

## ROLE OF FUNDING AGENCIES IN THE DEVELOPMENT OF BRTS IN AHMEDABAD

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### ABSTRACT

*Ahmedabad's Bus rapid transit system, also known as Janmarg is operated by Ahmedabad Janmarg Limited (AJL). AJL got impetus from the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and the National Urban Transport Policy (NUTP). This is one of the largest operated network in terms of BUS rapid transit system in India. This paper shows the funding pattern of various Government and private sector bodies in the development of AJL in Ahmedabad. Bus Rapid Transit System (BRTS), Ahmedabad whose capital expenditure is borne by the JnNURM while the remaining operating expense is still covered by the AMC under the special contracts which was signed between the AJL and AMC in 2011. AJL is operating with the highest success rate in Indian and won so many rewards. The success rate of BRTS in Ahmedabad is relatively high, it is not only catering the latent demand of present transport system by promoting a shift away from private motorised but also given short shrift to non motorised transport system. Most of the operations are managed by the PPP (Public private partnership) but still facing a gap and funded by Ahmedabad Municipal Corporation.*

**KEYWORDS:** JnNURM, BRTS, AJL, Funding Pattern, Transport Policy, AMC, PPP.

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### Introduction

India is having 2<sup>nd</sup> largest transportation system. Sixty percent of the GDP generated from the urban areas. India comprises of 40 cities with population over 1 million, 396 cities with population over 100000 to 1 million, 2500 cities with population 10000 to 100000. As per the survey 2019 population of Indian cities keeps on increasing day by day. In 1981 to 2001 there were only 6 metro cities as per the population is concern which increases to 40 in 2019 as per the report of world population review report. And with the increase in pollution motor vehicles keeps on increasing by 20 times

### Bus Rapid Transit System in Ahmedabad (JANMARG)

The city of Ahmedabad is the seventh largest urban agglomeration (and fifth largest municipal area) in India with a population of 6.35 million in 2011, registering a growth rate of 3.5% per annum in the decade of 2001-11. Ahmedabad is receiving second largest per capita grant from JNNURM projects (Kundu & Samanta, 2011) While comparing the metropolitan cities of India who are receiving grants from the JNNURM Scheme for their BRTS project, Ahmedabad is second in number. AJL has the largest network & it is continuing its expansion. Near about 88.8 km BRTS corridors are operation in Ahmedabad city. Janmarg, which means "people's way". The BRTS has started its operation in Ahmedabad in 2009 and has won many National and Inter-national awards in the field of Excellence of transportation. Since the first phase of its operation, It carries 137291 million passengers per day, with a daily revenue of Rs 7457 lakh (Ahmedabad Municipal Corporation 2018)

With the launch of JnNURM in 2005 and the NUTP in 2006, Ahmedabad Municipal corporation had decided to develop a project of Bus rapid Transit System in Ahmedabad. The project was funded by JnNURM, NUTP, AMC & the Central Government. Ahmedabad was the first city to avail this opportunity

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with the help of AMC, JnNURM and NUTP and submit the DPR under the UIG component of JnNURM. In 2006 project was approved and started its work in 2007. They initially sanction the project of length 88.8km, which was divided into two phases. The first phase is of 58.3 km and the second phase is of 30.5km. At the city level, there were expectations that roads would be well-laid, road space would be created for pedestrians, bicyclists, and vendors, on-street parking would be managed, and an efficient and reliable bus system would be provided as promised in the detailed project reports in 2006 and 2008. JANMARG is the bus rapid transit system in the city Ahmedabad. It is operated by Ahmedabad Janmarg Limited a subsidiary of Ahmedabad Municipal corporation and others inaugurated on October 2009.

### Objective

The objective of this paper is to analyse the funding pattern of Bus rapid transit system in Ahmedabad. The various agencies involved in providing the fund for the development of BRTS in Ahmedabad for its Capital and Operational expenses. What are their funding schemes? How they can be able to make this partnership as a success. It's basically a descriptive research & conclusion are drawn on the basis of figures obtain either from the trusted website or from the annual reports of the various funding agencies

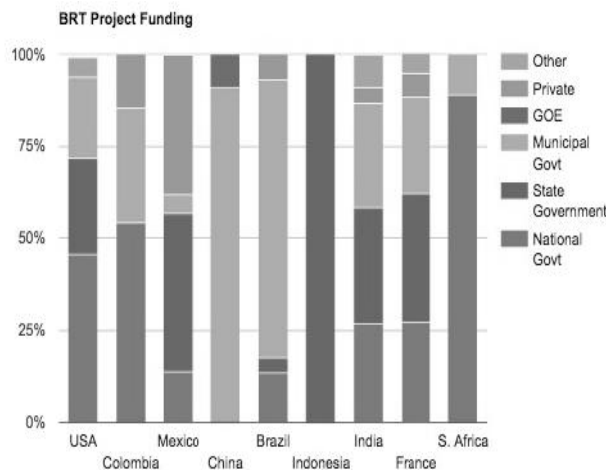
### Literature Review

The 2006 National Urban Transport Policy (NUTP) that was launched in April 2006 by the Ministry of Urban Development (MoUD) (GOI, 2006) heightened interest. This new transport policy represented a dramatic policy shift for the sector, advocating a move away from highway and road expansion investment towards the promotion of non-motorized transport and improvement of public transport services (Pucher et al., 2005; Pucher et al., 2007) (Agarwal & Zimmerman, 2008). The Jawaharlal Nehru National Urban Renewal Mission (JnNURM) funded the implementation of the NUTP (Baijal, 2011; Ponnaluri, 2011). This centrally financed program provided USD15 Billion equivalent over 6 years for a range of infrastructure improvements in key urban centers (Baijal, 2011). To be eligible for JnNURM funding, all transport projects in these centers had to comply with NUTP guidelines (GOI, 2005; Pai & Hidalgo, 2009; G. Tiwari & Jain, 2010). In an international review of operational BRT systems Hidalgo and Guterrez (2013) conclude that BRT "systems in the developing world suffer problems resulting from poor planning, implementation and operation, due to financial, institutional and regulatory constraints" (Hidalgo & Gutierrez, 2013, p. 8)

### Funding of BRTS

#### Capital Funding of BRTS

The manner of funding the capital cost of BRTS project is similar to other medium to large scale capital projects of the similar implementing agencies. It is usually a level of government (municipality, state, or national) or a government-owned enterprise established fewer than one of these levels of government. Funding the capital cost of BRT system depends on which level of government is leading the BRT S project, and its track records of managing the projects of similar scale.



The source of funding were broken into the five main sources of funding:

- National government
- State Government
- City /Metropolitan government or transport authority
- Government owned entities
- Private sector backed primarily by user fee

Normally infrastructure accounts to 85% to 90% of the total capital cost, while vehicle procurement and other equipment make up only 10% to 15% of the total initial cost. Vehicle fleet procurement can be done by private investment. BRTS team should assume that Infrastructure cost will be paid by the government and the user fee will be sufficient to cover all or most of the operating cost. Generally municipalities takes the lead to run such buses but if the municipalities are weak, state authorities are carrying the primary funding responsibilities. Where both municipalities and state government are too weak to raise the necessary revenue, national authorities are stepped in to meet the funding gap. The summary of few countries according to the capital funding is given as under

- Municipal Government Funding China , Brazil
- State Government Funding Indonesia
- State Government, State owned enterprise , Private sector Mexico & India
- National government Colombia
- Fairly Even mix of funding sources US & France

In India, the capital investment of BRTS projects are largely funded by National Government, JnNURM (Jawaharlal Nehru National Urban Redevelopment Mission) grants and the revenues of Values added taxes at state level. In some cities like Ahmedabad, AMC (Ahmedabad Municipal Corporation) also plays an important role in the development of BRT Infrastructure In some Indian cities; the vehicle procurement is covered by private investment, while in other cities like Pune BRT vehicle procurement is covered by a grant of new vehicles from the national government through the JnNURM program.

In 2005, the ministry of Urban development (MoUD) & the Government of India (GOI) launched the Jawaharlal Nehru National urban renewal mission (JnNURM. The aim of the mission was to encourage Urban level reforms and fast track planned infrastructure development of the 65 mission cities. The duration of the mission was from 2005-'06 to 2011-'12. However, since most of the projects have not been duly completed, the government has extended the mission until March, 2014. JnNURM comprises of two sub missions

- For Urban Infrastructure and Governance
- For basic services to the Urban poor

#### Annexure 1: JnNURM bus funding scheme as per density of population

Population OD the Mission Cities	Central Assistance	State Assistance	ULBs/Parastatals/ Loan From FIs
More than 4 Million	35%	15%	50%
1-4 million	50%	20%	30%
Less than 1 million	80%	10%	10%
J& K and North Eastern state	90%	10%	-
Other cities	80%	10%	10%
Setting up de-salination plants	80%	10%	10%

Source: Centre of Urban Studies

- In the JnNURM scheme, Under CFA (Central Financial Assistance), funds would be released as Additional Central Assistance to State Government or Nodal Agencies. Then the nodal agencies will disburse this loan to urban local bodies as a soft loan, Grant of Grant-cum-loan.
- CFA's release the funds in instalment. The first instalment is of 50 percent, than the second instalment of 40 percent and the last instalment is of 10 percent. The first instalment will be released upon the sanction of project from the competent authority. After its complete utilization the second instalment will be released The Initial fund will be released after the sanction of the project from authority. The second instalment of 40% will be released upon the receipt of Utilization Certificates (UC) to the extent of 70 % of the grants (Centre and State) and subject to

route permission from the competent transport authority, Operations tie up, Loans tie up. Then the last instalment of 10% will be released upon receipts of Utilization certificate to the extent of 70 per cent of the grants (Centre and State) and subject to commencement of satisfactory service operations.

- Now the next step is to set up the bodies that can make scientific assessment of demand on various routes and contact services which can be monitored properly. The role of these bodies is to manage bus stations, terminals, depots; central offices etc and also provide maintenance facilities. The members of major stakeholders and operators are the representative of such bodies.
- The Ministry of Urban development have circulated the Urban Bus specification. All the buses of BRTS must conform to such circulated specifications.
- The major emphasis is to cover all the cities which are included under the list of JnNURM funded cities. Their objective is to start an organised city bus services those cities which do not have such organised system. Funding scheme according to the cities given above
- The buses are to be in line with the Auto Fuel Policy approved by the Government in 2002 that is introduction of Bharat Standards (BS) three and four vehicles.
- All mission cities will be eligible for ACA
- States/ Urban local bodies/ Parastatals shall float a city specific, wholly owned Special Purpose Vehicle (SPV)/ Public Body for controlling and managing the city bus services/ Bus Rapid Transit System (BRTS) to ensure that the buses procured under JnNURM are utilized exclusively for the purpose of Urban Transport.
- For accessing ACA, Detailed Project Report (DPR) shall have to be submitted by the State Government/ State level Nodal agency including details about the city bus service/ BRTS: planning, financing arrangements, sustainability, user charges, operation, maintenance, the ultimate benefit. This will become available to the urban commuters.
- Public private partnership (PPP) proposals will be given priority in case of BRTS project. However the ownership will be remain with the urban local bodies or with the parastatals.
- The commitment of the maintenance of these buses, their usefulness through the life and put them in operations immediately will be done by ULBs/ Parastatals.
- Buses funded by the JnNURM scheme must carry the JnNURM logo on both sides.

#### **Special Purpose Vehicles**

A Special Purpose Vehicle is a legal entity created to fulfil narrow, specific or temporary objectives. Generally when a company transfers assets to the Special purpose vehicle for either the management or financing large projects and thereby achieves a narrow set of goals without putting the firm at risk. SPV is also known as Special Purpose Entity (SPE). These SPV's can be owned by one or more entities. The SPV is usually a subsidiary company that makes its obligations secure even if the parent company goes bankrupt.

#### **Urban Metropolitan Transport Authority**

According to the recommendations of the Working Group on Urban Transport in the 12th five year plan, UMTA:

- Unified Metropolitan Transport authority is an executive body. It is governed by a board. This Board comprises of heads of various departments of the cities, eminent leaders, and local elected citizens. It should be supported by team of professionals.
- UMTA should report to Metropolitan Planning Committee / District Planning Committee as given under the 74<sup>th</sup> Constitution Amendment act. If the MPC/ DPC were not formed then until its formulation it should report to the relevant department at the state headquarters.
- UMTA should be empowered to set up SPVs for various components of Urban Transport.
- UMTA should undertake the following functions:
  - It should formulate policies and strategies for the city urban Transportation system. It should also take care of financing for Urban Transportation.
  - As a regulatory function it ensures co-ordination of various modes of public transport to ensure seamless travel.

- Integrated and holistic planning: such as comprehensive, integrated transport– planning of all components of Urban Transport on a city wide/ Urban Agglomeration (UA) basis for implementation including integrated land use. Transport planning with inputs from urban Development Authority. This will include planning for an integrated, multimodal public transport system, MRTS, planning of bus routes, terminals, interchange points, intermediate public transport, Non Motorised Transport (NMT) and transport demand management. It will also plan goods movement in the city.
- Next function is planning for Infrastructure in the cities. Planning of road network and associated infrastructure in conjunction with– planning of city wide public transport system. Infrastructure includes roads and associated facilities such as road furniture, traffic signals, road intersections, flyovers, grade separators, bridges, bye-passes, and facilities for inter modal transfer and parking.
- Organising and co-ordinating services that is franchising/ route allocation,– contract monitoring, co-ordination of services, ensuring supply of services to meet demand, provisioning of new supplies, monitoring the work assigned to the implementing agencies. All service providers including Rail Transit and BRTS will be monitored by UMTA (however, construction, operation and CPPR-Centre for Urban Studies maintenance of various MRTS, bus services and other infrastructure will continue through existing city agencies.) Common services such as resolution of day-to-day matters, dispute resolution,– Public Relations (PR), security services, management of revenue sharing arrangements. Provision and management of common facilities i.e. depots, terminals, and Passenger Information System (PIS), integrated ticketing, data management, management of multimodal interchanges, last mile connectivity, planning movements around MRT stations, co-ordination with other agencies and planning for future extension.
- Traffic Engineering and Management.–
- Capacity building to upgrade the skills of the city officials.

#### Annexure 2 : Funding Plan of JnNURM for the growth and development of BRTS in Ahmedabad

Serial No.	1	2	3
State	Gujarat	Gujarat	Gujarat
City	Ahmedabad	Ahmedabad	Ahmedabad
Project Name	Bus rapid transportation system construction of 12 km long stretch( 1 <sup>st</sup> phase. BRTS roadways and carrying out detailed studies & engineering and remaining stretch	Bus Rapid Transit system (stretch of 46 kms)	Bus rapid Transit system (Phase 2 <sup>nd</sup> )
Approved Cost ( In lakh Rs.)	8760.00	40572.00	48813.00
Additional Central Assistant Committee ( ACA) ( Rs in lakhs)	3066.00	14200.00	17085.00
Amount of ACA released for utilization in 2007-2008	00.00	0.00	0.00
Amount of ACA released for utilization in 2008-2009	766.00	3550.05	4271.00
Amount of ACA released for utilization in 2009-2010	766.00	3550.05	0.00
Amount of ACA released for utilization in 2010-2011	00.00	0.00	0.00
Total ACA from 2007-08 to 2010-11	1533.00	7100.10	4271.00

Source: Press Information bureau

On the basis of above funding scheme the project was implemented in 2006 and it covers its first phases in 2009 with full utilization of its fleet. AJL has 65 kilometres of operational BRTS routes with approximately 135 buses (36 of which are Air Conditioned) and carries around 1.30 lakh passengers daily. AJL is registered as a 100 per cent subsidiary of AMC. As per the Memorandum of Agreement (MoA), the Municipal Commissioner is the chairman of AJL.

From the audited report of BRTS Ahmedabad Annexure 3 shows the income and expenditure statement of BRTS from 2011 onwards.

**Annexure: 3 Summary of Income & expenditure of BRTS as per audited result**

(Rs. In Lakhs)

Year	Total Income	Total Expenditure	Surplus / Deficiet
2011-12	3694	3828	(-134)
2012-13	4623	5332	(-709)
2013-14	5663	7643	(-1980)
2014-15	7326	9850	(-2524)
2015-16	11216	11784	(-568)
2016-17	8695	14114	(-5419)
2017-18	7457	12902	(-5445)

Yet BRTS is a big success in Ahmedabad but still its operational cost is showing deficit which is funded by Ahmedabad Municipal Corporation. AMC is raising the project cost (raised through different sources like Advertisement rights and purchasable Floor Space Index (FSI) on the BRTS routes) the fund which is given by AMC as a loan/ Grant to BRTS under the assistance to AJL scheme is given as under:

(In crores)

Year	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Loan To AJL	35.03	46.93	60.85	73.85	122.31	182.31	235.31
Loan to BRTS	659.59	659.59	759.45	955.86	979.84	979.84	979.84

(Website: Ahmedabad Municipal corporation)

**Conclusion**

On the basis of above study it is concluded that BRTS is a joint effort of : GoI: 35% of the project cost GoG: 15% of the project cost AMC: 50% of the project cost (raised through different sources like Advertisement rights and purchasable Floor Space Index (FSI) on the BRTS routes) . CEPT has taken the street planning, Engineering design and Vehicle technology. Project is supported by Ahmedabad Urban Development Authority; Gujarat Infrastructure Development Board ; Urban Development and Housing Department, GoG Ahmedabad City Traffic Police. Lead Planning And Implementation role of Ahmedabad Municipal Corporation (AMC) has made it a big success.

**References**

- ~ Balance Sheet of Ahmedabad municipal corporation  
[https://ahmedabadcity.gov.in/portal/jsp/Static\\_pages/amc\\_balance\\_sheet.jsp](https://ahmedabadcity.gov.in/portal/jsp/Static_pages/amc_balance_sheet.jsp)
- ~ Rizvi 2014: Comparison of delhi and ahmedabad BRTS.
- ~ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=77869>
- ~ <https://brtguide.itdp.org/branch/master/guide/funding-and-financing/funding-brts-capital-costs>
- ~ <https://www.nap.edu/read/21947/chapter/11#175>
- ~ [www.ahmedabadbrts.com](http://www.ahmedabadbrts.com)

