

# Review on Case Study of BRTS And Its Advancement

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**Abstract-** *Bus Rapid Transit System[BRTS] is a transport system provided for very fast movement for the passengers which saves their time and also it is cost effective, reliable and comfortable and for betterment of the city. But now a days Pune BRT facing some problems because of which the system is about to fail and it is not running as it was planned. The routes of BRTS is used by other private vehicles and causing lots of problem to ongoing buses which disturb the bus cycle. The objective of the paper is to provide a review of the recent development of BRTS across the globe.*

**Keywords-** BRTS, ITS, JNURM

## I. BRTS; AN EFFECTIVE MODE OF PUBLIC TRANSPORT

**Author:** Gupta K, Singh A, Dwivedi V, Tandon M

**Published:** July 2014.

In this review paper the system of BRT is described. Which includes various factors about BRTS. It is intended to reduce traffic on roads by using this system. This is the new faster and cost efficient compared to metro and monorail. Features of this systems are the running ways are separated from other traffic, it is accessible, safe, secure, cost effective and easy to board. It provides the real time passenger information. It is frequent and has all day service. The fare collection is off board. This is the permanent integrated system which uses buses or specialized vehicles on dedicated lanes for quick and efficiently transport passenger to their destinations. It also includes the 'CASE STUDY OF AHMEDABAD BRTS' which include its population density about 6 million (2001) within area 466 sq. kms. And that city was facing several challenges about road transportation. Description of Components of Ahmedabad BRTS are given which include the 1) Running ways- it has 2 median bus lanes of width 3.65 to 3.75m. 2) BRT station – it include 38 m long 3m wide bus station 3) Bus features – designed for passenger comfort, and wide central doors, having 90 person – capacities. 4) Intelligent Transport System (ITS) – operations control 5) Total cost – the project is sanctioned by JNURM project in 2 phases. 6) Rating for BRTS by Users – Avg Rating in 1st month 8.34 out of 10. Avg Rating in 2nd month 8.88 out of 10. 7) Factors of success. The conclusion of this

literature is BRTS is a successful to increase traffic demand as well as sustainable mode of public transit effectively and it has better management which is the fastest mode and more economic.

## II. A METHODOLOGY FOR SELECTION OF BUS RAPID TRANSIT CORRIDORS: A CASE STUDY OF KOLKATA

**Author:** TuhinSubhara Maparu and Debapratim Pandit.

**Published:** October-December 2010

In this review paper we studied that in Kolkata city, people are using private vehicles rather than public vehicle (BRT) and this led to traffic congestion and this affect the BRTS. BRTS is a system of facilities, services and that improve the speed, reliability of bus transit. In India the first phase of BRT system has been implemented in Delhi and this lead for few cases of accident and traffic congestion. Kolkata has Hugh population and a high percentage of bus users.

Selection of BRTS corridors in Kolkata has been done in step wise

1. The city was divided into different traffic analysis zones
2. Origin destination matrix was prepared for bus route.
3. They identified high travel demand
4. Routes or links through which these travel demands met were identified.
5. Finally, priority of developing these corridors was determined.

This paper aims to deliver methodology and planning framework for selection of BRT corridors.

## III. RECENT DEVELOPMENT IN BRT: A REVIEW OF THE LITERATURE

**Author:** Taotao Deng, John D. Nelson

**Published:** 10 November 2010

In this review paper we studied about the development in BRTS. It has emerged as a loading mode of

urban passenger. This system has potential to offer significant impacts on urban economic, social & environmental development. Bus rapid transit is an emerging form of mass transit, which ties the speed & reliability of a rail service. An increasing number of cities are considering BRTS as a cost-effective way of providing a quantity a high-quality transport service to meet their mass transit needs. The BRTS was originated in north America and is used widely. The BRTS is defined as a rapid mode of transportation that can combine the quality of rail transit and the flexibility of buses.

In this paper BRT system divided into four groups

- 1) Running in mixed traffic
- 2) Using shoulder bus lane
- 3) Using median bus lanes
- 4) Using exclusive buses

The literature confirms that the BRT system has taken advantage of characteristics of rail system in a cost-effective way. An appropriately designed BRT system offer a high-quality transport service as compared to rail service.

#### IV. BUS RAPID TRANSIT SYSTEM IN INDIA: AN OVERVIEW

**Author: Debapriya Tripathy, Dr. Pradepta Kumar**

In this review paper we studied the country's growth is much dependent upon effective/adequate transportation system available to the citizens. BRTS is cheaper than the Rail and metro. Installation of BRT reduces the vehicle passing capacity and but it brings benefits to people. The study has shown that user's cost has descend trend with an increasing of frequency. This paper proposes a way of approx. introducing some regular bus lines as the quasi-BRT. The quasi-BRT is divided into 3 categories. 1) on line, 2) off-line, 3) merging line. The paper discusses the interface between vehicle and station from 3 aspects

1. Vertical gap
2. Horizontal gap
3. Transverse gap

At the Ahmedabad BRTS the bus stop has following characteristics

1. Low maintenances and less wear and tear
2. Safety for all kind of people for movement
3. Climate consideration of heat and rain.

Ahmedabad BRT buses use CNG gas as a fuel. At the stops of BRT Standard form are there for passengers such as signage's, route details and graphics.

#### V. A REVIEW OF BUS TRANSIT IMPLEMENTATION IN INDIA

**Author: Ankit kathuria, Manoranjan Parida, Ch. Ravi sekhar, Anshuman Sharma**

**Published: 2016**

This paper review the Indian BRT system based on various design and operation characteristics. The popularity of bus rapid transit system has increased in the past few years. In terms of design firstly the system will be categorized as open and closed BRTS. BRTS is attractive public transit option because of its higher journey speed. Delay at the signal and higher dull times are a major cause of lower speed. The BRTS is reported to have reasonably good operation frequency to the range of 30 second in peak hour. Reliability of transit services has been recognized as a significant determinant of quality of service.

#### VI. TRAFFIC IMPACT ANALYSIS OF BRTS – A CASE STUDY OF AHMEDABAD BRTS

**Author: Chaudhari Dron, Prof. N.D. Hajani**

For development of urban area transportation is the backbone. In this review paper we studied about the planning between origin and destination. Transportation became a source of environmental problem. According to study (world bank,1996) 70% of air is polluted by transportation. The paper includes the effects of BRTS on other traffics, urgency problems, safety purpose of people in BRTS buses. Vehicle are the major source of greenhouse gases.

#### VII. CONCLUSION

After studying all above literature paper, we conclude it as BRTS is the best public transport for passenger in cities and is time saving and it can be taken to next level transport and it reduces the other traffic vehicles on roadways. As we have studied the Pune BRTS but it is not well equipped so we can implement the things needed for the Pune BRTS to succeed. The Ahmedabad BRTS is well equipped and the response of the passenger is good because of which the private vehicles on roadways is less which reduces the traffic as well as air pollution. In Kolkata city people were using private vehicles rather than public transport which results in traffic congestion. When the origin and destination of passenger is

lies in the BRTS route than they will stop using private vehicles which saves their time, cost efficient and reliable.

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