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## **Evaluation of Ahmedabad Municipal Transportation System**

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### **Research Guide**

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### **ABSTRACT**

Public transportation plays a vital role in the development of Indian Cities. In most of the cities of India, public transportation is losing its cliental with declining ridership. There is a drastic change in the travel pattern. With the introduction of multi-model modes of transport the total scenario of public transportation changes. This increase in vehicles created various other problem like congestion, accidents and breakdowns. Increase in traffic decreases the efficiency of the public transportation. The only way to deal with this problem is to wean travelers away from use of personal vehicles to public transportation. In foreign countries, most of the people are still relying on public transportation than personal vehicles for example, BRTS in Singapore. The aim and objective of this paper is to evaluate existing bus transportation of Ahmedabad city i.e. AMTS (Ahmedabad Municipal Transport System), This study evaluates existing system of AMTS. It helps to make guidelines and guiding parameters for evaluation of Bus transportation system.

### **[1] Introduction**

Public transportation is a form of travel offered locally that enables more people to travel together along designated routes. In urban areas, there is a demand of small number of trips between diverse locations. There are many modes of public transportation like buses, trains, trams high speed rails airlines etc. They



all can compete with each other if and only if they can meet the expectations of travelling people i.e. if they can deliver an attractive, accessible, reliable, responsive, passengers oriented, quick and affordable services by minimizing overall inconvenience and increase in economic and physical comfort. Because of Innovation and technical advancement, multiple mass transit options are available today. Selecting the best among them depends upon feasibility criteria and transit needs. A well-designed public bus transportation system will satisfy the characteristics given above. Public transportation in terms of city buses is in the form of system, which serve mobility needs with low cost. With the changing technological environment, it is easy to design a bus, which saves energy, make commutator's travel comfortable, safe and cost effective.

Roadways are the backbone of any country. It serves as one of the indicator of economic development. It plays a prominent role in the developing India. The number of persons using public transportation is increasing day by day. Urban transportation plays a prominent role in developing most of the developing countries. However, with lots of comfort and services it is also associated with accidents and breakdowns.

AMTS is India's largest municipal transport service for local conveyance. It is managed by Ahmedabad Municipal Corporation under Bombay provincial Municipal Corporation Act. AMTS started its operations on 1<sup>st</sup> April 1947 with a fleet of 112 buses when the municipal administration declared nationalization of the private buses that were running in the cities. Initially Morris Company operates 32 bus routes with 50000 commuters in the city. At present urban transportation has 1072 buses serving the city in which 848 buses runs under AMTS and 224 under BRTs.

## [2] Objective

- 1) Review organization and hierarchy structure of AMTS
- 2) Analysis of AMTS using guidelines



3) Suggestions for its improvement

### **[3] Management and Administration of AMTS**

AMTS is under the administration control of statutory committee viz Transport committee formed by general board of AMC. It has no capital base therefor total funding for running the buses is provided by AMC in the form of interest bearing loans. A transport committee consist of 9 members including Chairman. One of them being AMC's standing committee chairman. These members may or may not elected. Transport manager exercise administrative and operational powers under the supervision and control of Transport Committee. Transport Manager is not a member of transport committee.

Administrative team from top to bottom OF AMTS is :-

- 1) Dy. M.C. ( T.M.)
- 2) Dy. TRANSPORT MANAGER ( GENERAL)
- 3) Dy. TRANSPORT MANAGER ( TECHNICAL)
- 4) DIRECTOR OF TRAFFIC
- 5) ASSISTANT MANAGER 1<sup>ST</sup>
- 6) ASSISTANT MANAGER 2<sup>ND</sup>
- 7) ASSISTANT ENGINEER 3<sup>RD</sup>
- 8) A.C.E ( CIVIL)
- 9) LABOUR WELFARE OFFICER
- 10) Dy. WORKS MANAGER 1<sup>ST</sup>
- 11) Dy. WORKS MANAGER 2<sup>ND</sup>
- 12) ASSISTANT ENGINEER
- 13) JUNIOR ENGINEER
- 14) D.I. ( LAL DARWAZA)



#### [4] Research Methodology

This study is based on the secondary data collected from the statistical statement on AMTS. This study is for the period of seven years from 2010-2011 to 2017-2018. The study is for the period of eight years. Where the tool of analysis is simple observation of trend. Analysis is based on the trends of data collected from the financial statements of their yearly reports. The recommendations are based on the trend analysis observation of secondary data.

#### [5] Fleet & Vehicle Utilization

The actual analysis of efficiency is calculated through the fleet utilization in public transportation. Gross and effective utilization of vehicle is presented in the table in terms of kms from 2010-11 to 2017-18. Fleet utilization efficiency is declining marginally. This may be due to over utilization of old fleet, insufficient funding, inadequate infrastructure and overall growth in the city traffic.

YEAR	FLEET UTILIZATION.	VEHICLE UTILIZATION ( KMS)	
		GROSS	EFFECTIVE
2010-2011	71.6	231.39	212.18
2011-2012	68.11	214.75	199.25
2012-2013	66.95	210.25	197.61
2013-2014	70.31	214.97	203.82
2014-2015	75.83	213.89	202.97
2015-2016	80.95	227.42	208.53
2016-2017	78.30	202.76	196.74
2017-2018	79.04	206.97	191.48

Source : AMTS



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## [6] Fuel Efficiency

Fuel efficiency is presented in terms of kilometer per liter.AMTS is rated best in terms of fuel efficiency.

The organization received many national level trophies for its performance in road safet, tyre productivity and fuel efficiency in previous years. They tried to maintain efficiency. Yet the data shows marginal increasing and decreasing trends.

YEAR	FUEL EFFICIENCY
2010-2011	3.47
2011-2012	3.26
2012-2013	3.17
2013-2014	3.07
2014-2015	3.21
2015-2016	3.27
2016-2017	3.19
2017-2018	3.18

## [7] Quality of Services

Quality of services associated with the following heads of financial statement given in the list of AMTS.

Number of trips cancelled, no of accidents ( Reported and Non Reported) , number of Breakdowns etc. Here I am considering the data of accidents and breakdowns According to the reports accidents are shown per 1,00,000 gross kms which is decreasing from 2010-11 to 2017-18. According to the collected data no of accidents are showing mix trend with the increase in population and traffic. But increase intraffic makes the condition of breakdown worst which is increasing with each passing year.



## [8] Accident and Breakdown Details

YEAR	NUMBER OF ACCIDENTS ( PER 1,00,000 GROSS KMS)	NO OF BREAKDOW N
010-2011	0.94	46226
011-2012	1.84	47399
012-2013	1.03	52447
013-2014	1.00	60006
014-2015	0.99	49076
015-2016	1.07	42304
016-2017	1.33	24091
017-2018	0.88	86159

SOURCE : AMTS

## [9] Conclusion & Suggestion

After analyzing the reports of Ahmedabad Municipal transport Services I concluded that the population of Ahmedabad keeps on increasing day by day. It was 6,412,713 in 2011 to 7,680,935 in 2017. There is an increase of 19.78% in population during these years. The need of transportation is getting increase day by day. Over the last three decades the urbanization increases to 37%. Ahmedabad is having two major public transportation system i.e. AMTS & BRTS.AMTS being the oldest one in India, which was started after the independence of India, whereas BRTS was introduced in 2009 in



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Ahmedabad. Implementation of BRTS reduces the burden of AMTS to some extent. But initially the corridor of BRTS was very small, it increases with time. The total pathway of BRTS is 89 km by Dec 2017.

- 1) AMTS continues to be a dominant provider of Public transportation. AMTS served areas within AMC , however approximately 18-20% routes extended beyond AMC to provide growth to the new areas, BRTS covers only 89 km till Dec 2017.
- 2) AMTS is continuously facing the problems of financial viability, lack of organizational authority and basic infrastructure constraints.
- 3) The frequency of the AMTS buses does not respond to the actual demand. In peak hours the frequency is less than required, which results in financial losses due to underutilization of buses.
- 4) Average break down increases during these period, which result in more cancelled trips.
- 5) Between AMTS and BRTS, most of the people prefer to travel through BRTS because of safety and comfort.
- 6) Now most of the buses uses CNG, so its fuel efficiency is maintained and pollution also decreases. But again due to old and obsolete fleet the fuel efficiency is less than required.
- 7) AMTS bus stops are untidy, small and non-convenient for passengers and to the pedestrians. The conditions of bus-stops are even not so good to stand, to wait or to sit.
- 8) Non-reported accidents are always greater than reported accidents, which shows carelessness and non- expertise of drivers.
- 9) BRTS loses its ridership because of limited routes. Only in Ahmedabad BRTS proved to be a successful but in other cities the BRTS is Unsuccessful.
- 10) If such trend continues, then the viability of existing public transportation system will be in question very soon.



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