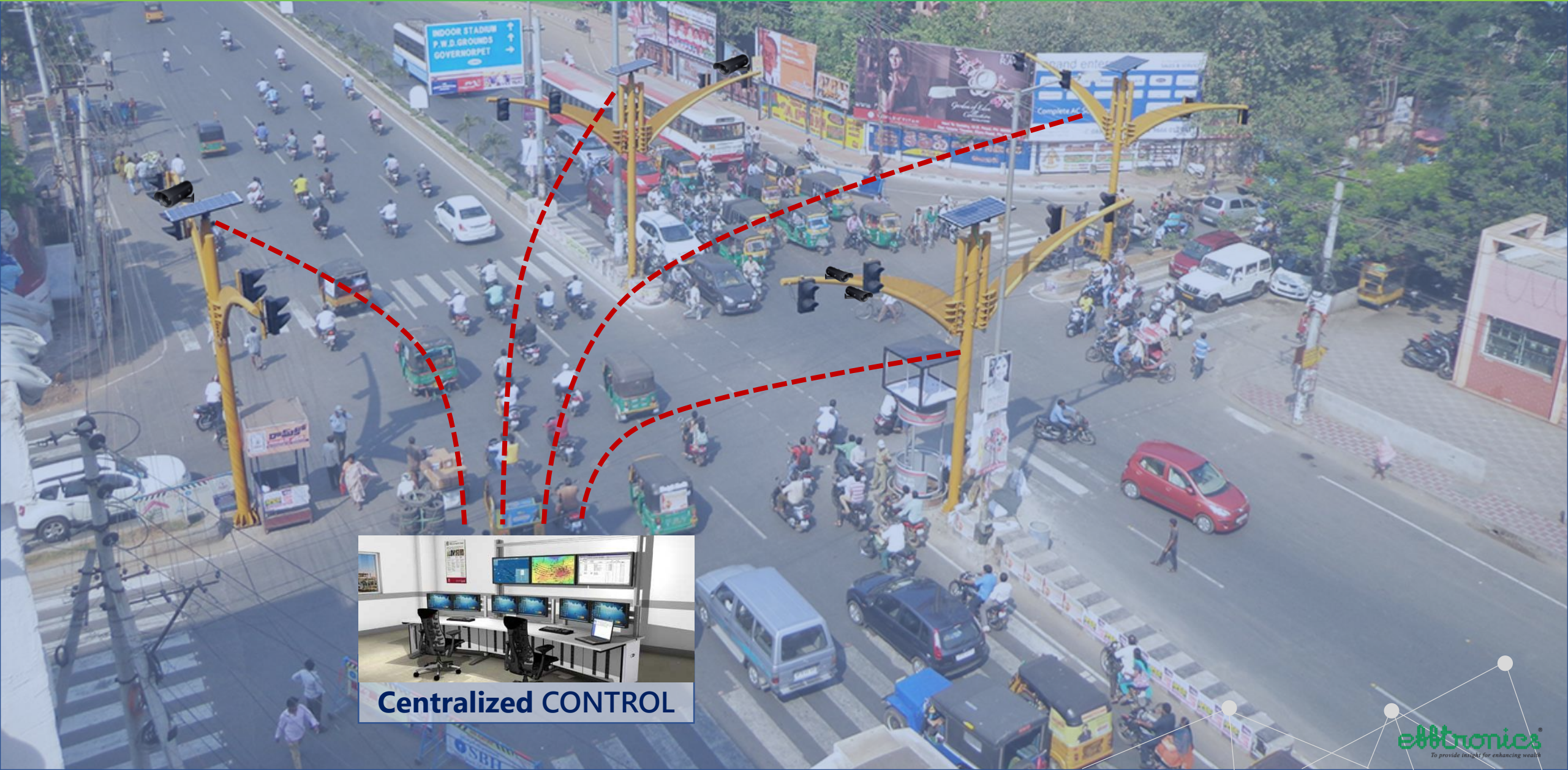
1. **Traffic Study**
2. **Identify alternative routes , respective traffic density**
3. **Create public awareness towards alternative routes through various media**
4. **Identify required technical solutions to improve traffic**

ADAPTIVE TRAFFIC MANAGEMENT SYSTEM



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Adaptive Traffic Control



Centralized CONTROL

Adaptive Traffic Control



- Every signal can be addressed & dynamically controlled.
- Remote controlling of traffic signals.
- Central Connectivity for Remote Control and Monitoring.

Galvanized Cantilever & Standard Pole:

- Easy Relocatable
- Each pole can generate its power supply itself using the solar panel and maintain battery backup
- Each pole handles at-least one slave module

Cantilever pole



Standard pole



Vehicle Detector Camera:

- Backing Low power imaging platform based vehicle occupancy detection system calculates the traffic density
- Based on traffic density in each lane master processor decides & schedules the timings for each lane which ensures smooth flow of traffic
- Detects red light jumping



Adaptive Traffic Signal Controller:

- Calculates the sequence and finds the corresponding signals status and the countdowns of the junction's ways.
- Data will be forwarded to the corresponding slaves, so that slaves will control the lamps and countdowns as per the master.
- Monitors & Shares the information to user regarding Health, Signal strength, Voltages, currents...
- Synchronize all the slave to the master regularly to get the uniform change of all the signals



Pedestrian Lamps:

- STOP :

Lamp Color – Red

Pattern – Stop Position Man

No of LEDS – 50

Dimension – 300mm Dia

- Walk :

Lamp Color – Cyan

Pattern – Walk Position Man

No of LEDS – 54

Dimension – 300mm Dia

Traffic Light Aspects:

- Lamps will controlled by Slaves and Feedback facility is available for each lamp
- Suitable for rugged environment

Pedestrian Lamp



Light Aspects

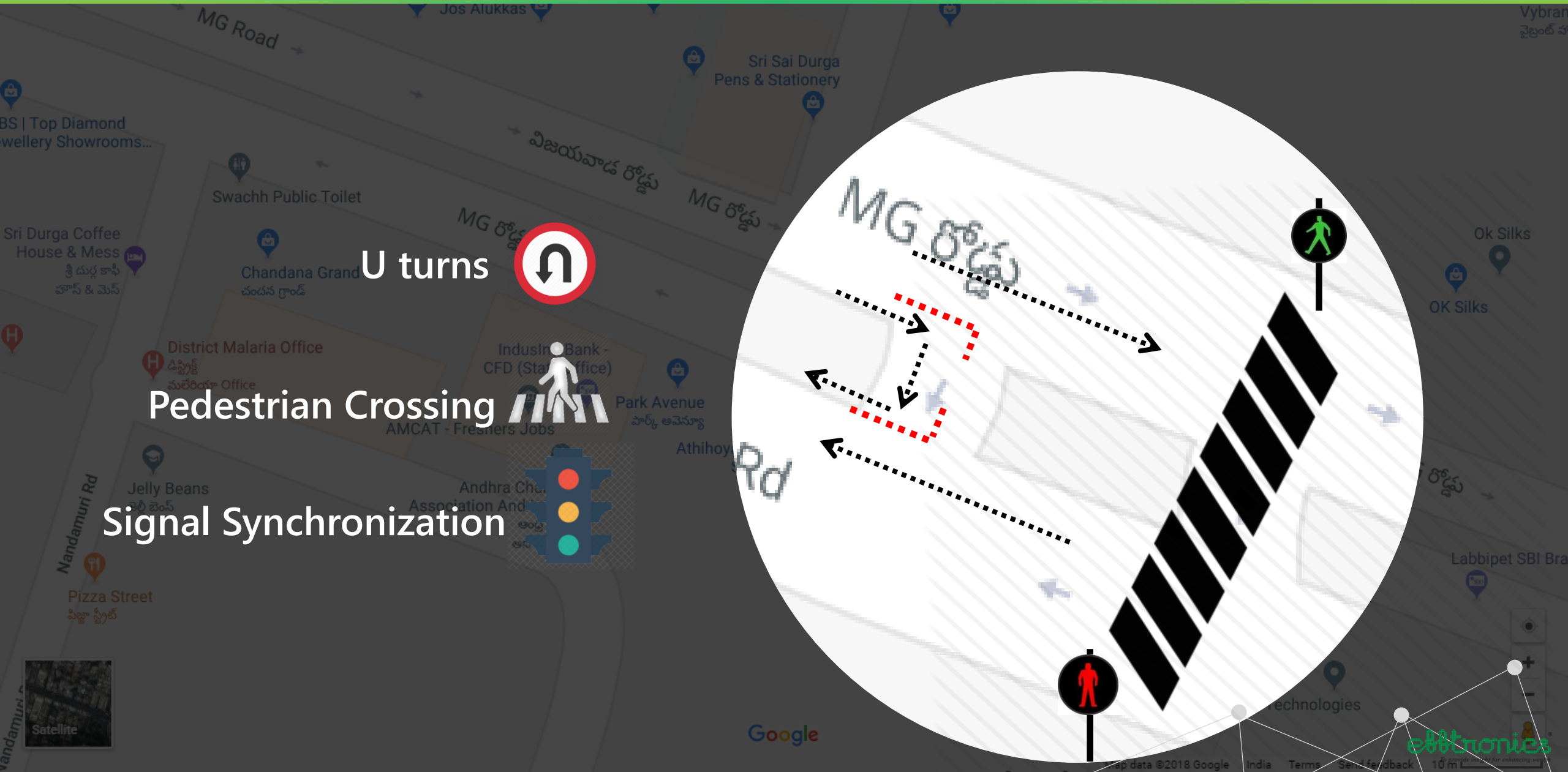
Solar Blinkers



- Traffic signal blinkers are used mainly at road dividers on highways, near construction sites and at accident prone areas to warn the motorists for safe and secure transportation.
- Solar blinkers work on solar power which is green energy based. It will have the various options like intensity variation as per the ambient lighting conditions, and configurable blinking duration.



Pelican Signals



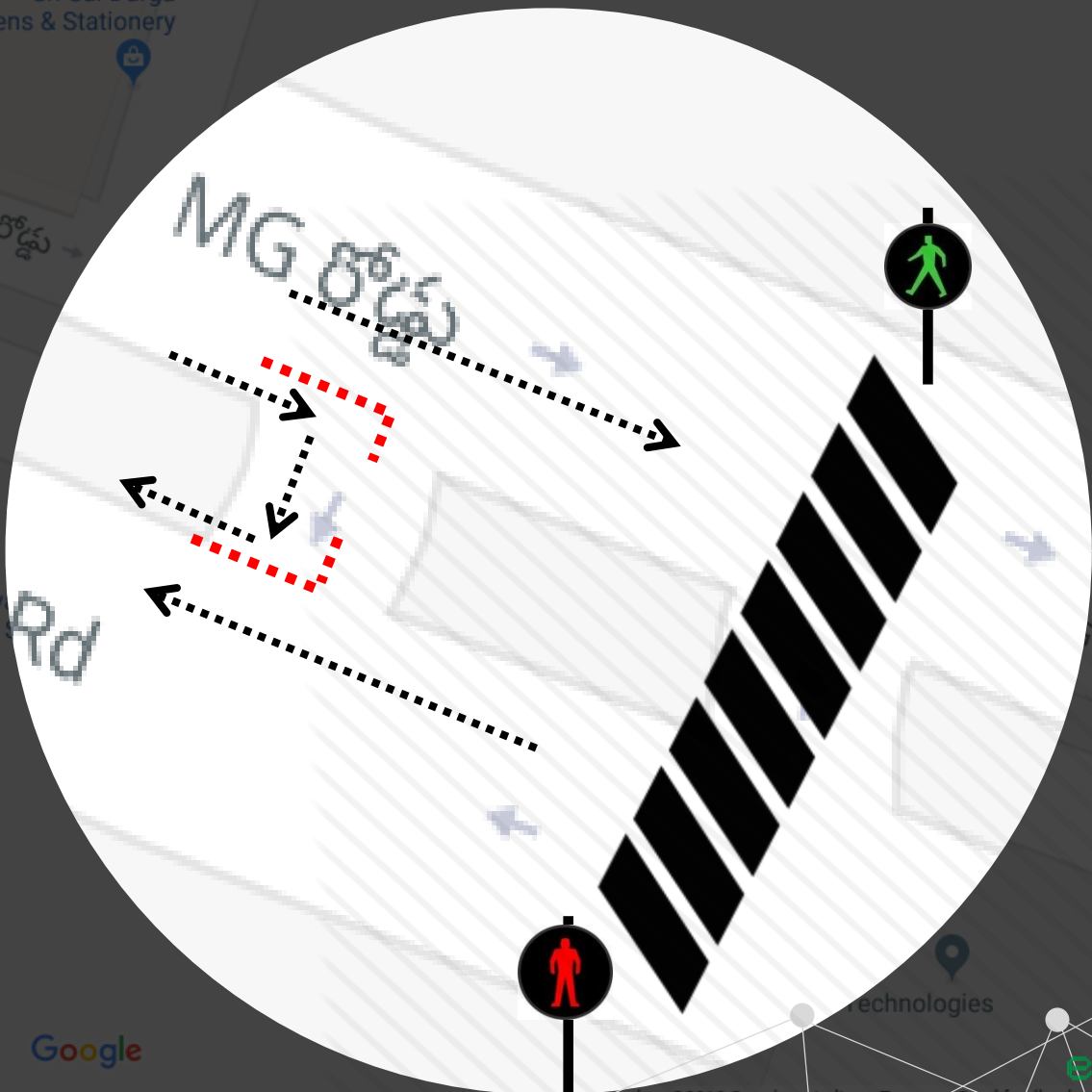
U turns



Pedestrian Crossing



Signal Synchronization



Emergency Vehicle Priority



Technology enables emergency vehicles to automatically trigger traffic light sequences to change along the most direct route when responding to an emergency call



GPS and traffic management information to determine the location of the emergency vehicle and the time taken to reach the next set of traffic lights. Once the emergency vehicle has passed, the traffic lights will return to normal sequence, minimising traffic disruptions.

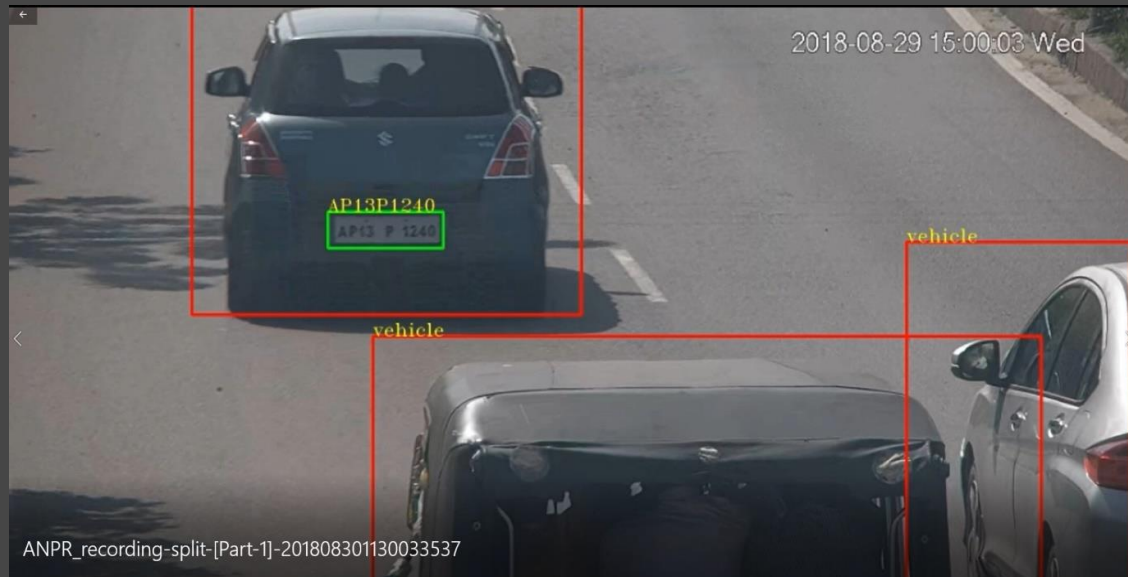


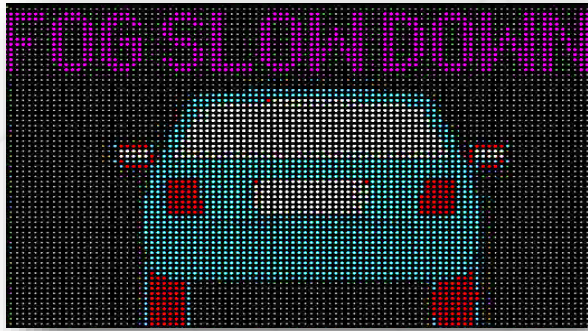
Video Analytics



Using advanced machine learning, system shall learn the number plates, and violations. The system will also improve its performance by continuous learning. The system is trained by the Indian number plate recognition. The solution provides various video analytics like

1. Automatic number plate recognition
2. Red Light Violation
3. Wrong Route Direction
4. No helmet detection





VARIABLE MESSAGE SIGNAGE SYSTEM

Display warnings, traffic advice, route guidance and emergency messages to motorists from the control room in real time.





Constant current LED driver
use for reducing Ageing
Effects



works without being effected even
in Adverse Weather Conditions



user accounts with
password for Security

central place Controlling
& Networking



Control Room

User

Application S/W

Easy Access



Alarm for sign
failures



Quick and undisturbed
parts replacement for best
maintenance

SLOW DCWN

High display stability
& uniformity for Longer
Visibility



Challenges & Solution

USE CASES



Road Signs



Health Alerts



Advertisements



News Bulletin



General information



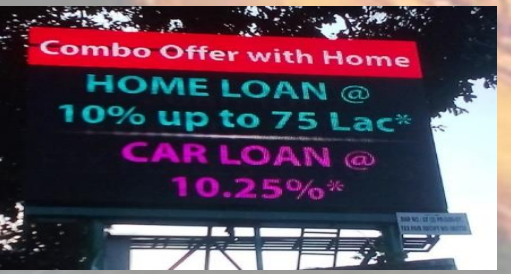
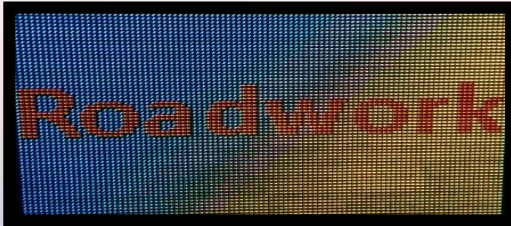
Weather Alerts



Live Traffic Alerts

INSTALLATIONS

103 INSTALLATIONS done all over India



CERTIFICATION

Tested in accordance with EN12966

Innovation • Service • Excellence



INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY

[A Division of NATRIP Implementation Society (NATIS), Govt. of India]

TEST REPORT (Development Test)

Non-Traceable

C D O L N 6040

Date: 08.02.2018

- 1.0 NAME AND ADDRESS OF THE CUSTOMER : M/s. Efftronics Systems Pvt. Ltd.,
40-15-9, Brundavan Colony,
Vijayawada, Andhra Pradesh – 520010.
- 2.0 CUSTOMER REFERENCE : IOCS Reg. No.: CCDEFTTMFPHO51670
Dated: 03-May-2017
- 3.0 DESCRIPTION OF TEST COMPONENT : Variable Message Signage (VMS) Test
Module P20-32x32 1R1G1B with Serial
Number EFF/VMS/RGB/001
(Discontinuous VMS)
- 4.0 TEST OBJECTIVE AND PROCEDURE : To Conduct Optical Performance Tests
on Variable Message Signage (VMS) test
modules in accordance with EN
12966:2014 (E)
- 5.0 TEST REQUIREMENTS AND RESULTS : Please refer the test results in annexure I
- 6.0 TEST CONCLUSIONS :

Test Parameter	Class
Colour Coordinates	rC2, gC1, bC2, wC2
Luminance (cd/m ²)	L2
Luminance Ratio	R2
Beam Width	B6
Uniform Intensity	Compliance Criteria Met

DISCLAIMER

This test report pertains only to the components /parts /assemblies /sensors /materials /tools /chemicals /engines /vehicles /Agri Tractors etc., actually tested at ICAT in the presented condition based on the documents /information produced /submitted by the customer. The issuance of this test report alone does not indicate any measure of approval, certification, supervision, COP, control of quality surveillance by ICAT of the product. No exact, abridgment or abstraction from this test report shall be published or used to advertise the product without the written consent of the Director, ICAT, who reserves the absolute right to agree or reject all or any of the details of any items of publicity for which consent may be sought. ICAT is in no way responsible for any misuse of copying of any design /type system in connection with entire vehicle /components /parts and assemblies. Breach of any statutory provisions of Indian laws or of laws of other countries, will be sole responsibility of the customer and ICAT shall not be liable for any claims or damages, made by the party, whatsoever. The customer shall alone be liable for the same and undertakes to indemnify ICAT in this regard. Further, ICAT has the right to initiate cancellation /withdrawal of the certificate /report issued, in case of any fraud, misrepresentation, when it surfaces and comes in the knowledge of ICAT. The appropriate local courts at Gurugram shall have the jurisdiction in respect of any dispute, claim or liability arising out of this report.

Prepared by DEEPANSHU DWIVEDI Dy. Manager	Checked by MAHENDAR PAL Sr. Manager	Approved by PAMELA TIKKU Sr. General Manager	 Page 1 of 13 [51670]
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Site -2 : Plot No.-01, Sector-M-11, HSIIDC, IMT-Manesar, Gurugram-122050, Haryana (India)
Phone : 0124-4586111, Fax : +91-124-2290005. E-mail: team@icat.in, Website : www.icat.in
[An ISO 9001, ISO 14001 and OHSAS 18001 certified, scope wise NABL accredited and BIS recognised Test House]



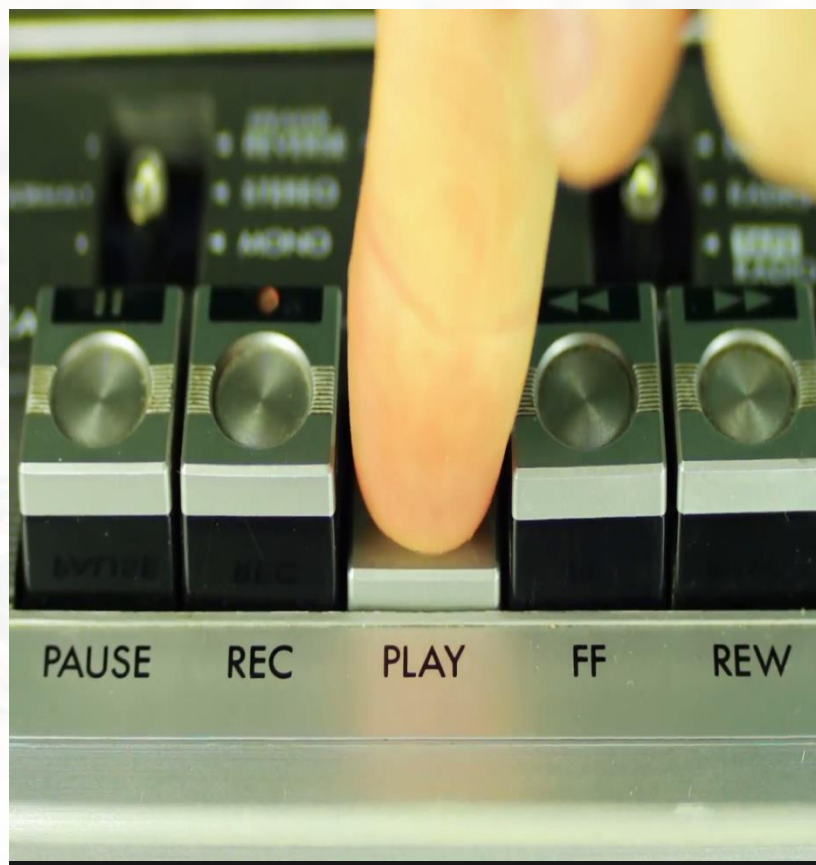
PUBLIC ADDRESS SYSTEM

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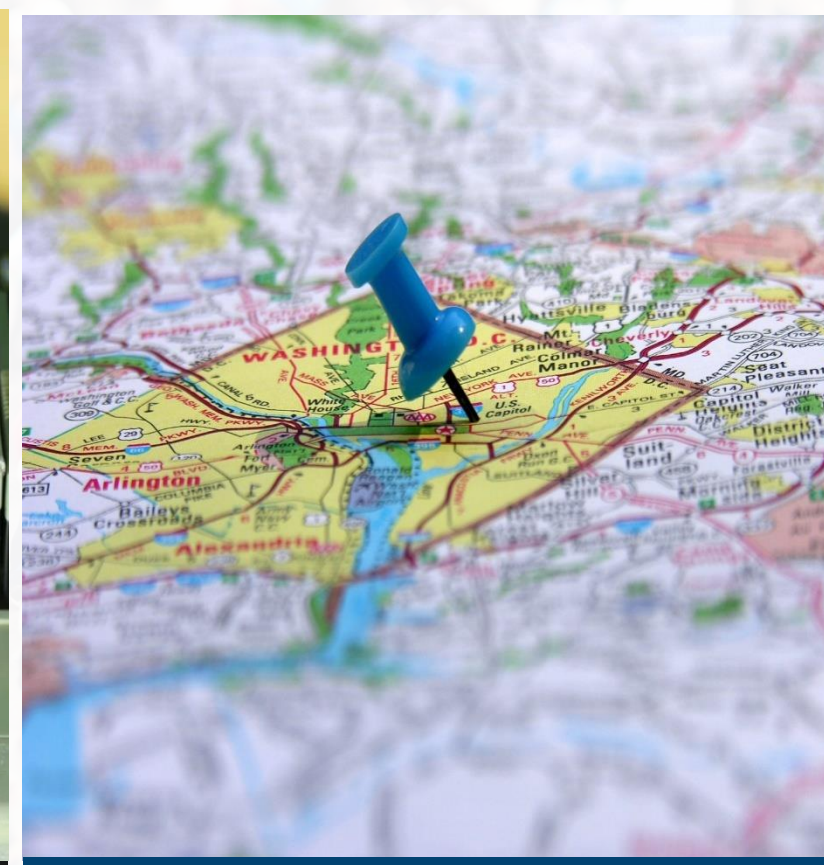




specific announcements to
specific locations



Deliver pre-recorded
messages



single zone / multi zone
Announcements

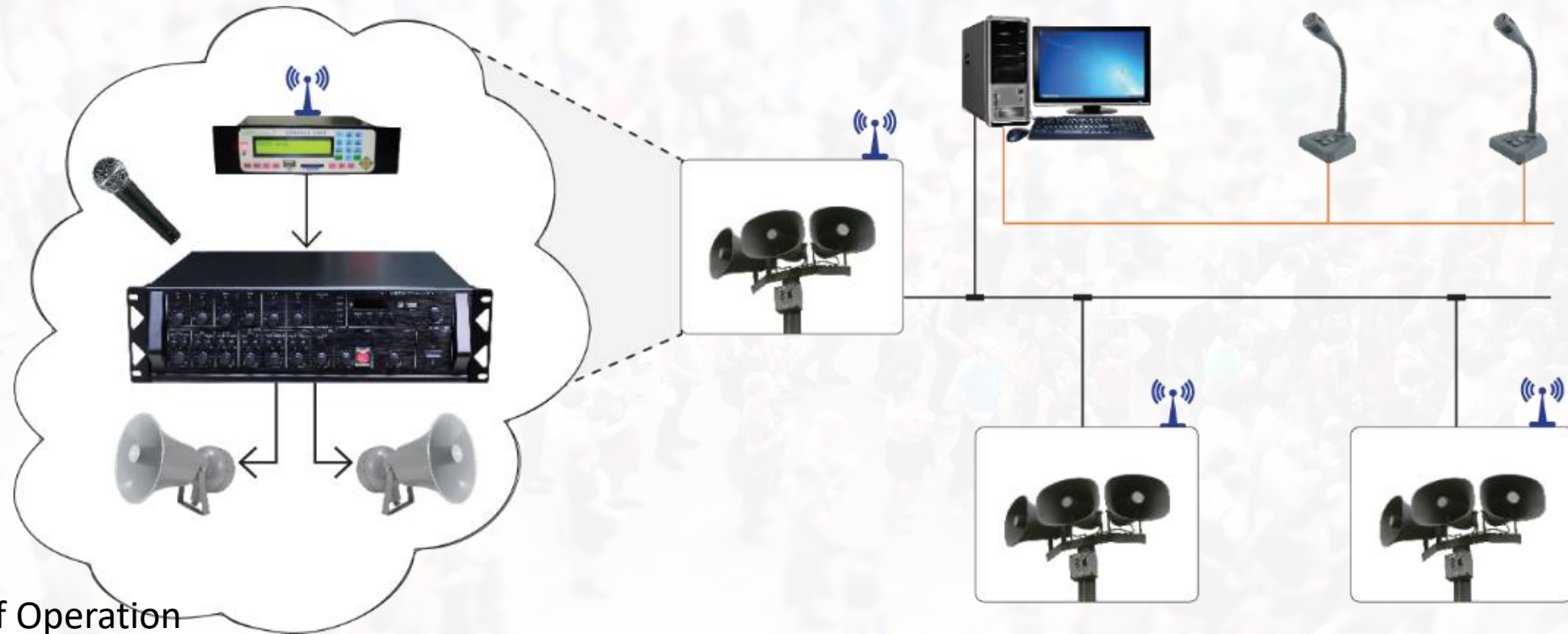


Components

- Amplifier
- communication system
- loudspeaker system

Features

- Power: Automatic On/Off Operation
- Casing: IP-65 rated for housing
- Conditions: 0° to 50°C



Central Command Software

SIGNAL Monitoring

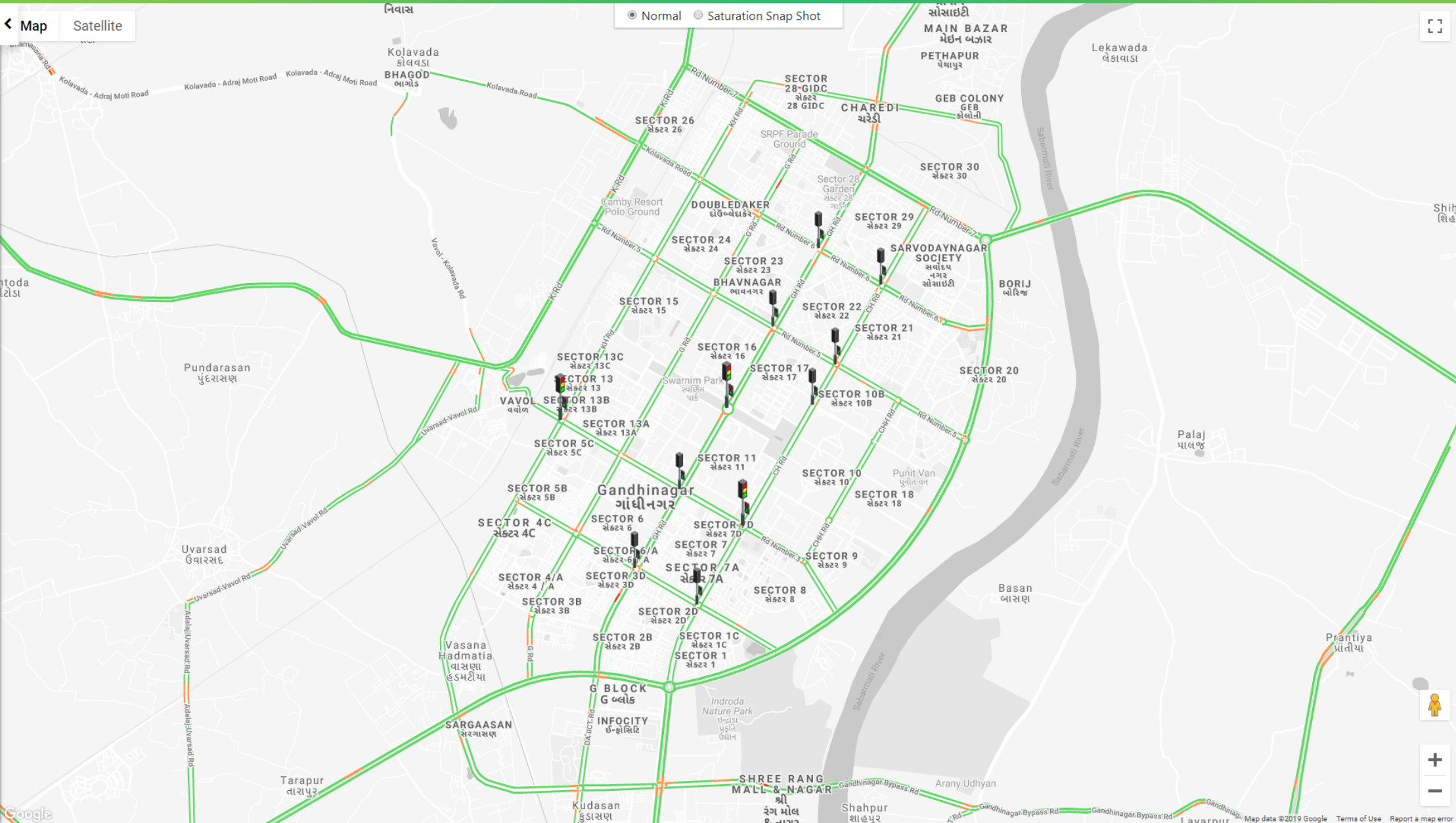
Faults Status

SIGNALS Controlling

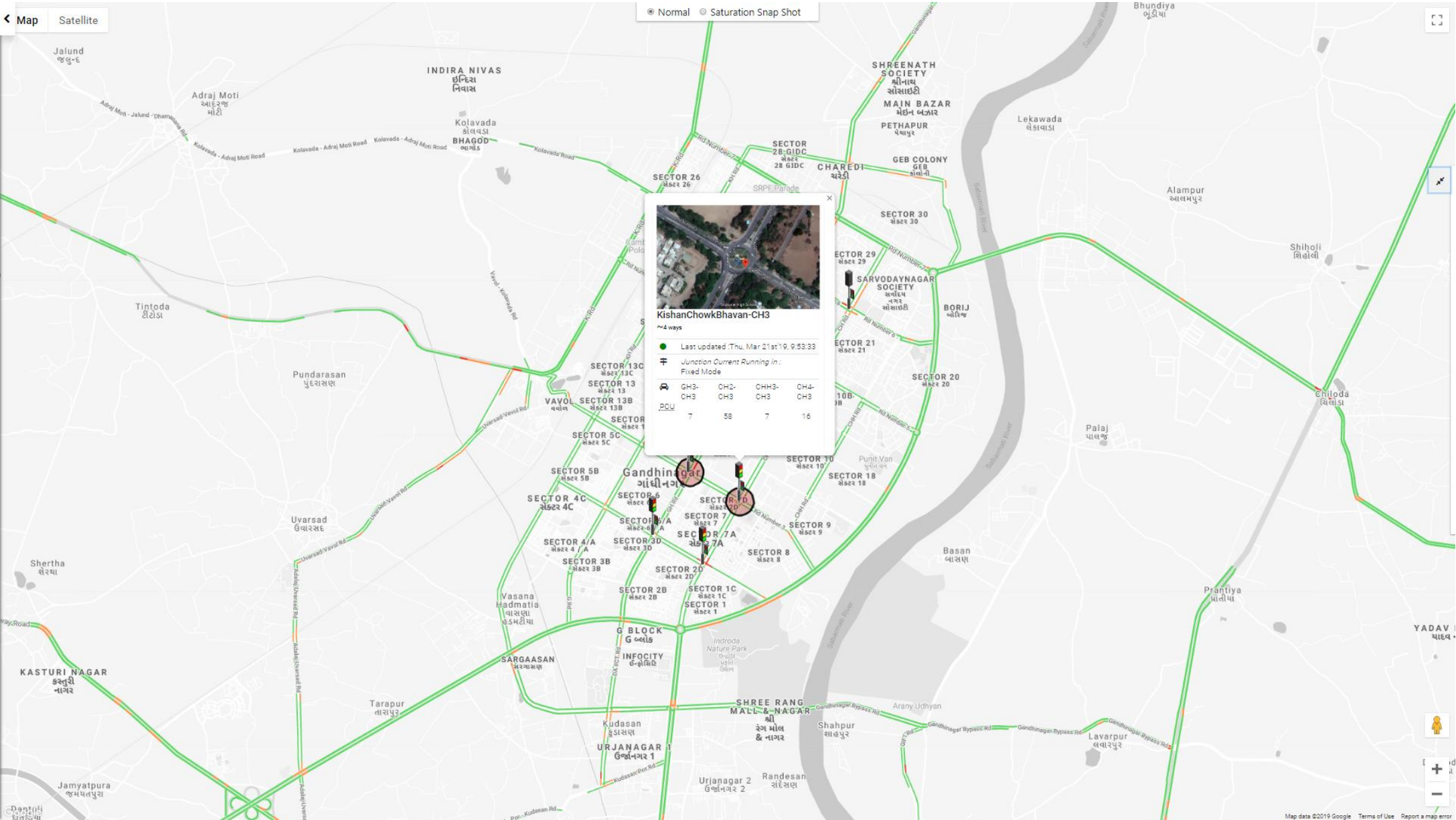
Junction Controlling



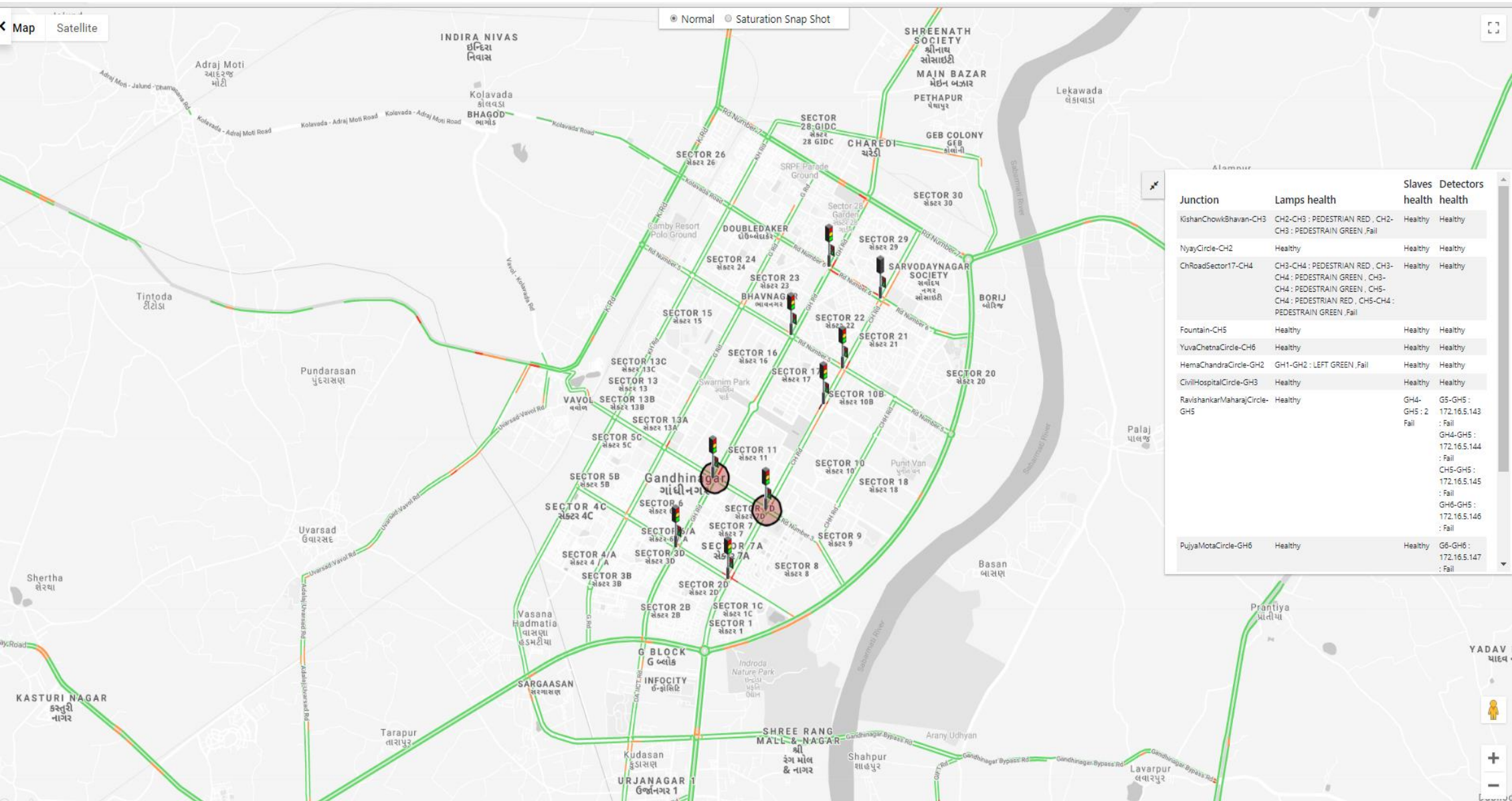
Network Screen



Junctions Network Status





Critical Junction Identification



Junction Configuration





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Junctions

Signal Groups

Stages


Cycles

Slots

Holidays

Commands

Junctions



Add New Junction


Last updated time : 1/13/2019 4:13:46 PM

YuvaChetnaCircle

Yuva Chetna Circle, Gandhinagar

[Edit](#)

[Delete](#)




Last updated time : 1/13/2019 3:03:34 PM

ChRoadSector17

Saturday nights pf pie family, ch road sector, Gandhi nagar

[Edit](#)

[Delete](#)



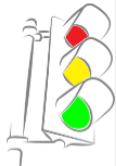
Last updated time :

HemaChandraCircle

GH 2 HemaChandra Circle, Gandhinagar

[Edit](#)

[Delete](#)




Last updated time :

CivilHospitalCircle

Civil Hospital circle, gandhinagar

[Edit](#)

[Delete](#)




Last updated time :

RavishankarMaharajCircle

Ravishankar Maharaj Circle, gandhinagar

[Edit](#)

[Delete](#)



Last updated time : 1/23/2019 1:29:45 PM

PujyaMotaCircle

Pujya Mota Circle, gandhinagar

[Edit](#)

Last updated time : 1/22/2019 6:50:58 PM

PCR

[Edit](#)

Last updated time : 1/23/2019 1:51:15 PM

CH3

kishan circle,GandhiNagar,Gujarath

Junction Configuration



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Cycles

Slots

Holidays

Commands

Stages

Select Junction

CH3

Enter New Stage Name

GH3-CH3

Clear

CH3-CH4

Clear

CH3-GH3

Clear

CH4-CH3

Clear


Existing Stages for Selected Junction


Stage Name	GH3-CH3	CH3-CH4	CH3-GH3	CH4-CH3
combination1				
combination2				
combination3				
combination4				
combination5				
combination6				
combination7				

Saved Signal Groups

Junction Configuration





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Stages

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Select Junction
CH3

Enter New Cycle Name

Stage Name

Clear


Existing Stages for Selected Junction


Stage Name	GH3-CH3	CH3-CH4	CH3-GH3	CH4-CH3
combination1				
combination2				
combination3				
combination4				
combination5				

Existing Cycles


Cycle Name	Cycle Details																					
	Stage Name		GH3-CH3					CH3-CH4					CH3-GH3					CH4-CH3				
combination1																						
combination2																						
combination3																						




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Live Events


Events History


KPI Reports


Alerts


Alerts History


Forecast


Recent updates


Junction	CreatedTime	EventName	Description	Data
NyayCircle-CH2	2019-03-21 10:07:48			--
RavishankarMaharajCircle-GH5	2019-03-21 10:07:50	Stage Change	Sequence no: 2 , Stage : 8	Stage timeout 5 Sec
KishanChowkBhavan-CH3	2019-03-21 10:08:05	Time reset	Reset by : ICCC , Type : +ve Correcion	Time difference :126
NyayCircle-CH2	2019-03-21 10:07:49			--
NyayCircle-CH2	2019-03-21 10:07:48			--
ChRoadSector17-CH4	2019-03-21 10:08:00	Stage Change	Sequence no: 2 , Stage : 7	Stage timeout 5 Sec
PujyaMotaCircle-GH6	2019-03-21 10:07:35	Stage Change	Sequence no: 2 , Stage : 9	Stage timeout 5 Sec
CivilHospitalCircle-GH3	2019-03-21 10:07:46	Stage Change	Sequence no: 2 , Stage : 1	Stage timeout 20 Sec
RavishankarMaharajCircle-GH5	2019-03-21 10:07:55	Stage Change	Sequence no: 2 , Stage : 9	Stage timeout 5 Sec
ChRoadSector17-CH4	2019-03-21 10:08:05	Stage Change	Sequence no: 2 , Stage : 1	Stage timeout 50 Sec

EXPORT

Plan Change Reports





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Alerts

Alerts History


Forecast

CH3

Jan 01 2019 17:01:08

Jan 02 2019 17:02:08

Plan Change Reports

View

Copy CSV Excel PDF

Search:

JUNCTION	CREATEDTIME	EVNT_DESCR	DATA
1	2019-01-01 18:41:26	Physical Signal Configuration update	Success
1	2019-01-01 18:41:45	Physical Signal Configuration update (Signal Order)	Success
1	2019-01-01 18:41:45	Physical Signal Configuration update (Signal Order)	Success
1	2019-01-01 18:41:23	Physical Signal Configuration update (Signal Order)	Success
1	2019-01-01 18:41:29	Sequence Configuration Updated	Success
1	2019-01-01 18:41:32	Sequence Configuration Updated	Success
1	2019-01-01 18:41:35	Sequence Timings Information Update	Success
1	2019-01-02 09:44:57	Physical Signal Configuration update (Signal Order)	Success
1	2019-01-02 09:44:57	Physical Signal Configuration update (Signal Order)	Success
1	2019-01-02 09:44:57	Physical Signal Configuration update (Signal Order)	Success

Showing 1 to 10 of 34 entries

Previous

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Updated yesterday at 11:59 PM

Mode Change Reports





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KishanChowkBhavan-C ▾Jan 27 2019 13:10:27 Feb 09 2019 13:11:27 Mode Change Reports ▾[View](#)

Copy CSV Excel PDF

Search:

JUNCTION	CREATEDTIME	EVNT_DESCR	DATA
1	2019-02-04 17:53:20	ATCS Mode	ATCS Mode
1	2019-02-04 17:34:31	ATCS Mode	ATCS Mode
1	2019-02-04 17:17:30	ATCS Mode	ATCS Mode
1	2019-02-04 16:41:11	ATCS Mode	ATCS Mode
1	2019-02-04 10:41:29	ATCS Mode	ATCS Mode
1	2019-02-04 10:21:58	ATCS Mode	ATCS Mode
1	2019-02-02 18:32:43	ATCS Mode	ATCS Mode
1	2019-02-06 16:13:29	Fixed Mode	Fixed Mode
1	2019-01-01 00:00:00	Fixed Mode	Fixed Mode
1	2019-02-04 18:33:27	Fixed Mode	Fixed Mode

Showing 11 to 20 of 30 entries

Previous

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Cycle Change Reports





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CH3

Jan 01 2019 12:43:07

Jan 03 2019 12:44:07

Cycle Change Reports

View

Copy CSV Excel PDF

Search:

JUNCTION	CREATEDTIME	EVNT_DESCR	DATA
1	2019-01-03 11:49:24	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 1 and present sequence no is1
1	2019-01-03 10:05:14	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 1 and present sequence no is1
1	2019-01-03 10:33:13	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 1 and present sequence no is1
1	2019-01-03 12:00:07	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 2 and present sequence no is1
1	2019-01-03 12:00:10	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 2 and present sequence no is1
1	2019-01-03 10:44:24	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 1 and present sequence no is1
1	2019-01-03 10:09:38	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 1 and present sequence no is1
1	2019-01-02 20:00:17	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 2 and present sequence no is1
1	2019-01-03 11:15:28	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 1 and present sequence no is1
1	2019-01-03 00:00:15	Cycle Changed : GH3-CH3 Green stage started	previous sequence no is 2 and present sequence no is1

Showing 1 to 10 of 104 entries

Previous

1

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...


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Lamp Intensity Reports





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CH3

Jan 01 2019 12:43:07

Jan 23 2019 12:44:07

Intensity Reports

View

Copy CSV Excel PDF

Search:

JUNCTION	CREATEDTIME	DATA
1	2019-01-09 08:00:14	Intensity changed from 50 % to 100 %
1	2019-01-08 19:31:07	Intensity changed from 100 % to 50 %
1	2019-01-08 08:00:10	Intensity changed from 50 % to 100 %
1	2019-01-07 19:25:36	Intensity changed from 100 % to 50 %
1	2019-01-07 08:00:17	Intensity changed from 50 % to 100 %
1	2019-01-06 20:28:57	Intensity changed from 100 % to 50 %
1	2019-01-06 08:00:09	Intensity changed from 50 % to 100 %
1	2019-01-05 19:33:46	Intensity changed from 100 % to 50 %
1	2019-01-05 08:00:13	Intensity changed from 50 % to 100 %
1	2019-01-04 19:34:08	Intensity changed from 100 % to 50 %

Showing 1 to 10 of 51 entries

Previous

1

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Alerts



Alerts History




Forecast

KishanChowkBhavan-C

Jan 01 2019 13:29:03

Feb 08 2019 13:30:03

All

 View

Copy CSV Excel PDF

Search:

JUNCTION NAME	ALERT	GENERATED TIME
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-07 12:58:13
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-07 12:54:53
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-07 12:44:25
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-07 11:44:25
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-07 11:40:26
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-07 03:39:25
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-06 17:44:19
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-06 17:20:22
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-06 17:14:22
KishanChowkBhavan-CH3	Network CategoryLinkfail between Master and ICC	2019-02-06 11:44:07

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...

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Forecast

Corridor Report

Junction Report

Junction Report

CH3

From Jan 10 2019 12:35: ✓

To Jan 13 2019 12:36:26 ✓

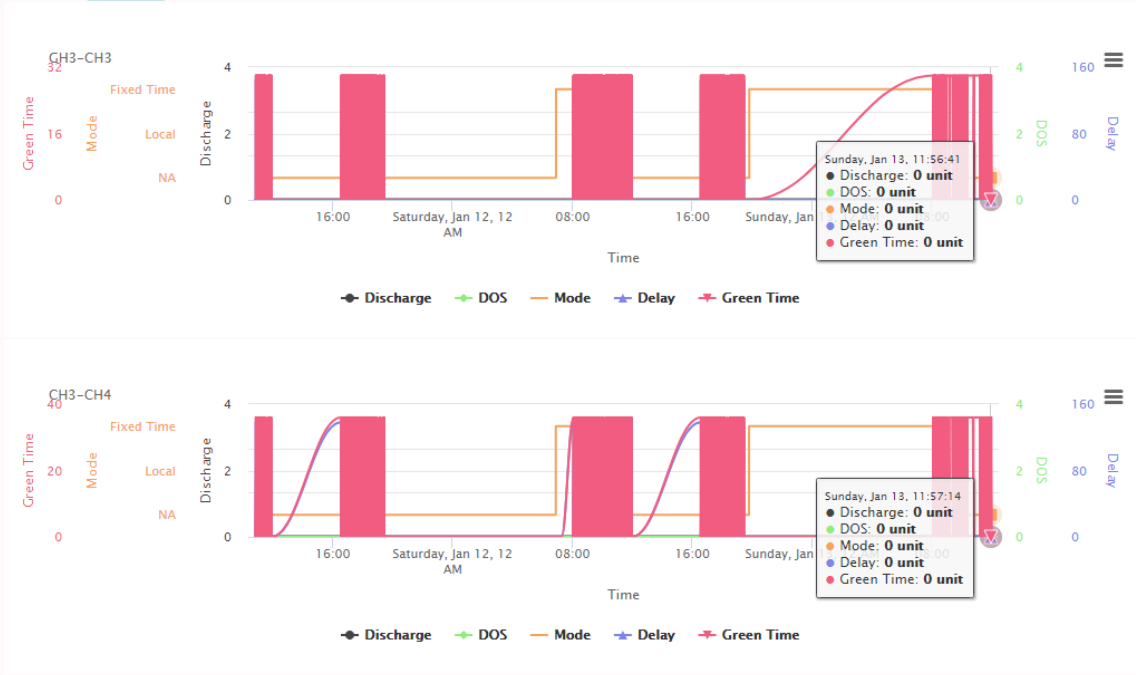
KPI

Get Report


Click next/prev for switching junctions

<PREV

NEXT>







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Forecast

[Future Forecast](#)

[Compare Data](#)

Compare Forecasting Report

Junction

CivilHospitalCircle-GH3 ✓

WAY

G3-GH3 ✓

Select Date

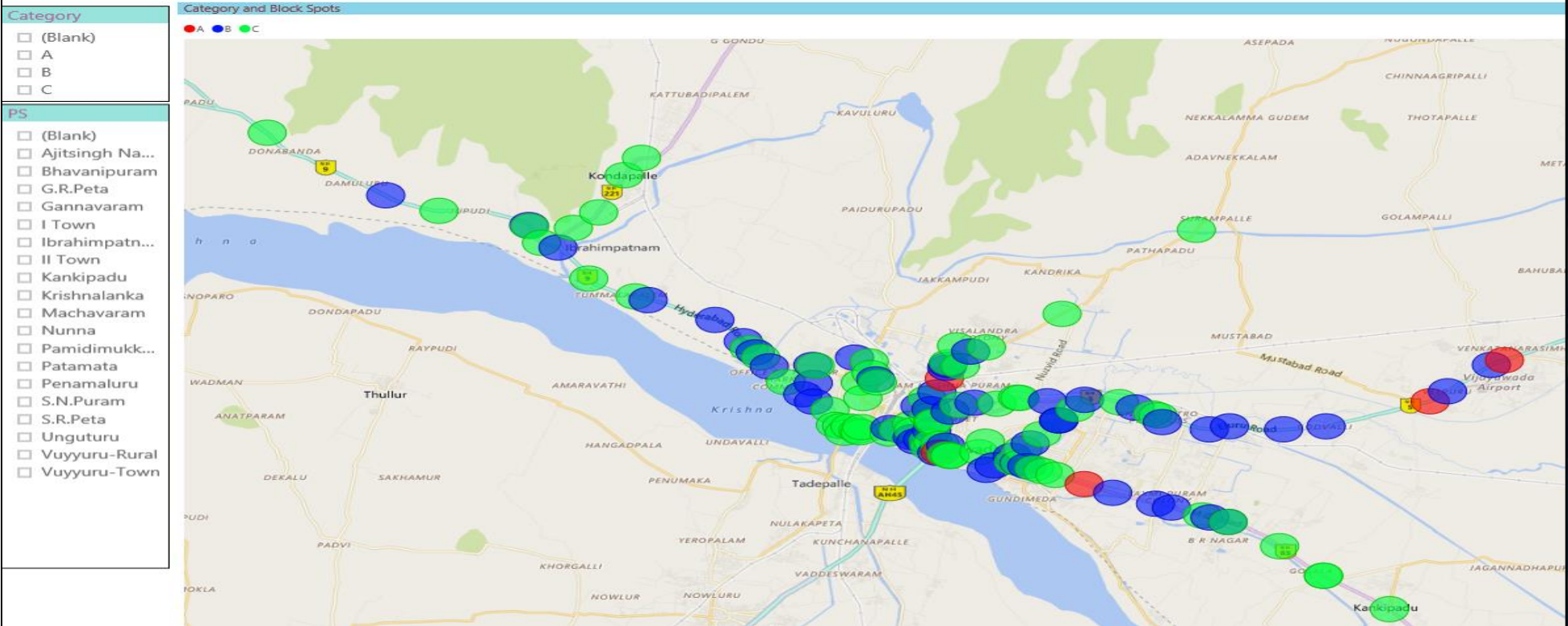
19-03-2019 ✓

[Get Report](#)

TIME	PREDICTED PCU	ACTUAL PCU
0:00:00	31	40
1:00:00	27	18
2:00:00	8	5
3:00:00	9	13
4:00:00	21	29
5:00:00	55	75
6:00:00	117	124
7:00:00	233	341
8:00:00	311	347
9:00:00	390	241
10:00:00	495	381
11:00:00	341	330
12:00:00	352	348
13:00:00	326	365
14:00:00	392	379
15:00:00	311	343
16:00:00	341	315
17:00:00	288	301
18:00:00	305	256
19:00:00	315	278

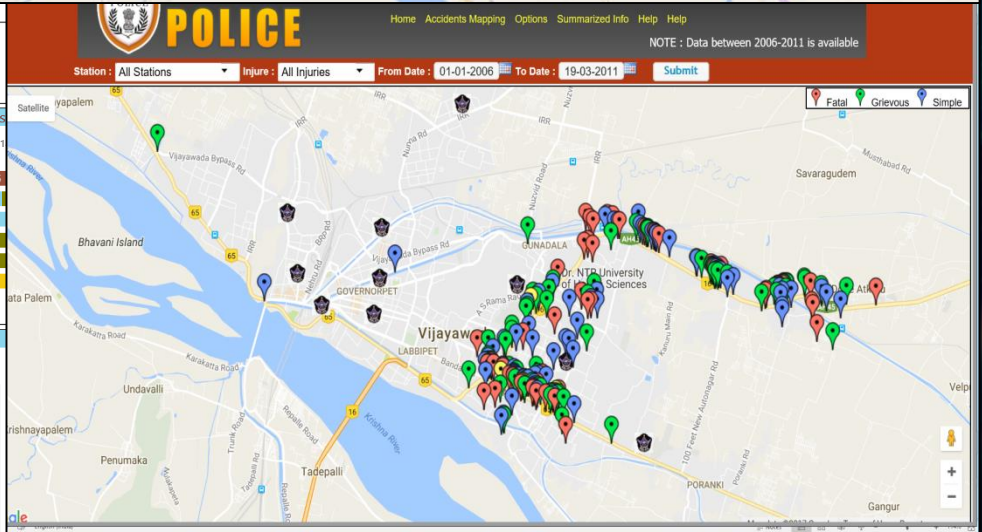
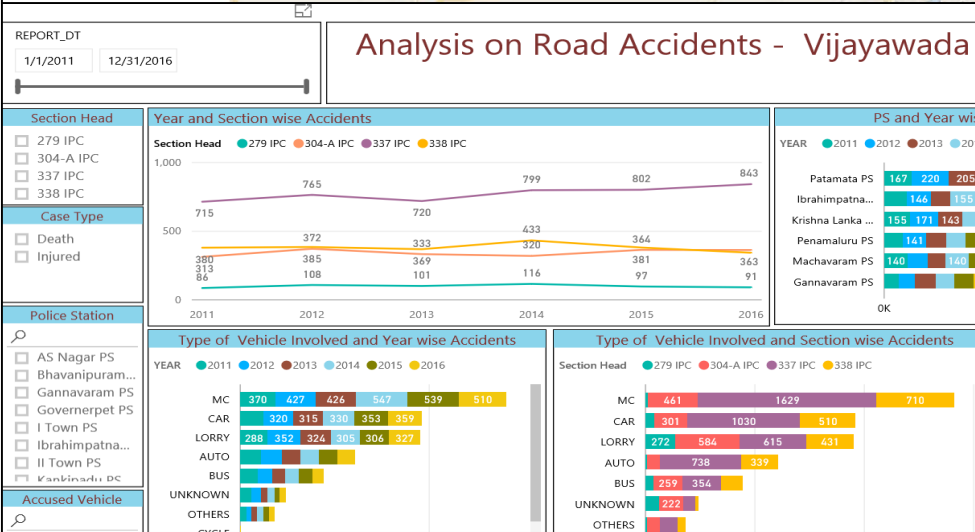
Black Spots in Vijayawada City

A	B	C	Total
5	58	78	141



Analytics Dash Boards

- Data Driven Decisions
- Smart Policing
- Well connected with Citizens





THANK YOU



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