## Project Name:

#### ROUTE RATIONALIZATION PLAN FOR BUS OPERATIONS FOR ATAL INDORE CITY TRANSPORT SERVICES LIMITED (AICTSL), INDORE

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## **Background Of AICTSL**

- A company "Atal Indore City Transport Services Ltd" was incorporated to operate and manage the public transport system on 1 December 2005. "Atal Indore City transport services Ltd" has been incorporated to operate and manage the public transport system. The new SPV is ideally constituted as a Public Limited Company incorporated under the Companies Act, 1956. The Registered Office of the company is situated at 30 Residency area, Indore. The authorized capital of the company is Rs 25 lacs divided into 2.50 lacs equity shares of Rs. 10/- each. The initial paid up capital of Rs. 25 lacs is being held by the Indore Municipal Corporation and Indore Development Authority in equal proportion. AICTSL is an ISO 9001:2008 certified company.
- Indore is **commercial capital of** the Madhya Pradesh.
- As per census 2011,
  - Population has grown from 1.64 m in 2001 to 2.29 m in 2011.
  - Avg Annual Growth @ 3.4%
  - Decadal growth @ 39.76%
  - Expected to reach 2.78 m in 2021.
- The developed area is expected to grow from 11,000 ha (2001) to 35,650 ha by 2021 (Master Plan).
- Registered vehicles have increased **from 0.55 m in 2001 to 1.85 m in 2016** (10% per yr)
- Share of private vehicles more than 82% in total registered vehicles.
- Accidents have increased from **2617 in 2001 to 3473 in 2016** (3.2%)

## **Net Cost Model**

- In this model operator operates the bus and take care of maintenance activities.
- Revenue is collected by the operator.
- Bus could be the property of AICTSL or of the operator.
- AICTSL is operating buses under this model since 2006.
- Operators are demotivated with this model because of leakages and fuel prices hike during the operations.
- Since 4 years AICTSL has initiated this model on intercity buses.

### **Gross Cost Model**

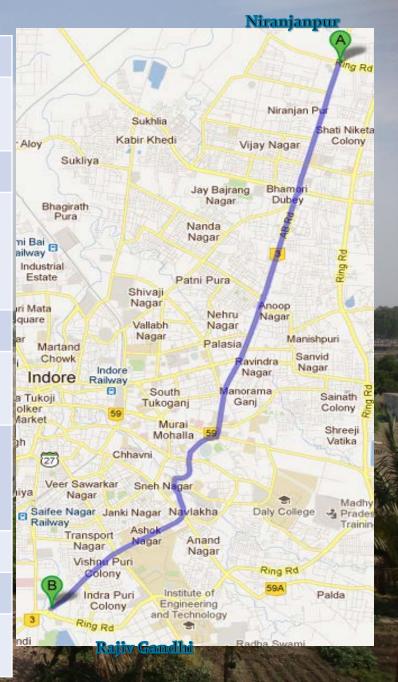
- In this model operator operates the bus and take care of maintenance activities.
- Direct control of AICTSL on maintenance, schedule, etc.
- AICTSL is operating ibus BRTS services since 4 years via this model.
- Revenue is collected by AICTSL and per Km cost is given to the operator as quoted in the tender.
- Per kms cost is hiked with reference to the fuel price .

## VGF Model (Hybrid Model)

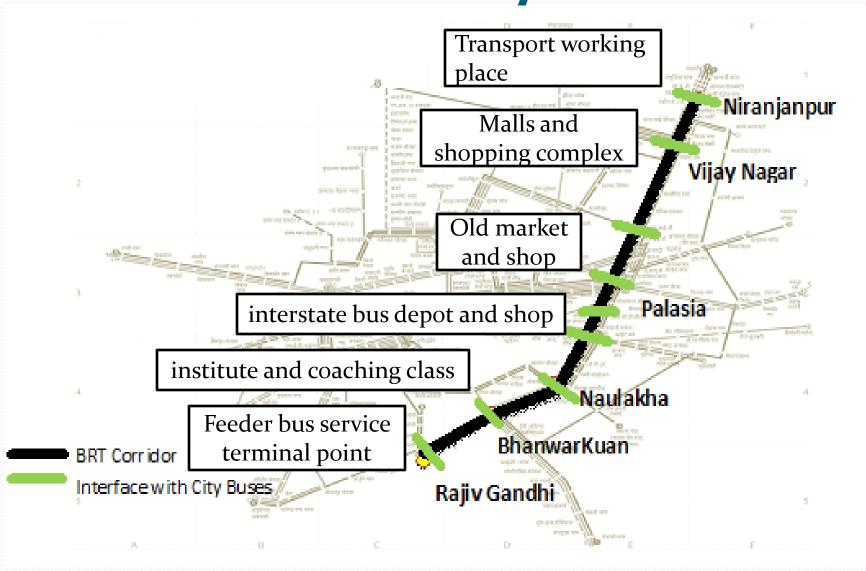
- This model is the combination of Gross Cost and Net Cost model.
- AICTSL has started this model since 2015 and operators are being motivated by the same.
- In this model operator operates & maintained the buses and quote the VGF per km cost to AICTSL.
- This cost is being paid to the operator after reconciliation of the kms travelled via GPS.
- Minimum operated kms could be ranged from 120 to 200 kms per day per bus.

Project Basics – ibus BRTS

Initiated	•	2007
Route Length	•	11.46 km AND 12 kms feeder.
Road section	•	31.6 / 60 /38 metres
System type	•	Closed Median stations Open for feeder buses.
Stations	•	21 + 35 (Feeder)
Buses	•	42 ( 30 BRTS & rest feeder)
Type of bus	•	12 m long with AC 900 mm Floor 245 hp,
Completion	•	31st March 2013
Operations	•	10 <sup>th</sup> May 2013
Ridership	•	60,000 pax/day (avg)



# BRTS I Bus Route And Integration With City Buses



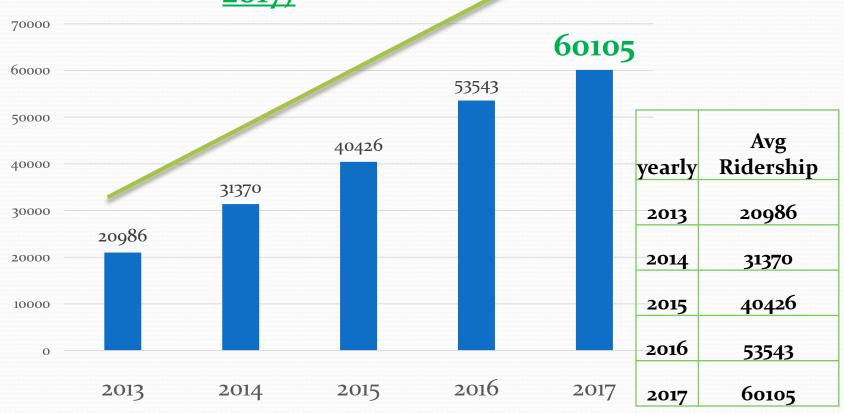
## Objectives of the project

- Improve PT service quality, in the city by connecting new route, frequency of buses as per demand and by increasing number of fleet on heavy demanding route.
- Integration between the city bus and midi bus services with BRTS for better connectivity and other services/with those of the PT bus services to connect internal feeder route.
- Development of an effective business plan for sustainable city bus services by which operator also get benefited and serve more effective bus service to passenger.

## **Approach**

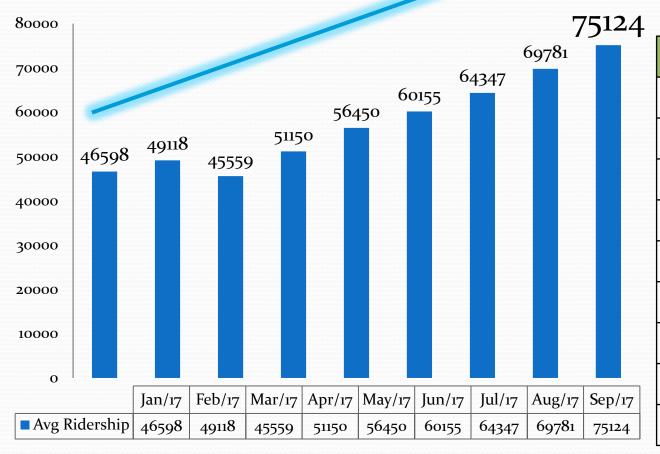
- Will include verifying network selection with additional primary data, identifying demand and prepare route rationalisation plan. The proposal should be prepared with extensive consultations with all stakeholders to understand regional and local context. The route rationalization includes the following activities but not limited to:
- Review of existing public transport passenger flow movement
- Review of financial performance of the routes.
- Identification of market segments.
- Modification of existing routes according to market segmentation and passenger flow movement.
- Identification of new routes as per market segments
- Estimation of ridership on modified/new routes
- Identification of minimum service standards.
- Allocation of buses on routes for maximization of revenue
- Estimation of financial performance of revised routes.

#### I BusAvg Ridership Yearly(2013-2017)





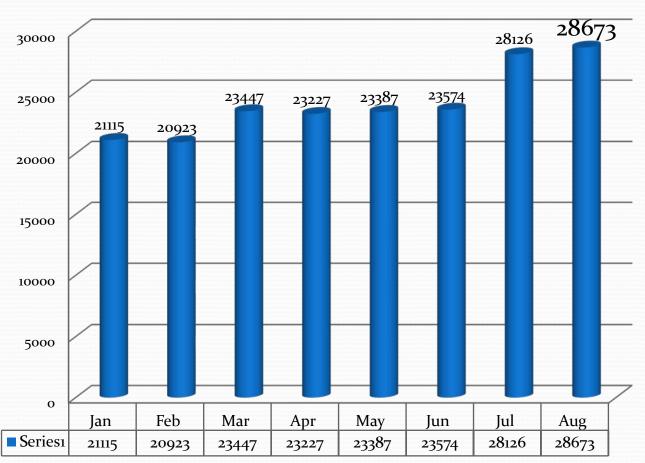
#### Month Wise Atal City Bus Avg Ridership-17



Month	Avg Ridership
Jan-17	46598
Feb-17	49118
Mar-17	45559
Apr-17	51150
May-17	56450
Jun-17	60155
Jul-17	64347
Aug-17	69781
Sep-17	75124



#### Month Wise Atal City Bus (Midi) Ridership-2017

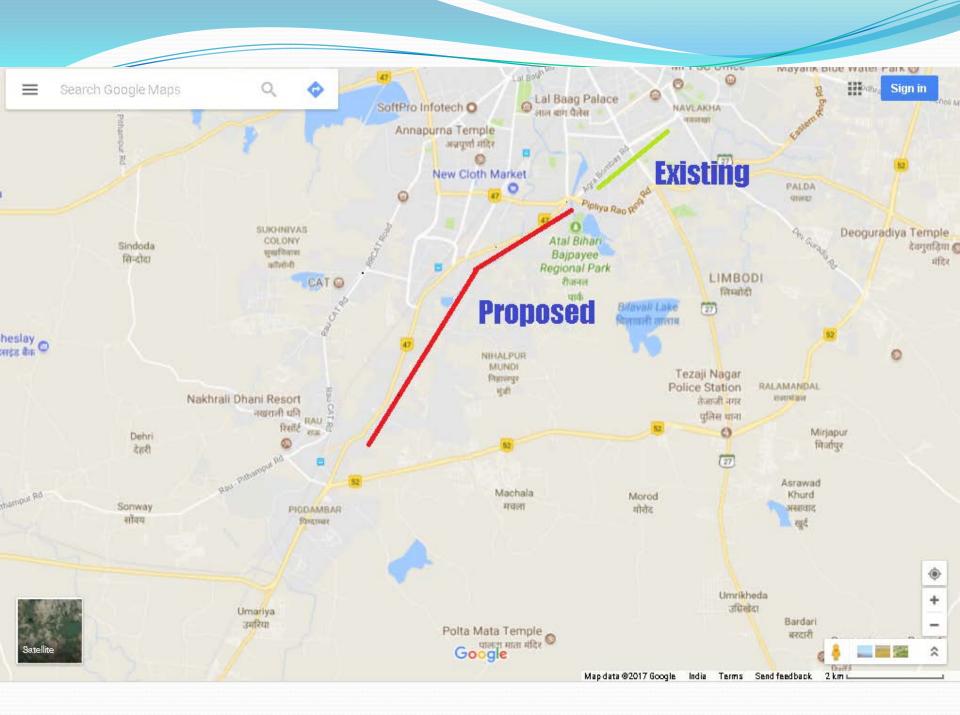


Avg Rider ship
Midi Bus
21115
20923
23447
23227
23387
23574
28126
28673



#### **Extension Of BRTS Services**

- Indore BRTS is 11.5 K.M dedicated bus corridor with 20 median station and one side station.
- Also with this feeder bus service along through corridor upto Rau Mhow is also covered. So extension provision of BRTS from Rajiv Gandhi to Rau have potential which cover upto 7 K.M.
- Infrastructure development is almost complete and also works in progress.
- Also form Niranjanpur to Panchvati there is a provision of BRTS extension but infrastructure development is not in good condition .its cover total 5 K.M of area.



## Plan document for route rationalization of public transport service

- Estimated passenger travel through public transport.
- Number of buses running on particular route.
- Infrastructure development as per recruitment.
- Connectivity of buses for every part of the city.
- Improve feeder bus services.
- Reliable and fast public transport service.
- Fare charges as per passenger satisfaction also have pass system smart card etc.
- All public transport interconnected with each other with ITMS system.
- Controlling and monitoring of the organization is improved.
- Data analysis for city bus and brts system.

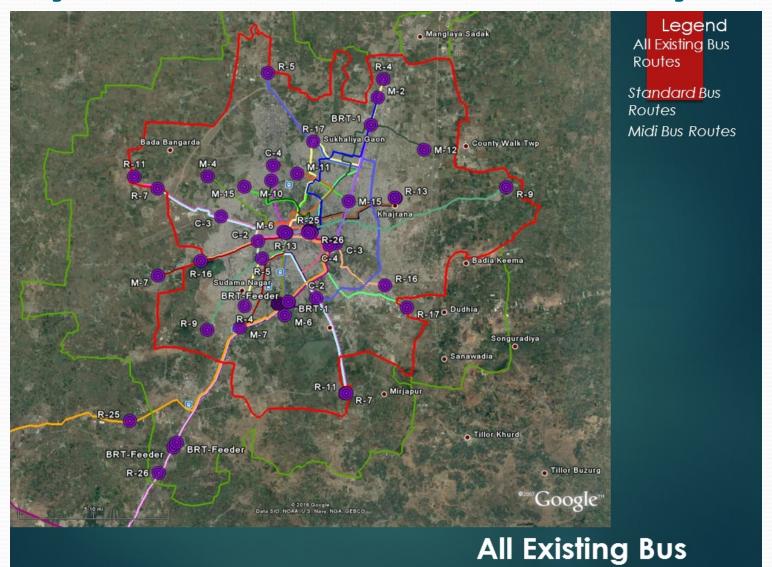
**Atal City BUS (Midi)** 

S.no	Route No.	Route length	Held Buses	Current Freq.	Name Of Route
1	M4	11.2	6	00:18:00Min	CHOTA BANGADADA TO CHOITHRAM MANDI
2	М6	10.5	7	00:14:00Min	RAJWADA TO TEJAJI NAGAR
3	M7	15.5	4	00:35:00Min	BAANK TO SILICON
4	M10	10.6	5	00:20:00Min	MYH TO TIGRIYA BADSHAH
5	M11	14.6	8	00:18:00Min	BHAGIRATPURA TO CHOITHRAM MANDI
6	M12	11.2	5	00:22:00Min	NIPANIA, DEWAS NAKA TO RAILWAY STATION
7	M15	13.4	6	00:20:00Min	LIG TIRAHA TO SANGAM NAGAR- VIA RAJWADA
8	C-1	12.8	5	00:15:00Min	KHAJRANA TO RAJWADA
9	C-2	16.8	2	00:15:00 Min	Musakhedi TO Navda Panth
10	C-3	7.5	4	00:15:00 Min	GANDHI NAGAR TO MY HOSPITAL
11	C-4	13	4	00:25:00 Min	ARVINDO TO MY HOSPITAL

## **Atal City BUS Standard**)

S.no	Route No.	Route length	Held Buses	Current Freq.	Name Of Route
1	4	19.8	12	00:14:00Min	PANCHWATI TO GREATER VAISHALI
2	5	25.3	14	00:13:00Min	ARVINDO TO MHOWNAKA
3	7	18.9	5	00:28:00Min	TEJAJI NAGAR TO GANDHI NAGAR
4	9	14.4	12	00:12:00Min	BY PASS TO HAWABANGLOW-CAT
5		13.1	2	1:00:00Hr	Kanadiya Gao to Rajwada
6	11	24.2	7	00:28:00Min	Tejaji Nagar To Gomatgiri Via Railway Station
7	17	14.9	7	00:20:00Min	MR-10 TO PALDANAKA
8	25	47	2	1:00:00Hr	Indore To Pithampur .Indorama Via Rau
9	16	16.2	2	00:15:00 Min	MUSAKHEDI TO NOORANI NAGAR

## City bus Route Of Indore City



#### City Bus and Midi Bus Fare Structure

kilometer	Fare
0.0 KM To 1.5 KM	5 Rs
1.5 KM To 5 KM	10 Rs
5 KM To 10 KM	15 Rs
10 KM To 15 KM	20 Rs
15 KM To 20 KM	25 Rs
20 KM To 25 Km	30 Rs
25 Km To 30 Km	35 Rs
30 kM To 35 Km	40 Rs

## **BRTS And Feeder Bus route**

Route Length	• 11.46 km AND 20 kms feeder.
Road section	• 31.6 / 60 /38 metres
System type	<ul><li>Closed</li><li>Median stations</li><li>Open for feeder buses.</li></ul>
Stations	• 21 + 35 (Feeder)
Buses	• 42 ( 30 BRTS & rest feeder)
Type of bus	<ul><li>12 m long with AC</li><li>900 mm Floor</li><li>245 hp,</li></ul>

#### **BRTS Fare Structure**

kilometer		Fare
0.0 KM To	1.5 KM	5 Rs
1.5 KM To	<b>→</b> 5 KM	10 Rs
5 KM To	10 KM	15 Rs
	<b>→</b>	
10 KM To	20 KM	20 Rs
20 KM To	25 KM	25 Rs
25 KM To	30 Km	30 Rs

## **Demand Analysis**

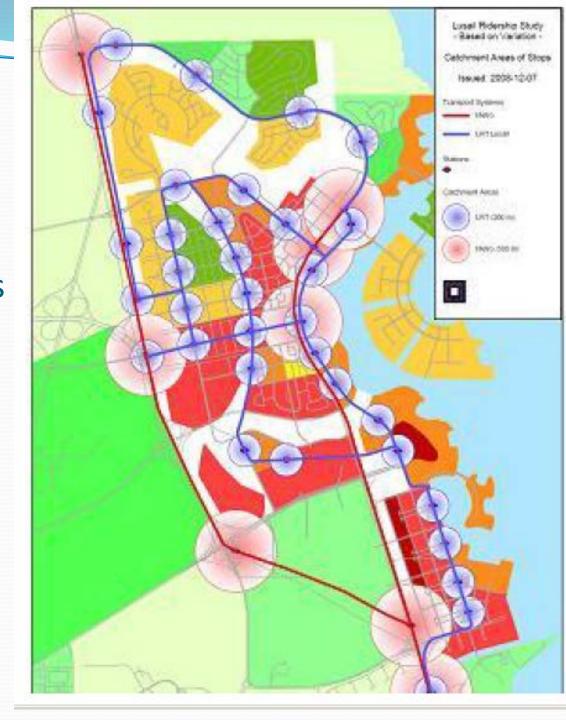
- Identification of Areas of Demand: Any city has three distinct potential catchment areas for successfully running the system, i.e, Commercial Zones/ Office areas, Residential Zones.
- Educational Institutes Zones. The study shall identify the broad areas falling under any of the zones listed above and demand generated from each of the area would be identified.

**Basic Analysis** 

**Demand Matrix Analysis** 

Route and Network Planning

Route and Network Analysis



## Thank You