# **Terms of Reference**

# CONSULTANCY SERVICES FOR PREPARING SERVICE AND BUSINESS PLAN FOR CITY BUS OPERATIONS FOR ATAL INDORE CITY TRANSPORT SERVICES LIMITED (AICTSL), INDORE

#### 1. BACKGROUND:

Indore is one of the pioneering cities of India introducing a city bus service through an innovative public-private-partnership (PPP) in 2006 followed by a Bus Rapid Transit System for its citizens. Introduction of the Bus Rapid Transit System (BRTS) is part of a larger effort of the city to provide good quality mobility by mass transportation of public in a socially equitable and environmentally sustainable manner. Integrate the public transportation through proper planning as per the demand and supply.

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 1.18 m in 2010 (10% per yr)
- Share of private vehicles more than 82% in total registered vehicles.
- Accidents have increased from 2617 in 2001 to 3473 in 2010 (3.2%)

Brief description of current size of operations of AICTSL:

Indore has a bus route network of approximately 1,000 km length which is covered through 26 designated bus routes. At present, nearly 15 bus routes are operated and 11 routes are non-operational or have irregular frequency. AICTSL is operating more than 124 buses in the city including the BRTS ibus The fleet size is expected to grow within a year.

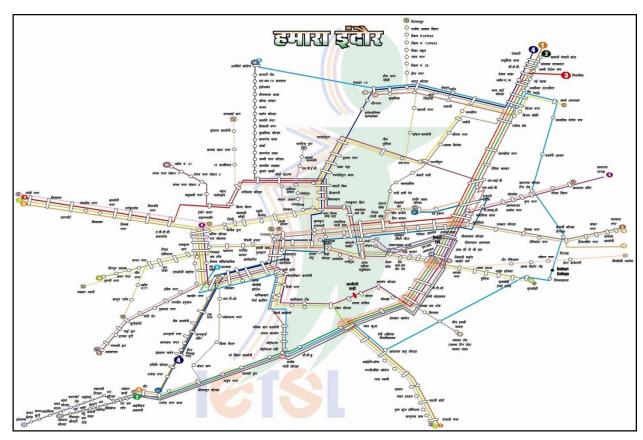
The population growth in the city and introduction of new public transportation systems has resulted in to the following:

- 1. Changes in the movement patterns of the passengers in the city during last three years.
- 2. Gaps in Route Planning which are not serving the existing demand patterns
- 3. Mismatch in the passenger demand and allocation of buses to routes
- 4. Monetary losses on several AICTSL routes which are running parallel to the other routes.
- 5. Lack of planning to address different market segments; particularly that of a feeder system for the BRT system in Indore.

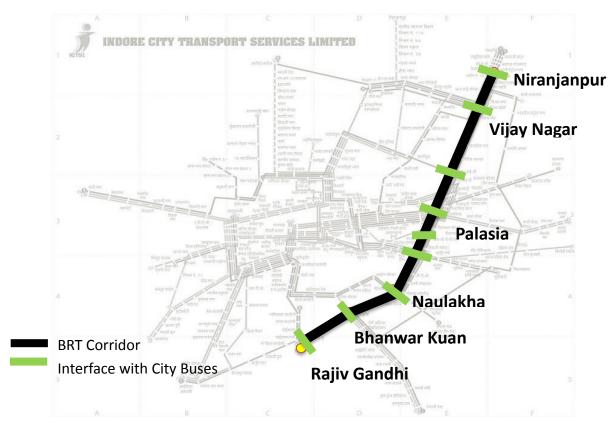
In addition, the current size of operations does not fully cater to the travel needs of the city and AICTSL is keen to identify and better service the travel demand in the city. AICTSL also realises that in order to be able to effectively cater to the cities bus transport needs it will need to plan the system holistically including requirement for fleet enhancements, infrastructure improvements, operators and contracting arrangements, systems to support operations and customer service, enhancements in AICTSLs organisational and staffing requirements, and finally financing, to support both capital investments as well as operations, for the expanded and improved service in the city. AICTSL therefore proposes a consultancy to develop the route rationalization plan and business plan for Atal Indore City Transport Services Limited (AICTSL), Indore.

Under the GEF-UNDP-World Bank-India Sustainable Urban Transport Program (SUTP) being implemented by the Ministry of Urban Development, Government of India, AICTSL has availed funds to improve urban transport infrastructure and services in corporation area. These investments are expected to promote environmentally sustainable transport in the city. The GEF-UNDP-World Bank-SUTP consists of implementing multiple projects focussed on urban transport sustainability and AICTSL proposes to undertake the above activity through SUTP.

Details of Indore City Bus routes are provided in the Annexure No.1.



More details can be found on <a href="http://www.citybusindore.com/">http://www.citybusindore.com/</a>



# **Details of Indore BRTS**

Length of route	• 11.46 km
Road section	• 31.6 / 60 metres
System type	<ul><li>Closed</li><li>Median stations</li></ul>
BRTS Stations	• 21
Number of buses planned	• 50
Type of bus	<ul> <li>12 m long with AC</li> <li>900 mm Standard</li> <li>245 hp, BS III engine Rear Engine</li> <li>12 m Long AC buses 900 mm</li> <li>180 Hp front engine</li> </ul>

The scope of work includes two components

# 2. OBJECTIVES AND METHODOLOGY OF THIS CONSULTANCY:

The objective of the study is to carry out a review of all bus service operations, routes and the route network operating in Indore and to suggest improvements in existing service operations, routes and the route network as well as for new bus services, routes and route network for the city. The study objective

further includes development of an effective business plan for sustainable city bus services. Main objectives of AICTSL in implementing a sustainable bus transport project include two parts:

#### Part (I)

- Increase public transport(PT)service in the city by expanding and integrating the city bus service operations, routes, and route network;
- 2. Improve PT service quality, in areas such as adequacy, accessibility, reliability, regularity, punctuality, and safety,
- 3. Consider and address needs, aspirations, and concerns of all PT stakeholders as part of the development of the service improvements.
- 4. Improve service and physical integration between the PT bus services and the BRT and other services/with those of the PT bus services.
- 5. Improve operational, institutional, organisational and regulatory performance of PT agencies.
- 6. Develop improvements that encourage higher usage of the PT services in the Indore

## Part (II)

- 1. Develop an overall business strategy for AICTSL to support efficient and sustainable delivery of PT services for the whole city bus system including any BRT system.
- 2. Prepare a 5 and 10 year business plan for the company to implement the business strategy.

# 3. Scope of Work

Part (I) 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:

- 1. Review of existing public transport passenger flow movement
- 2. Review of existing stage carriage route plan for the city of Indore.
- 3. Review of financial performance of the routes.
- 4. Identification of market segments.
- 5. Modification of existing routes according to market segmentation and passenger flow movement.
- 6. Identification of new routes as per market segments
- 7. Estimation of ridership on modified/new routes
- 8. Identification of minimum service standards.
- 9. Allocation of buses on routes as per minimum service standards.
- 10. Allocation of buses on routes for maximization of revenue
- 11. Estimation of financial performance of revised routes.
- 12. Suggestions on route planning review as a periodic process.

Part (II) will include Business Plan be prepared for AICTSL taking into consideration its present status and future goals. The Business Plan shall address, but not necessarily be limited to the following aspects:

- Clearly articulate AICTSL's vision and value proposition
- Review AICTSL's present activities and capacities
- Identify detailed services
- Develop delivery structure

- o Identify Internal staff requirements
- o Identify operator strategy i.e. number of operators, contracting approach etc.
- o Identify complementary assets needed for delivery of identified services
- Determine cost & financial model
  - Identify assets and costs
  - Evaluate revenue generation potential
- Formulate competitive strategy

The consultant shall undertake detailed discussion with the members, management and the concerned staff of the AICTSL and prepare the Business Plan so that the document presents a workable plan that meets the actual needs of the institute. The Business Plan should also include the long term, (beyond 5 years) development strategy besides the short term (in next 5 years) action plan.

At this stage the consultant shall also develop a detailed 'Implementation Plan' for operationalizing the short term action plan. This should clearly bring out recommended strategy to implement the plan, including timelines, deployment of resources and inter relationship with other agencies involved.

To achieve the objectives of the consultancy, it is divided into the following major tasks:

- Task I. Project Inception
- Task II. Data Collection & Analysis
- Task III. Draft route rationalisation and service plan report and stakeholder participation workshop,
- Task IV. Final Service plan and Route Rationalisation Plan report submission
- Task V. Draft Business Strategy, business plan and Workshop
- Task VI: Final service plan, Route Rationalisation Plan & Business plan report submission

#### Task I: Project Inception

In this Task, develop the inception report for service operations planning, route rationalisation and business plan along with details of methodology and work plan that will be followed to successfully complete the project.

#### Activity 1: Articulating AICTSL's Vision and Value Proposition

Conduct stakeholder discussions to assess if current vision of AICTSL is in line with the business plan that is being conceived. If not, a new vision statement shall be developed. The value proposition of Indore and how it fits into the urban transport space shall also be detailed in this task.

# **Activity 2: Review AICTSL's Current Activities and Capacities**

Obtain an understanding of AICTSL's current working model in terms of activities, associated people and capacity to deliver on activities as part of this task. The task shall include review of all relevant documents, consultations and detailed discussions with members and management of the AICTSL.

# Activity 3: Detailed survey plan & methodology

Prepare data collection plan and methodology.

**Deliverable: Inception report** 

#### Task II: Data Collection & Analysis

#### **Activity 4: Prepare Study Area Profile**

Prepare a profile of the study area from available documents and compare with the city level statistics. The parameters include location in the city, history and evolution of the area, population and demographic data (e.g., education, gender, age groups) and socio-economic data (e.g. household size, percentage and type of employment, income).

#### Activity 5: Collect Data; Undertake Documentation of the Study Area

Document the mobility network and street environment that affects how commuters travel within the city. These include but are not limited to:

**Secondary data:** Review of existing public transport passenger flow movement, Review of existing stage carriage service operations and route plans for the city of Indore. Review existing public transport passenger flow movement. Review existing stage carriage/BRT service operations and route plans for the city of Indore , Review of financial performance of service trips, routes, Identification of market segments **Primary Surveys** 

- I. Conduct various surveys within the city required for generating desired database for deciding proposed routes and service operations plan. Main surveys required to be carried out are:
  - Review of existing public transport passenger flow movement from Boarding/ Alighting Surveys & limited OD and TVC surveys for the purpose of aggregating traffic and travel pattern amongst private/IPT modes on the city primary network

#### Activity 6: Analyse Data Collected and Documentation Undertaken

Analyse existing data and documentation to evaluate service operations plans and route network / rationalisation through the following but not limited to:

- I. As per the data base collected from surveys as above, Identification and rationalization of City Bus operations plans and routes in Indore City and sub urban/adjoining area of Indore as a route hierarchy (definition for each type be documented) such as:
  - Trunk Routes
  - Standard Routes
  - Complimentary or Feeder Routes
- II. Improvement of existing service operations and routes network according to market segmentation and passenger flow movement and passengers.
  - Identification of new routes and operations designed to serve specific commuter market segments of such as Ordinary Service, Express Service with limited halts, Air Conditioned Bus Services.
  - Estimation of ridership on modified/new routes including those of feeder routes
  - Identification of acceptable service standards
  - Allocation of buses on routes as per minimum/maximum service standards & for maximization of capacity utilisation and fare box revenue.
  - Technical & Consultancy support for preparing tender document/RFP for identified new city bus routes and for each of the other outsourced activities / needs, as defined in PT operations model.
  - Recommendation on optimal fare per pax km, fare structure and pricing policy based upon the aforesaid analysis. Prepare a fare fixation, revision and fare structuring model for

- sustainability of city bus services. Prepare a mechanism for assessing quantum of concessions and for its reimbursement by the beneficiary agencies/Government.
- Prepare proposals/recommendation in a phased implementation of new service operations plans / routes/ route network.
- III. Fleet Management: Evaluate gap between ridership demands and bus fleet supply considering existing level of service condition (2014) and projections for future (2015 to 2024) periods. For analysing bus fleet supply, also analyse and evaluate bus technology and other aspects of physical performance of bus fleet including but not limited to fleet utilisation, vehicle productivity, bus capacity& its utilisation, increasing need for regularity and punctuality, comfort and convenience of services and safety of operations.
- IV. Identification of new route(s) and preparation of service operations plan: Based on spatial and temporal ridership demand on corridors, identify new feasible/sustainable routes/plans within study area. Identify phase wise demand and cater to that demand on identified new routes specifying service operations plan in each case. Identify feeder routes along with travel demands on each feeder route.
- V. **Overlapping of routes:** Based on the primary survey and secondary information, identify overlapping routes and provide suitable proposal/solution for route restructuring and or service scheduling to facilitate increased commuter / area accessibility and capacity utilisation including those for feeder routes operated by micro buses, vans, and PT buses.
- VI. **Public and Intermediate Public Transport Infrastructure**: When identifying new routes/service plans and overlaps in routes/services, address the need for feeder routes and use of micro buses / Vans/ three wheeler operations in the city. Suggest options for integration and seamless intermodal transfers among walking, bicycling, intermediate public transport services, BRT, and bus services.

#### **Deliverable: Submission of Draft Data Analysis Report**

Submit draft service operations, route rationalisation and business plan framework based on outcome from data analysis.

#### Task III: Draft route rationalisation and service plan report and stakeholder participation workshop

**Activity 7:** Hold two, one-day workshops for AICTSL and other stakeholders, including citizens, operators and commercial / institutional establishments to obtain their needs from PT system. Present information regarding the need for an efficient PT system and summarize an analysis of the existing PT system in the city including route behaviour and service plan characteristics and actual and perceived deficiencies. Suggest possible solution options for routes and service plans modifications / improvements. Involve Micro bus/vans/IPT operators in this process for effective integration of such vehicles in providing seamless transfers and last mile connectivity.

Also outline new concepts in route structuring and service planning and PT agency's future plans for a responsive and improved PT system in the city. Obtain and use the feedback to revise proposals.

Disseminate requisite information / plans/proposals etc, to about 50 participants each nominated and invited by Indore. The workshop must provide a forum for cities to share their current initiatives as related to PT services.

Develop questionnaires and other supporting material to gauge the level of preparedness of the cities. The consultant will be responsible for all the logistics of the workshop, including:

- Developing and sharing workshop material in both hard & soft formats,
- Preparing and delivering power point presentations
- Arranging and hiring the venue
- Usual packages of Lunch & snacks.

**Activity 8:** Submit a report of the Task III work and workshop outcomes

# Task IV: Final service plan and Route Rationalisation Plan report submission

PART (A) Final report for service plan, route rationalisation should include following contents:

- Section 1: Service plan and route rationalisation plans
- > Section 2: Phase wise implementation plan
- Section 3: Details of service plan and rationalised routes including those for BRT and Non BRT routes and service plans for market segmented services.

**Section 1** will include revised proposals for service plan, route rationalisation of the complete Indore bus network, based on data analysis and findings from the study.

The development of the proposals shall include but not be limited to the following work activities:

- Modification of existing routes / service plans according to market segmentation and passenger flow movement.
- Identification of new routes / service trips as per travel demand characteristics and market segments.
- Estimation of ridership on modified/new routes/ feeder routes / services. Identify minimum service standards.
- Determination and assignment of buses on routes/services based on minimum service standards and the appropriate size and type of buses (including micro buses /vans /IPTs) on routes for the maximization of capacity utilisation and revenue.
- Evaluation of new routes and service plans for various performance parameters from the perspective of different stakeholders.
- Estimation of financial performance of revised routes/ service plans.
- Development of a structured process for the periodic review of route/service plans that includes recommendations regarding minimum frequency of reviews and other triggers for such reviews.

**Section 2** will present phase wise service and route rationalisation plan showing how AICTSL introducing the new route network can begin in a gradual manner with a simultaneous but gradual inclusion ofIndore suburbs and its connectivity. In future, fleet sizes may be adjusted as per demand and improved fleet performance with high quality BRT infrastructure, if any, in place that allows buses to achieve higher speeds, better utilisations and supply per bus.

**Section 3** will give detailed legend wise map and a list of bus stops, service operation headways, and other operational parameters for each of the routes listed in Section 1.

# PART (II) Business Plan

The table below illustrates the possible scope of the Business Plan. As the report for this section is to be prepared separately, a summary / conclusions of part I are intended to be included in this Part II to maintain a coherent flow.

	Section	Suggested Scope (Only summary of some of the aspects dealt with in Part I need be given in this part to avoid duplication)
1	Vision and Overall Business Strategy for AICTSL for the 5 and 10year period	-
2	Key objectives and targets	Develop a set of key objectives which will achieve the Business

	Section	Suggested Scope (Only summary of some of the aspects dealt with in Part I need be given in this part to avoid duplication)
		Strategy. Develop a set of target which are clear and which will be deemed a successful implementation of the Business Plan.
3	The bus route planning standard, service planning and principles	Develop the principles to be used in bus route/service planning. In particular, establish the basis on which service levels will be set and the network development will be developed. Identify whether minimum citizen mobility criteria will be set, and if so, identify the principles.
4	Existing situation analysis.	Establish position of AICTSL in 2014, including a full listing of routes, service characteristics, depots, key assets, ridership, operational situation, financial data, debt and liabilities, and other key obligations.
5	Network and service development plan	Identify the strategy and the specific changes foreseen to the network over the business life. Provide specific details for years 1 and 2, and indicative changes for years 3, 4, and 5, 10. Quantify the volume of service and number and type of vehicles required by year.
6	Bus Asset Strategy	Based on the foreseen quantum of operations and the network requirements, identify bus asset requirements by year over the 5 and 10 year plans. Identify any requirements for changes to bus types, features and fleet mix. Taking into account requirements over the 5 and 10 years and the current situation, develop a multi-year plan for the bus fleet. Identify vehicles to be scrapped, and the number and type of vehicles to be purchased including those for servicing demand growth.
7	Business Model	Develop business model options separately for each element as brought out in the sections dealing with "objectives and methodology", carry out SWOT analysis for each of the elementwise options, and develop a composite business model including all the selected elements. If certain business model is already in operation, recommend model be considered for future.
8	Operator Strategy	Determine the manner in which the service would be offered through private operators and address issues such as how many operators, route or area licensing, and what kind of contract structures. This shall also include options for properly integrating the micro buses / Vans services with the overall transport service
9	Maintenance, overnight parking, and associated infrastructure plan	Taking into account the requirements over the 5 and 10 years and the current situation, develop a multi-year plan for bus maintenance, depots, workshops and parking facilities. Identify separately requirements for infrastructure, and requirements for new maintenance practices and for expenditure on equipment.
10	Terminal and interchange requirements	Taking into account the requirements over 5 and 10 years and current situation, develop a multi-year plan for terminals and interchanges. Identify needed features including interchange features, customer-facing services, and operations support facilities. Identify separately the investment requirements for infrastructure, and for facilities and services.
11	Staffing levels, capabilities,	Based on the operational, maintenance, internal services and

	Section	Suggested Scope (Only summary of some of the aspects dealt with in Part I need be given in this part to avoid duplication)			
	training and productivity	customer support requirements, develop staffing plan for the public agency. This should include multi-year staffing levels by category of staff. Develop key productivity indicators and targets. Identify training needs, both for ongoing needs and for new competences that need to be acquired.			
12	Business Development Strategy	Develop Business Development Strategy covering full plan period. Identify the target markets, product positioning and pricing, and how various markets will be developed over the plan period. Identify main actions and associated programs for business generation and retention.			
13	Ridership and revenue forecast	Based on service products, network development plan, business development plan and pricing strategy, develop multi-year ridership and revenue forecasts. Identify key assumptions and sensitivities.			
14	Capital investment program	Based on asset requirement plans and support system plans, develop a multi-year capital investment program. Develop scenarios for availability of capital funds, and prioritise investments within each scenario.			
15	Operational cost forecast	Based on network and operational program, develop multi-year operational cost forecasts at current prices and fleet age related deterioration factors for various physical performance parameters. Identify key assumptions and sensitivities.			
16	Financial analysis	Develop a multi-year financial analysis for the plan period. Forecast the outturn for key financial metrics, identify main changes, and identify significant items requiring special attention. Identify levels of profitability, funds available for investment, requirements for public funding support (if any), and any requirements for exceptional financing. Identify key requirements for fare price reviews.			
17	Key performance indicators	Develop a set of Key Performance Indicators. Identify current values and set multi-year targets.			
18	Risk Management strategy	Identify key risks. Classify by cost to company, probability, and consequences. Develop mitigation strategy and means of monitoring. Assign risks to owners within AICTSL.			
19	Operations Management Strategy	Develop an Operations Management Strategy, including requirements for bus dispatching system, bus and crew scheduling, fleet management, measures to improve/safeguard operating environment for bus services, and training requirements for operations staff.			
20	Performance and service quality development plan	Develop a strategy for performance and service quality, taking into account the expected requirements from AICTSL under any reform program. For main performance indicators and their targets, develop tactical measures to achieve them within a framework of continuous improvement.			
21	Information systems plan	Develop information systems plan including (a) MIS and other internal information needs of AICTSL and (b) information services			

	Section	Suggested Scope (Only summary of some of the aspects dealt with in Part I need be given in this part to avoid duplication)
		for passengers and other stakeholders., and develop implementation plan using extensive data obtained from IT / ITS, its analysis and usage as an organized MIS including exceptional reporting, performance evaluation of PT system and the service providers wrt various stakeholders needs and PT Agency's goals and objectives.
22	IT and ITS applications	Prepare a detailed plan for acquisition of IT and ITS equipment / facilities and their O & M mechanism, detailed information flow pattern using ITS/ communications systems, driver alerts, PIS, incident reporting, , bill payment after adjusting penalties, security monitoring – on board and on bus stops, Ticketing and monitoring / control of ticket less travel / revenue leakage, etc,

**Activity 9:** Assist the AICTSL in O&M and financial assessment for each concept. Write a brief report documenting the O&M and financial analysis.

# **Activity 10: Formulate Competitive Strategy& Develop Implementation Plan**

The business plan shall also include a competitive strategy for AICTSL to be sustainable as an organization in the long term. Based on the short-term services and the delivery structure identified in the business plan, develop an implementation plan document.

Deliverable: Draft business strategy& Business plan report

Task VI: Final Route Rationalisation Plan, service plan, & Business plan in different sections

The draft route rationalisation plan, service plan, & Business plan will be presented to stakeholders. The final report will be prepared incorporating all comments.

Deliverable: Final route rationalisation plan Service Plan & Business Plan Report

# 4. DELIVERABLES, TIME FRAMES and PAYMENT SCHEDULE

The consultant shall commence work within a week of signing of the contract and shall submit a work plan within 1 month of commencement of work. All deliverables are due within 12 months of commencement of work. The list of deliverables and their respective time frames are given in the table below:

Table 1: Time Frame for Route Rationalization, Service Plan and Business Plan

S. No.	Activities	Time	Cumulative
		(in months)	Time (in months)
1.	Submission of Inception report (combined report)	2	2
2.	Submission of report on data collection and analysis report	4	6
3.	Stakeholder Workshop &report	1	7
4.	Submission of Draft Route Rationalization, Service Plan and Business Plan Report	4	11
5.	Final Route Rationalization, Service Plan and Business Plan Report	1	12

**Table 2: Work Plan** 

Activities / Months	1	2	3	4	5	6	7	8	9	10	11	12
Submission of Inception report (combined report)												
Submission of report on data collection and analysis report												
Stakeholder Workshop & report												
Submission of Draft service plan, route rationalisation plan & Business plan report												
Final service plan, Route rationalization and business plan report												

All reports submitted to client will be supplied in six hard Copies, along with a CD comprising relevant electronic copies of all data, maps & reports.

It must be noted that the copyright for all the manuals, plans and reports and other intellectual property created as a part of this project will vest exclusively with AICTSL which would be free to use all such material, without restrictions, in any of its training programs or for any other purposes.

## 5. Payment Schedule

The payment schedule for the above-discussed work has been detailed out in Table 3.

**Table 3: Payment Schedule** 

		Payment %
S. No.	Milestone	
1.	Submission of Inception report (combined report)	20
2.	Submission of report on data collection and analysis report	30
3.	Stakeholder Workshop & report	10
4.	Submission of Draft route rationalisation plan, service plan, & Business plan report	30
5.	Final Route Rationalization, Service Plan and Business Plan Report	10

**Note:** Payment schedule is the combined for all the activities required for preparation of the deliverable. Also after submission of reports, the percentage payment shall be made.

# 6. Consultant identification

The consultant's team will need to have interdisciplinary expertise, including GIS mapping, database management, financial planning, transport and city planning, Public Transport system operation. The consultant should have demonstrated experience in undertaking transport surveys in urban areas, in planning and designing of infrastructure relevant to public transport.

#### 7. Staffing

The suggested key staffing requirement and schedule required for the project has been outlined in Table. The minimum experience required of proposed key staff is:

S. No.	Position	Man Months	Professional Experience		Specific Expertise
1	Team	4	Minimum	15	Minimum qualifications – Masters in Transport

	Leader/Senior Public Transport Specialist		years		Planning/Transport Engineering or Graduate in Civil /Mechanical Engineering with 20 years experience in Public Transport systems management.  Experience as Team Leader or Project Supervisor in City Bus Service Project (Route Rationalization, Bus Operations) or in Public Transport Planning projects,
2	Bus technologist, fleet maintenance and related infrastructure planning expert	3	Minimum years	10	Minimum Qualification- Degree in mechanical or automobile Engineering with over 10 years experience in fleet maintenance management, maintenance infrastructure and facilities planning, costing of bus operations and maintenance activities including assessment of key deterioration factor related to fleet age etc, alternative analysis, make or buy decision making processes, manpower planning, induction and capacity building, etc
3	Transport Planner	5	Minimum years	8	Minimum qualifications – Masters in Transport Planning/ Transport Engineering.  Experience in Transport Planning, City Bus System planning & development, demand forecasting, transport modelling, public transport engineering, designs & development of support facilities in city bus system.
4	Business Plan Expert	3	Minimum years	8	Minimum qualifications- MBA or Equivalent in Finance/ Strategy Experience in designing business strategies and business plans for public service organisations with at-least some understanding of public transport.
5	Bus Operation Expert	3	Minimum years	10	Minimum Qualification – Masters in Transport Planning / Management / Mechanical Engineering with 10 years experience or Degree in Mechanical engineering with 15 years experience in a public transport Agency. Experience in Public Transport planning & operations& scheduling. The person should have a good understanding of urban public bus transport and have experience in project formulation, financing and implementation at the local urban level.

# 8. Supervision

The study will be supervised by AICTSL's PIU. They will be supported by the National PMU and World Bank.

Annexure 1
AICTSL Route and Bus Operation Overview

route No	Source Station	Destination Station	Nos of Old Diesel Buses	Nos of JnNURM CNG Buses	Total Fleet	Route length	Current Bus frequency (minutes)	
1	Tejaji Nagar	PANCHWATI	0	7	7	18.30	20	
2	CAT	PANCHWAT	0	5	5	18.40	20	
3	NEPANIA	GANDHI NAGAR	0	6	6	21.70	26	
4	VAISHALI NAGAR	PANCHVATI	0	8	8	19.30	16	
5	Arvindo Hospital	MHOW Naka	2	6	8	25.50	23	
7	Tejaji Nagar	GANDHI NAGAR	0	6	6	18.30	22	
9	Hawa Bungalow	Manavata Nagar	9	0	9	14.70	13	
10	Bombay Hospital,	Bada Ganpati	0	2	2	9.60	30	
11	Gommatgiri	Tejaji Nagar	0	8	8	24.50	23	
12	Rajwada	Manavata Nagar	0	4	4	8.60	30	
13	Rajwada	Khajrana Mandir	1	4	5	6.60	24	
16	Musakhedi	Noorani Nagar	4	2	6	11.40	20	
17	MR 10 Square	Palda Naka	4	5	9	13.80	13	
25	Indore Rly station	Indorama ( Pithumpur Sector 3)	8	2	10	39.00	1hr	
26	Indore Rly station	Mhow, Indorama ( Pithumpur Sector 3)	0	8	8	45.00	1.30 hr	
		total	28	73	101			
Sub- U	rban Area							
33	Indore	Simroal – Sanawad.	0	0	4	73.00	As per	
34	Indore	Hatod , Gutampura, Badnagar	0	0	2	80.00	issued RTO	
41	Indore	Bhopal	0	0	4	200.00	Permit	
31	Indore	Manapur, Dhamnod	0	0	4	78.00		
BRTS A	total 14 BRTS AC Buses (Rajivgandhi to Niranjanpur) 50							

# City Route Under Deployment

	Khajrana						
6	Mandir	Futi Kothi	0	4	4	13.10	
8	CAT	Arvindo Hospital	0	4	4	13.90	
18	IPS College	Maruti Nagar	0	4	4	13.20	
14	White Church	Arvindo Hospital	0	6	6	14.80	
15	White Church	Scheme No 51	0	6	6	17.60	
		total			24		

**Note**: The status/ number/ frequencies/ routes of the buses keep changing since it is an ongoing process.