

# **Vision for Taxi Services for Mumbai**

**Recommendations of Bombay First**

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**Bombay First**

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## Background to the Study

Bombay First has been very actively examining the transportation system of Mumbai with the objective of identifying problem areas, and suggesting methods of improving them, within the overall framework of Bombay First's Mission Statement: putting Mumbai on the fast track towards becoming a better place to live, work and invest in. With this objective, several smaller Core Groups were formed, comprising of individuals who were concerned enough about the city to contribute their time towards improving it. Several NGOs were also included as a part of these groups.

One such Core Group was formed to look into the possibility of improving the taxi services of Mumbai. This service is used by a large volume of residents and visitors to the city, and it is found to be far below par by all who access it. Moreover, a visitor to the city forms his first impressions from the transport that takes him from the airport /station to his hotel. A large number of these vehicles unfortunately have dirty or soggy upholstery and doors that don't shut properly, basic safety features like indicator lights, red warning lights do not work. The driver looks to his passenger for directions to his destination, and at the end of the day, it is not a acceptable experience.

It was with this vision in mind that Bombay First set out to study what it takes to have a world class taxi service for Mumbai. The Taxi and Enforcement Group, or the Taxi Group, as it was christened, was headed by Mr. Alok Gupta, Country Manager of India for Cabot Corporation. This group met regularly, and drew up a Wish List of what the taxi services should be like and then go on to develop a business model that can be implemented, based on study of services in other cities of the world and taking into consideration the Indian situation. The other members of the group were as follows:

	Representing/Status
Ms Nayana Kathpalia	NAGAR
Ms Neera Punj	Citi Space
Ms Meher Razaat	Clean Air
Mr Prashant Sibal	Tata Motors
Ms Kunti Oza	Clean Mumbai Foundation
Mr Ashok Datar	Individual
Mr Dilip Jadhav	Addl Transport Commissioner
Mr MP Bhave	Asst Transport Commissioner
Mr Sanjay Dani	Asst Commissioner Traffic Police
Mr Rishi Aggarwal	Bombay First

Supported by

Ms Bina Balakrishnan.- Professional with expertise in transport related issues.

Extensive interaction with stakeholders in the current taxi trade, the government, consumers, taximen unions and transportation experts was held. Based on their views and the input from several knowledgeable persons a model is now ready that would best suit the needs of this city. The transition plan has also been worked out from what is available today to what the final state of the taxi service needs to be.

This report therefore presents a document that has the details of the expectations, business model, transition plan and also the action plan to reach the final stage.

## Executive Summary

Taxis form an integral part of the commuting pattern in Mumbai, with a large number of commuters covering their origin and destination lead distances in taxis. Many business trips are also made in taxis, since limited parking space is available in the city.

As the financial capital of India, and an international destination attracting large volumes of business travelers and tourists, Mumbai and its citizens deserve a far better level of service in taxis than is available in the city today.

### Current Scenario

- a) The existing service comprises wholly of obsolete and poorly maintained vehicles that give rise to concerns of disease and hygiene to users of the service, with ill-mannered drivers who are very often ignorant of the city, tourist destinations and landmarks and have very erratic and poor driving habits.
- b) Maintenance of these vehicles is so poor that many of them have non-functional headlights, indicator lights, wipers and totally bald tyres, so that safety becomes a major concern.
- c) The current taxi service has deteriorated rapidly with time, with the downslide being much more rapid over the last 5-7 years. The existing service is being sustained purely because of the lack of options for both the taxi operators as well as the user public.
- d) One of the reasons is that enforcement of basic standards as was seen in Mumbai in the past by the concerned agency is now lacking. Perhaps it is because of the sheer numbers of vehicles involved in the trade, and the lack of manpower with the controlling agency to enforce these standards.
- e) The transportation profile of Bombay city has Auto Rickshaw's at the lower end and Private tourist taxis at the upper end. That over time has served to depress the demand for taxis. However, it may be noted, that the Tourist Taxis have been introduced by enterprising operators to meet a very real demand in the market, for good, efficient transportation option.
- f) Very clearly the sharp deterioration in service is increasingly leading to usage of taxi only as a last option by commuters, resulting in lowering revenue for taxi operators, which has led to a vicious circle of inadequate expenditure on maintenance of vehicles, further deteriorating the situation.
- g) There are only 600 stands demarcated for taxis between Colaba and Dahisar, whereas there are 45,000 taxis in operation. With inadequate place to park, they are forced to cruise around looking for prospective fares. This idle cruising eats substantially into their earnings, while contributing in a very big way to traffic congestion, noise and air pollution.



- h) An analysis of the market indicates that amongst the users of taxis, there are at least 30% users who would enthusiastically shift to a better taxi service and would be willing to pay a higher amount (current amount for AC taxi plus some more) for the same. In addition, it is estimated that there may be a substantial increase in the usage of better taxi service by travelers, who are currently using either a private vehicle or private taxi.

The Goal of this study therefore, is to have a taxi service that is comfortable, safe, affordably priced and dependable, while also reducing their impact on the traffic system, as well as the environment. *Dependable* here encompasses vehicle dependability, driver dependability, driver integrity and an overall improvement in passenger experience.

### Use Segmentation and Commuter needs

Taxi Users in Bombay city can be categorized into the following:

- a) *Feeder Service Users*: Those who need a dispersal service from the public transportation hubs like train stations to their place of work and vice versa. This is currently being served largely by shared taxi service.
- b) *Business travelers*: Those who make planned intra-city trips, or trips to the airport, and can book their vehicles in advance.
- c) *Visitors to the city*: Those who need a more comfortable, air-conditioned car, with ample luggage space, and have one trip end at the airports or train stations. These vehicles will be picked up either at the stations, or booked from the place of residence.
- d) *Shopping and recreation trips*: will have one end at the home, and look for a comfortable, air-conditioned car that is again easily accessible
- e) *Delivery Trips by Vendors*, are the lowest level of the service users, and are made by vendors carrying produce to their places of business. They want to keep their cost of transportation down to the very minimum.
- f) *Late Night Travel trips*- are similar to those made by Visitors to the City.

The taxi service in Mumbai – which is the black and yellow cab- currently caters to all the above categories of users, except the Business Traveler and the upper segment of the Visitors to the City. These two groups currently access the Tourist Taxis, which are operated by private operators. The rate structure generally used by them is given in Annexure I.

Clearly there is a space for differentiated service to cater to variety of expectations by the users.

Currently, an intermediate level of taxi service called the Cool Cab, which comprise the Premier Padmini, Indica, Uno and Alto vehicles, all painted a blue colour, and air conditioned exists but has not been very successful. Accessing these vehicles is not easy, as their call numbers are not widely disseminated. Moreover, the passengers



availing these vehicles generally end up feeling cheated, as the meters are always tampered with.

### Experience in other Cities

On the global front, Singapore has the most organized system of taxis, where the general public uses a taxi for most of their movements. Car ownership is low, because of the very high costs of vehicle ownership, and taxi use is therefore common. There is more than one operator, and all the taxis are fitted with GPS receivers (see Annexure- 2). When a taxi is called, rather than sending the one at the top of the list, the one nearest the caller is dispatched, so that waiting time is absolutely at minimum. Rates are telescopic, so that the cabbie tends to gain if he accepts short trips, and takes his customer through the shortest possible route. A comparison of the rates charged by taxi services across a few large cities is given in Annexure 3.

In London, all transport is managed by Transport for London, (TfL), which manages London's buses, Underground, The Docklands Light Railway and London Trams, in addition to other services, and also controls the taxis and private hire trade. Although they can be hailed on the street, these taxis can also be booked over the telephone, and have a variety of aids for disabled persons. Drivers are required to pass the Knowledge of London examination.

In Bangkok, the taxi experience seems to be very similar to that of Mumbai, with drivers operating as hired drivers of fleet operators, but requiring no special knowledge for driving these vehicles.

In New York, the New York City Taxi and Limousine Commission (TLC) control the taxi trade, and the number of cabs is strictly controlled. New York City Taxicab Medallions have a long history as a solid investment, and provide both a reliable and consistent income and guaranteed employment. In addition, a medallion is collateral that can assist in home financing, college tuitions, or even "worry-free" retirement. These medallions are considered a unique investment opportunity.

Thus over time the taxi service in each city has evolved in it's own unique way. It is therefore, time for Bombay to also evolve the model which suits it's needs, is consistent with it's local issues and can be transitioned to with ease.

Within India also, recognizing the need for change, the cities of Kolkatta, Delhi and Chennai have introduced a better class of taxis offering facilities like radio cabs. These can be accessed by calling a central dispatching office. Vehicles are dispatched to the calling party within a few minutes, or if there is a delay during peak hours, then they are informed accordingly. These cities have more than one operator providing these services, and each has a distinctive color for the body of the vehicle.

### Recommendations

The key issues that the Bombay First Team looked at when recommending a new model were:

- This is a Socio-Technical problem requiring a sound Business Model. It affects the lives of 250 thousand persons consisting of drivers and dependents.
- The recommended model should be financially viable at the current fare structure, or with a very nominal increment in the fare.
- The current level of service needs to be upgraded to a very different level, at par with the best in the world.
- There should be no increase in the number of taxis in the city- i.e. no new permits will be given out
- The new model should not be overly legislated, with the market forces ensuring the levels of service. The fare structure, though, should be fixed by the government on fair basis.

**The following are the recommendations for improving the overall taxi service in Mumbai city in line with the expectations and considering the current scenario, constraints and the practicality of the situation.**

- Having a two tiered service, which caters to the needs of the various user groups identified above. The **Base Service** with non AC taxis as toady along with the **Premium Service** having air-conditioned comfort, good hygiene levels, along with amenities and service in line with the any well run service. This would
- Strengthening the **Feeder Service** by integrate the system with other modes of mass transportation, such as the local train stations, bus services and proposed ferry services, to provide dispersal services in the high movement corridors, such as Ballard Estate, Nariman Point, Fort and Bandra Kurla Complex

**The improvement to be achieved in the service by implementing the following:**

#### **1. Improvement in the Base Service:**

The shortcomings of the current service are old vehicles, poor service, bad or no maintenance, unhygienic conditions and commercial non-viability. It is recommended that the authorities take all the necessary steps to strengthen the current service, referred to as the **Base Service**. The authorities, which directly govern the administration of the taxi trade, are the Transport Commissioner and the RTO. To support the up-gradation of the Base Service it is suggested that:

- **Government should extend one-time subsidies** in order to facilitate the purchase of new vehicles and give the necessary impetus for the shift. These subsidies could be in the form of:
  - A complete waiver of Octroi duty on new taxis purchased for this purpose
  - A 50 % waiver of Local Sales Tax
  - Complete waiver of Resale tax
  - A nominal increase of 50 paise to Re.1.00/Km in the tariff for all new taxis

- Catalyse availability of project finance at a concessional rate of interest, through financial institutions.
- **The current statutes of the Motor Vehicle Act, which apply to the taxis**, be implemented strictly with relation to the physical condition of the taxi as well as the service level of the driver.
- **Allow the formation of loose alliances**, which makes it possible for the taxi's to invest in common infrastructure, which could be required for providing better services.
- All vehicles should be fitted with **tamper proof meters**, to improve service credibility

## 2. Introduction of Premium Service with an Operator.

To cater to the demand for better quality taxis, which exists today, operator should be introduced to provide **Premium Service**.

- Instead of the current individual owned/driven model of the cab the operators would be professionally managed companies operating a fleet of taxis, which could number five hundred or more. **Premium Service** would offer services like air-conditioning, better interiors and better-trained drivers. In addition GPS system would be fitted in all the taxis, which would allow these to be called over phone. With cellular phone having become popular, this can be very convenient way to locate a taxi without creating congestion.
- The fare charged would be the current AC taxi fare plus 10%. In addition innovative ideas like advertising and other ways to improve revenue can be allowed in order to ensure that the service remains profitable. These vehicles should also have temper proof electronic meters, and telescopic fares to be introduced to make short hauls viable.
- In order for the operator to operate the taxis, it is recommended that no extra permits be issued. **The sale of Taxi Permits should be made legal**. Currently, the Motor Vehicles Act does not permit the sale or transfer of Permits, and given the high volume of taxi permits already given out, this step is actually crucial for the improvement in the services. The new operator entering the system will need to source the necessary permits from the existing holders. The legalisations of transfer of permit would encourage the existing holder, not interested in continuing, to exit, thereby also improving the base service.

## 3. Introduction of Feeder Service.

The need to streamline the service on the high traffic corridor is necessary to reduce congestion and improvement in the user experience.

- A 'Versa' like vehicle should be introduced, owned by the operators or individual taxi permit holder, suitable modified to have drop seats in front like the London taxi, which could accommodate 7 persons in the normal course and a lot of luggage with 3 persons seating. This can operate as the Feeder Service in the high movement corridors, connecting the mass transportation terminals with the commercial / residential areas.
- With the larger seating capacity, it would be able to maintain current shared taxi charges with better service and AC.
- These vehicles would be used for airport and railway station trips, if specifically asked for over the Demand Registering System, which could be through GPS system.

### **Transition over next 5 years.**

The transition will be achieved over the next 5 years, as follows:

- Over the next one year an operator sets up the basic infrastructure with about 500-1000 taxis, with very good service level, such as is being provided in Kolkatta.
- This gets accepted as the benchmark of taxi service in Mumbai and the customer pull motivates the basic service to improve, supported by the replacement of taxis and implementation of MV act, as described above.
- As the premium service gets more accepted more vehicles will be introduced in this category with transfer of permits. Over time more operators would enter the service leading to further improvement in service based on market competition.
- Since there is no restriction on the type of service offered by permit holders, informal alliance would form that could start with offering the more profitable point-to-point service, using the 'Versa' type vehicle.
- The entire fleet as currently existing will gradually be replaced with newer, more eco-friendly vehicles, with a corresponding upgradation in service, with radio or GPS systems, over a period of next 5 years.
- The role of RTO will be restricted to fare fixation and market forces would ensure that service levels and maintained and actually improve over time.

### **The Proposed Action Plan:**

1. To Modify MVA Act as follows:

- To allow transfer of permit at market determined cost, subject to a minimum of Rs 20K.
- To allow an individual/firm to hold multiple permits.
- To specify two levels of service with minimum expectations with two fare structure.
- Make it mandatory to have tamperproof meter in a taxi.
- Specify minimum skills and information to be acquired by the drivers of all base service within next 1 year, with system to get certificate from RTO, like a license.
- Extend the coverage of the taxi operation up-to Navi-Mumbai and Thane.
- To allow Operators to run taxi service in Mumbai and around.

## 2. For Base Service Enhancement:

- To declare the financial incentives for changing the taxi for a limited period of 1 year.
- The incentives to be only 50% in the second year.
- Allow marginal increase in the fares (5%) for base service for new vehicles with temper proof meters.
- Strictly Implement the provisions of MV act.
- Fix fares for shared taxi service between high density corridors

## 3. For Introducing Enhanced Service:

- Invite Expression of interest for starting the taxi service clearly specifying the expected service levels and fare levels.
- Set up an evaluation committee consisting of prominent members of society and business professionals to finalize the operators.
- Extend the same financial incentives for the operator as for the base service permit holder.
- Set up a review committee for first one year to monitor the progress and provide support by removing obstacles

4. General:

- Form a steering committee of Govt and Citizens reps to monitor and ensure the progress of the Taxi improvement project.
- Hold consultations with the Taxi-men union to secure the support for the plan for improving the service.

\* \* \* \* \*

## Introduction

### 1.1 Demand for taxis:

Taxis form a very high percentage of the traffic stream of Mumbai, and have become an integral part of the commuting pattern of the city. A large number of commuters cover their origin and destination lead distances in taxis, while another segment of commuters prefer to use taxis to their own cars for home-based work trips because of the absence of the need to locate and pay for a parking space. There are 55,000 registered taxis in Mumbai, out of which 45,000 are currently recorded as plying on the roads. The absence of adequate and conveniently located parking spaces for parking personal modes of transport has also prompted the move to use taxis for commuting to work. The demand for taxis during peak hours is so high that they are not available to the casual user who tries to flag one down on the street; and at railway stations, the very high demand has resulted in the operation of these modes as shared taxis, providing a point to point service for 3-4 persons at a much lower fixed fare than that of the metered fare. Although available only on feeder routes, these modes are thus available to a larger section of the population, as well as to an income segment that may not otherwise have availed of this mode due to the cost involved.

### 1.2 Contributors to Congestion and Pollution:

This high demand for the taxi has resulted in very old vehicles that are extremely poorly maintained also continuing to operate as taxis. Consequently, a large number of people, generally from a higher income bracket, also *avoid* using the taxis because of the poor condition of the vehicles, the ill-maintained interiors that give rise to concerns of hygiene and health, the absence of air conditioning, and the overall discomfort of the ride. There is also the risk of accidents due to the condition of the vehicles, because of non- functioning head lights, bald tyres and missing wipers. Their poor condition, coupled with the very high demand for taxis and their non-availability during peak periods prompt a large number of non- work car trips by persons who would otherwise have preferred to use a taxi.

This leads to a substantial increase in the number of vehicles on the roads, and especially during the morning and evening peaks, this increase in the number of avoidable vehicle trips contribute in a very large measure to the already bad air quality, while the neighborhoods adjoining the roadways- which, in Mumbai, is practically every neighborhood - also have severe problems of noise pollution.

With the high use of personal modes of transportation, the demand for parking is also at a constant high in all areas of Mumbai. Over 80% of this parking is on-street, with parking maneuvers taking up an additional half lane of the roadway. With inadequate taxi stands, and no parking available to them, the taxis are found cruising through the streets of Mumbai, looking for a prospective fare. This empty use of the vehicle adds substantially to the traffic volumes and therefore to the pollution on the City streets.

Taxis cruising in the middle lanes, looking for a prospective fare, and then stopping any where between the kerb and the median in order to pick up a customer are a

common sight in Mumbai, and while other drivers fume and use their horn at the disruption to the traffic, the taxi driver is completely unconcerned about the annoyance he has caused to the rest of the road users. Taxis are also found parked on the curves, completely blocking the left lane, and resolutely unresponsive to honking to clear the path. They also park at the mouth of intersections, effectively reducing the clearing capacity of the junction, and causing avoidable delays to the rest of the traffic stream.

Many drivers are ill-mannered and are not well conversant with the routes or destinations. Many of them profess ignorance of the routes, and tend to take their passenger via the longest possible route, to maximize his collections from the trip. Very often, they are found sleeping in their vehicles, with their feet sticking out of the open window. On being awakened for a ride, some of them are obliging, but by and large the prospective customer gets a very surly refusal.

The vehicles currently in use are an obsolete model of the Premier Padmini, whose spares are no longer manufactured by the authorized manufacturers, and therefore are sourced from the grey market, and although most of them have adapted their engines to the use of CNG or LPG, they still have trouble conforming to the standard emission norms.

None of these vehicles are air conditioned, and so the vehicle is in use with all the windows rolled down. This exposes the driver and the passenger to the heat, dust and pollution outside the vehicle, and it has been found that a large number of these drivers suffer from pollution related ailments, as they suffer the maximum exposure. With the vast variety of vehicles currently available on the Indian automobile market all being air-conditioned, this is no longer seen as a luxury fitting, but as an essential element of comfort in a vehicle. The quality of service currently being provided by taxis is thus very poor, and there is a perceived demand for a better level of service, in terms of comfort, convenience and overall riding quality.

In short, the existing taxi service, while providing a much needed mode of transportation, is also a cause and an effect of the very high levels of congestion that we have on the streets of Mumbai.

### *1.3 Need for Change:*

It is therefore felt that a blue print should be created for providing an effective taxi service for Mumbai that is convenient, eco-friendly and at par with the best in the world. The basic requirement is for well-maintained, comfortable and air-conditioned vehicles that conform to the existing norms of safety and emission standards, with well-informed and well-behaved drivers, a tamper proof charging system, and overall improvement in user experience.

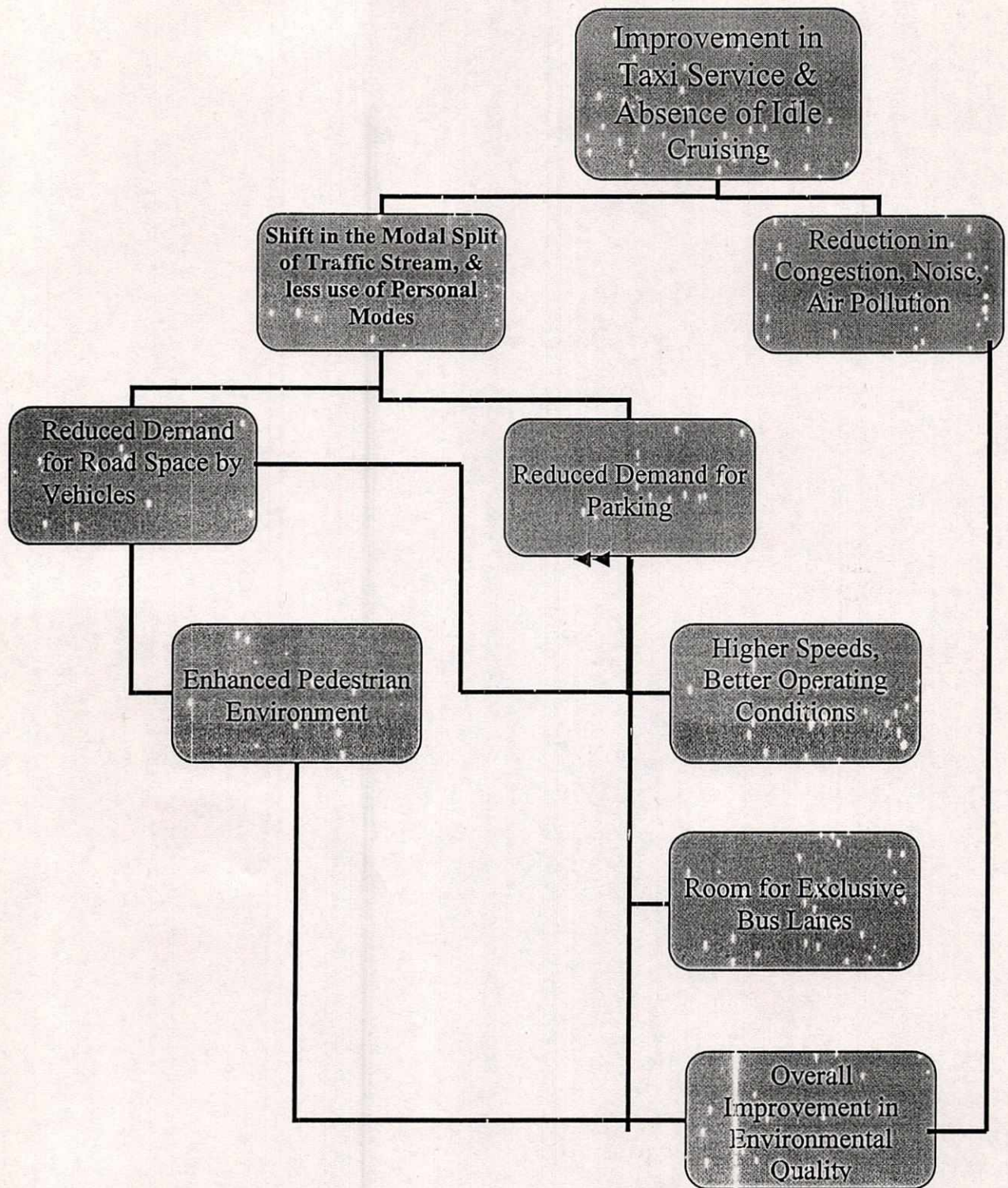
*Bombay First* proposes to make a study of the existing taxi service in Mumbai, and recommend a *Business Model* for an improved taxi service. This study will cover an overview of the existing taxi service in Mumbai and its evolution over time, the legal aspects of the service, and the reasons for the deterioration of the service, if any. It will examine the possibility of introducing the Dial-a-Cab or a Demand Responsive Taxi Service, and also examine the economics of using better models of cars for the service. It will study the new models – both vehicular as well as business models -



being used by taxi operations in other parts of the country, notably in Kolkatta. The study will also examine the nature and extent of finance currently available to these operators, and attempt to make recommendations for the same. It will also attempt to derive a set of incentives that may prompt current operators to shift to the recommended new system.

The final objective of the study would be to recommend a flexible, efficient system that would prompt a shift from the use of private cars to the use of taxis for a few category of trips, and induce a *shift in the modal split of commuters*, thereby reducing the absolute figures of vehicles on the roads, and at the same time, reducing the demand for parking space. This is expected to release scarce road space for the movement of vehicles and buses instead, while reallocation of the road space can help to create a better pedestrian environment, which is currently non-existent in Mumbai. The ultimate benefits from such a shift is expected to be in a decrease in the congestion levels, and improved journey speeds for all modes of transport, as well as improvement in the pedestrian facilities, and therefore improved environmental quality. This is schematically shown in Figure 1

In short, the study will attempt to outline a *Vision for a World Class Taxi Service* in Mumbai, along with a Business Model for the same.



Fallout of Improved Taxi Services

## Overview of the Existing Taxi Service in Mumbai

### 2.1 Taxi Unions in Mumbai

The *Bombay First* team met with the representatives of the various taxi unions in the offices of the Transport Commissioner, Government of Maharashtra. The Transport Commissioner, Mr. B.I. Nagarale, IAS, as well as his Joint Commissioners, Mr. Satish Sahasrabudde and Mr Dilip Jhadav were present throughout the meeting.

We found that as against the 2 Unions that were dominantly in the public eye, there are a total of 12 unions in the city, of which 7 Unions were present at the meeting, and these were:

**Bombay Taxi Association, Mahanagar Taxi Union, Bombay Taximans' Union, Taxi Chalak Malak Sena, City Taxi Union, Azad Taxi Union, and Bharatiya Taxi Chalak Sangh.**

Although all taxi drivers and owners are not members of these unions, and there are no compulsions to do so, almost 90% of the owners / drivers are aligned with one or the other of the unions. The primary benefits of being a member is that the unions take care of the payment of their taxes and insurance, which would otherwise entail the loss of a few hours of the taxi drivers' time. Additionally, when it comes to fighting the authorities for their benefits, the older unions have more financial muscle, and work faster than the newer unions. Many of the new unions were born out of some dissatisfaction with the older ones. The affiliation with unions is a simple matter of preference, and is not dictated by spatial or locational considerations.

### 2.2 Driver Characteristics:

Statistics were not available regarding the number of owner-drivers and hired drivers, but by and large, it is a hired driver who operates the vehicle during the day, and the owner runs it at night. This is because there are very few drivers willing to do the night shift. Fleet sizes, if any, were again not available, and the general opinion is that each vehicle has a separate owner –i.e. each is a single vehicle operator.

Regarding the process of hiring a new driver, we were told that the owner simply looked at the license and the Taxi Badge of the person approaching him, and engaged him. The duration of his stay would depend purely on how good a driver he turned out to be. If the maintenance costs with him were low, and there were no accidents, the driver generally continued for a long time. But involvement in any accident or increase in the maintenance costs would get the driver fired on the spot. The drivers generally drifted from one vehicle or the other, and had no great loyalty towards any employer. Working hours for the hired driver are generally from 9.00 am to 7.00 pm, after which the owner took over the running of the vehicle. But even he does not generally run the vehicle beyond 12.00 midnight, because by then most of the late night spots have closed, and safety becomes a concern.

Drivers are hired on two different bases.

- A few of them operate on the total kilometers run per day: i.e., the kilometer reading of the meter is noted when the vehicle is collected at 9.00 am, and then again when it is returned at night. The driver is expected to give the owner Rs 5.00 per kilometer run, and the rest is his to keep. In this case, the driver pays for the fuel, but the owner pays all the maintenance costs. Occasionally he may get a bonus from the employer, which is a few kilometers knocked back from the total computed.

- The other system is called the *Bachath*, where the driver, at the end of the day, pays the owner between Rs. 180 to Rs 200, as agreed upon, and keeps the rest for himself. Here the owner pays both the fuel bills as well as the maintenance costs. On an average, hired drivers make about Rs. 5000 to Rs. 6000/- net per month.

### 2.3 Financial facilities currently available:

The taxi operator has to look to himself for any financial aid to improve or upgrade his taxi. When they approach even nationalized banks for loans, they are refused point blank, as the bank has doubts about their ability to repay any loans extended to them. Some of the Unions have therefore formed their own co-operative bank, which lends money as required to the members of the Union, for any major maintenance work, or when they were required to equip their vehicles for the use of CNG or LPG as the fuel.

Drivers desirous of purchasing a vehicle for themselves will likewise have to look to family and friends to raise the necessary amount to buy a car. Initially, the Bombay Mercantile Co-operative Bank and the New India Cooperative Bank used to give loans. However, *they were required to furnish 2 Guarantors over and above the hypothecation of the vehicle to the bank*, and this is well nigh impossible for them. Recently, even these banks have stopped giving loans.

When desperate, they approach the "Sardarjis", who are licensed Money Lenders, but who charge exorbitant interest rates, and again require a second person to stand Guarantor. Therefore only small sums of money are borrowed from these sources.

### 2.3 Legal aspects of the trade:

The Motor Vehicles Act is the only legislation that controls the Taxi Trade. The Regional Transport Office (RTO) issues and controls the Driving Licenses and Taxi Permits, runs the vehicle Maintenance and Fitness Tests, and collects all taxes.

The pre-requisites for a Taxi Badge are simple. The driver has to hold a valid Driving License, and he has to pass an oral test at the RTO, where he is asked questions about the various roads and the routes to various destinations. He is expected to give very clear-cut routes in his responses. The fee for a Taxi Permit is Rs. 50.00 only.

The Regional Transport Authority (RTA) controls the taxi stands and the taxi fares. The shared taxi fares per seat are also fixed by the RTA. There are apparently only three legalized shared taxi stands in the City- one at Capitol Cinema, opposite CST Station, one at Regal Cinema and the other at Churchgate Station. However, shared taxis are seen to operate from all places, to all places.

Fare cards are also printed and sold by the RTA, and although a few bogus cards are in circulation, these are used by the errant driver only at night, and the additional gains are retained by him only.

### 2.5 Operational Aspects:

The current fare structure is Rs. 7.50 per kilometer, with the meter-down falling at Rs. 13.00, which is equivalent to 1.6 kms. Every additional kilometer thence is charged on a pro-rata basis. Taxis on an average run about 50- 60 kms per day. After the night shift, they generally have to fill their tanks, with one tank giving them approximately 110 to 115 kms. Again, information on an average trip length was not available, as they would all look for long trips, to maximize their fare collection. It must be remembered that the fare structure is not telescopic, and so the cabbie earns more on a longer trip. However the disadvantage with getting a long trip was that he could very well spend the rest of the day in the new locality trying to get a return fare to his home turf. Trips to the airports could break either way- they would any way end up having to spend hours in the queue. His earnings for the day would be burnt up in the idle cruising that he was forced to indulge in, looking for passengers. Average figures for idle mileage were therefore also not available. At the end of the day, whether he has struck it rich or struck it poor, he is expected to hand over the contracted amount to the owner, and on days that his idle mileage has been high, he has to dip into his own savings to do so.

The best earning time for them was during the morning and evening rush hours, when they would ferry passengers to and from the stations, or get a fairly long trip-i.e. a home based work trip. During the day, a large percentage of the time was spent cruising idly.

The minimum expenditure on maintenance per month adds up to about Rs. 600 /- to Rs. 700/-. Genuine spares for the Premier Padmini are not available, as also for the CNG kits, and replacement costs can be high.

While CNG is now readily available, and filling takes only 10-15 minutes when there is no rush at the pump, the last fuelling station in South Mumbai is at Bombay Central on the West side and at Masjid Bunder on the East side. Beyond these points, if they find that they have to refuel, and at the same time get a long distance fare, they often have to refuse the passenger, because they may run out of fuel. The drivers also have a pump loyalty of sorts, not out of any monetary gain, but simply because familiarity brings with it better service.

The night shift is a lonely one, but if they try to keep a companion with them, as is done in Delhi, passengers – especially couples - very often refuse to use their taxi.

### 2.6 Deterioration of the Taxi Service over the years:

It was quite interesting to note that the Unions were unanimous in their agreement that the reasons for the decline of their services over the last 2 decades has been for the following reasons:

#### *2.6.1. The introduction of Auto Rickshaws into the transportation profile of Mumbai:*

In the years before the auto rickshaw appeared on the scene in Mumbai, taxis were allowed to operate all the way upto Dahisar, with no restrictions on the areas of operations. Additionally, taxis were the only IPT mode available to the public. However, with the introduction of the autos, at a much lower fare, they suddenly

faced stiff competition, especially in the suburbs, where the passengers chose the lower priced mode of transport over their taxis. Consequently, they do not get many long trips beyond Bandra, which is where they make their money. Their primary area of operation has been reduced to the Island, upto Mahim. In the current fare structure, the taxis tend to make more money on long trips, rather than on short trips of 2-3 kms.

### *2.6.2 Permits given at Random:*

While the autos proliferated because the license to operate them was given at random, the taximan faced competition from his own kind, because licenses to operate *taxis* also were given at random, increasing the number of taxis in the city to 55,000 and that of autos to approximately 1,00,000. Simultaneously, Tourist Taxis or Private Taxis as they are called, were also introduced into the service transport profile, and today, we were given to understand that there are about 80,000 tourist taxis operating in the city. These as we know, provide a much higher level of service, and function as a highly comfortable, and even luxurious, personalized mode of transport for the duration of the hire period.

### *2.6.3 Decline in the Industrial Profile of Mumbai*

Around the same time, the textile industry and the small scale industries of Mumbai closed shop, and the number of potential customers for this service sector was further reduced.

With this progressive fall in their earnings, and the spiraling costs of the spares and fuels, the taxi operator is unable to spend as much as he should on the maintenance of his vehicle.

*Additionally, while conceding that the level of service provided by them have been far below par, they were insistent that the Bombay First Team be made aware of the difficulties faced by the taxi drivers. These have been broadly summarized below, as explained to us, and while we note their various problems, it is interesting to relate them to the public's perception of these problems, as has been given in Section 1.2.*

- 1. Inadequate parking and designated stands: Between Colaba and Dahisar, there are only 600 designated stands for taxis, which can accommodate a total of 6000 cabs, but there are 45,000 taxis operating on the streets of Mumbai. Since they do not have a place to park and stand when they are without a fare, they are forced to keep on the move, looking for a prospective fare. This is out of compulsions, and they try to avoid spending fuel on idle driving, as it simply reduces their total income.*
- 2. Inadequate civic amenities at the stands: None of the stands have a wash room attached, and the cabbie who is on shift from 7.00am to 12.00 midnight, is forced to use the public urinals to answer the calls of nature. But when he does so, he often has to park his vehicle in a no-parking area, as nothing else is available, and immediately pays for it by having it towed away.*
- 3. Since there are no facilities at any of the taxi stands, such as a rest room for them to take a short break, an attached toilet or a nearby snack shop / restaurant that can serve a hot meal, the cabbie is forced to seek his rest in his vehicle itself, and refuse to take a passenger when one approaches*

*during this period. Unfortunately for him, the customer does not understand his refusal, and he is charged with being rude and unprofessional. The Unions have apparently been asking for 2 sites to be provided with these facilities, one at the stand opposite the Bombay Gymkhana Club, and the other at Byculla, but nothing has been forthcoming.*

4. *The recent High Court order regarding emission norms again caught them unprepared and unable to comply with the conversion requirements, because of the shortage of funds. The subsequent loss in earnings have set them back in many ways.*

In the past, the unions had approached a nationalized bank for loans to buy Maruti cars to replace the very old vehicles operating in Mumbai. They were however, very *peremptorily refused loans* by the same bank. The union, therefore, raised loans of upto Rs 30,000 each through their co-operative bank for helping those with very old vehicles cover their urgent maintenance costs.

## Study Framework

### 3.1 Goals and Objectives:

Taxi cabs fulfill an important segment of the mobility requirements in urban areas, providing essential mobility for a wide section of people, including mobility for non-drivers and non-car owners, for tourists and during emergencies. This mode provides mobility to that segment of road users who want a level of service in between that of mass transportation and the private car.

The objective of the study is therefore to recommend a sustainable (suitable) model of secondary transport for Mumbai to meet the requirements of mobility of both the residents and visitors to the City. This mobility requirement is also expected to interface with the other forms of mass transportation in the city- both existing and planned - as it must be remembered that 88% of work trips in Mumbai are made by mass transportation. This implies that the taxi service should be well integrated with the suburban railway service, the bus services, as well as the proposed ferry services.

The study team therefore categorized the users into various groups, and attempted to define the levels of service they would expect, as well as their capacity to pay for these services. This categorization also tried to determine the broad locational aspects of the origins and destinations, based on which the urgency of availability of the transport mode could be assessed. This helped to put them into the "street hail" category or the booking category. This in turn determined the level of service and the fare structure acceptable to the user.

The goal is to have a taxi service which is comfortable, safe, appropriately priced and dependable. The term "dependable" here encompasses the entire gamut of dependability which includes:

*3.1.1 Vehicle dependability* - implies that it should be well maintained, clean and hygienic and can be expected to complete the journey for which it was hired without giving the passenger the unpleasant experience of having it breakdown en route, causing irritation, stress and loss of time, while also disrupting the movement of the traffic stream as a whole.

*3.1.2 Driver dependability* - in that the driver is expected to know the destination, be familiar with the route to be followed, and instills confidence in the passenger with regard to both his control over the vehicle as well as his adherence to the traffic rules and regulations, without exposing his fare to undue risks for the duration that he/ she is in his vehicle. He should be aware that once a passenger has hired his vehicle for a ride, he is solely responsible for the physical well-being of the individual(s), until he has been delivered to his destination. Courtesy from the driver is another very important trait that is to be expected.

*3.1.3 Driver Integrity:* The passenger should be confident that the fare he is being charged at the end of the journey is accurate, that the meter is tamper proof, and shows the correct fare, and that he has been taken there through the shortest route available, within the constraints of traffic restrictions.



3.1.4 *The passengers' experience* at the end of the ride should have been pleasant and happy, having had a comfortable, clean and uneventful ride from origin to destination.

### 3.2 Categorisation of Trips

The study team identified the following groups as categories of Taxi Users:

1. **Feeder Service users:** These users are regular commuters to work, who require a connecting service to the main mode of transportation, which is generally the suburban train. Despite the huge volumes of traffic that they carry, the suburban trains do not have an adequate dispersal service for the commuters to cover the last leg of their journey. Shared taxis have been filling this void. This auxiliary mode of transport is therefore used to cover the distance from the home to the originating station (origin lead distance), and again from the destination station to the place of work (destination lead distance), and vice versa. While there are users who hire the cab for their exclusive use, which will take them to the door of the building their office or home is located in, the greater percentage tend to share the taxi with others to the general location of their destination, after which they cover a short distance on foot. These shared taxi trips are generally confined to the peak commuting hours of the city, and are single person trips. The trip lengths are generally short- of about 2 to 4 kms. length. These are part of the home-based work trips, and one end is either in a residential area or a commercial area.
2. **Business travelers:** These are users who make short to medium distance trips for business purposes during the course of a working day, and either do not have a car provided by their office for this purpose, or choose not to use their own car because of the complication and time lost in searching for a parking space. The trips made by this category of user are either
  - i. intra-city trips – i.e. trips that have an origin and a destination at a commercial premise within the city limits, or
  - ii. trips to and from the airport, which have one trip end at the commercial premise.Trip lengths may vary from 2 kms to 15 kms for intra-city business trips, while those to the airport will be about 25 kms in length. All these trips are door to door.
3. **Visitors to the City:** These trips have one end at either the domestic airport at Santa Cruz, the International Airport at Sahar, or the Inter-City Railway Stations at Kurla, Dadar or CST. These trips will involve luggage, and require vehicles that have a provision for carrying extra luggage. These may be single person trips or entire families, and trip lengths will be anything from 2 km to 25 kms. These are door to door trips, and the vehicle is hired for the exclusive use of the single unit hirer.
4. **Shopping and Recreation Trips:** These trips have one trip end in the home and the other trip end is in a commercial / recreational area. These are generally of short to medium distance, and the

vehicle is hired for the exclusive use of the person or family making the trip. These trips will generally be from door to door.

5. Delivery trips by Vendors: A very large number of vegetable vendors and fish mongers use the taxi for carrying their produce to their place of business from the whole sale markets at Dadar, or the fish market at Sassoon Dock. These may be single or shared trips, and trip lengths will generally be of short length. The produce is carried on the roof of the car in baskets. One trip end is in the wholesale market, while the other trip end is at their place of business, which is generally in a residential area.
6. Late Night Travel Trips: By and large these would be connecting the International Airport at Sahar with a residential area of the city, or a hotel. These will have all the characteristics of the trip demands made by visitors to the city.

The various types of taxi trips, as identified above, have been further categorised on the basis of the type of service they would expect for these trips, in terms of comfort or luxury, and the corresponding capacity to pay:

### 3.3 Basic service requirement:

These users are not too concerned about the comfort levels of the vehicle they have hired, and are focused only on getting to their destination in the shortest possible time, and paying the lowest fare. Trip lengths tend to be short in this case, and both trip ends are generally in a non-residential locality. The fact that the vehicle is not air-conditioned will not particularly affect them. The Feeder Service Users and Vendors fall in this category. These users are concerned about keeping their monthly expenditure on transportation within specific limits, set by themselves.

The basic requirement here is for a good vehicle that is clean, non-air-conditioned, easily available and low priced. The demand for the transport is immediate, and waiting time will not be well tolerated. These vehicles are generally flagged down on the streets.

Shared taxi users would want a vehicle that can be expected to fill up within a short span of a few minutes, and therefore the vehicle should not be so large that it would take more than 2-3 minutes to fill up. In other words, a mini bus or a van operating these services would not be well received.

### 3.4 Premium service requirement:

These users can further be classified into those requiring an intermediate level of service, and those requiring a premium level of service.

3.4.1 The intermediate level of service expectations would be a clean, comfortable, and air-conditioned vehicle, but with some ceiling on the fares payable. These users also generally pay for their own transportation, and while cost is a factor, a minimum level of comfort is also expected. Accessibility to the taxi may be over the telephone.

The air-port night trips, visitors to the city and shopping and recreational trips fall into this category. Trip lengths can be expected to be medium to long. The first two will have the originating trip end in a transport terminal area such as the airport or railway station, while the shopping and recreational trips will have one trip end in a residential area, and the other in a non-residential area.

The requirement here is for a vehicle that is clean, comfortable, has ample seating capacity as well as luggage carrying capacity, and is air-conditioned. Waiting time for the taxi should not be more than 5 minutes. Fares payable can be marginally higher than that of the basic service.

A section of the Feeder Service users also fall into this category. These users would generally travel in the upper class of the mass transportation mode, and would like to continue the rest of their journey in relative comfort, especially if the trains have been crowded, and they want a respite before commencing their day at the offices. However, waiting time should not be more than 2-3 minutes for them, as they are already traveling under stress, and any additional delays imposed on them while waiting for the vehicle to fill up will not be easily accepted.

3.4.2 Premium service requirements are those where cost is not a constraint, who have relatively advanced knowledge of their requirement for the transport, and who are looking for maximum comfort. Trip lengths are long, and trip ends are generally both in a commercial area or will have one trip end at the airports. The Business Traveler and a segment of the Visitors/ Tourists fall into this category. The requirement here is for a vehicle that can be booked in advance, that is very clean, well air-conditioned and luxurious rather than just comfortable, and reflects the image of the user to some extent. The seating capacity and luggage carrying capacity are not a consideration in this category. Cost is also not a consideration.

### 3.5 Existing Taxi service:

The taxi services as currently available in Mumbai are of three types. The predominant service is provided by the black and yellow cab, which has been in operation for several decades. The service they provide is far below the very basic level that this report is seeking to define.

These vehicles are almost entirely the old model of the Premier Padmini, and can be flagged down anywhere on the streets. Although they have kerb-side space earmarked for them to park in most localities, they generally park anywhere, looking for a fare. The vehicles are often in a disgraceful state of repair, and the interiors are extremely poorly maintained and unhygienic, raising concerns of disease and ill-health in the minds of the users. They have limited luggage storage capacity, and any large piece will need to be carried on the roof of the car. Not all of them have a carrier on the roof of the car. They currently provide taxi-cab service to all the categories of users as defined in Section 3.2

The drivers are shabbily dressed, and many of them are blatantly ignorant of the desired destinations, the reason being that "they are from the suburbs" or that they have only just started driving a taxi. During peak hours, they often refuse to go to certain destinations, or do short distances. The drivers are also rude, and courtesy is non-existent in the trade. Meters are generally rigged, and over and above this, the fare conversion card that they carry is also not authentic. At the end of the day, the passenger is left with the knowledge that he has well and truly been taken for a ride.

The other, premium service that was started about 5 years ago, is the air-conditioned taxi, which comprise the Premier Padmini, Indica, Uno and Alto vehicles, all painted a blue and white colour, and air-conditioned. These are called "Cool Cabs". All other characteristics are the same as that of the yellow cab. The fare chargeable here is only 25% above that of the yellow cabs, but the meters are tampered with here also by the driver, and the fare finally paid is several time greater than the authorized fare. These vehicles also can be hailed at any street corner, but can also be called over the telephone. The call numbers, however, are not readily known or accessible. These vehicles have also been given designated stands, at Haji Ali and near the Taj Mahal Hotel at Colaba.

There is yet another Super-Premium service available, called the Tourist Taxis. These vehicles are owned by private operators who have about 50 to 60 vehicles of all makes of cars in their fleet. These vehicles are parked at the fleet operator's office, and have to be booked in advance, and the customer is able to get the vehicle of his choice. All these cars are well maintained and air-conditioned. Most of the drivers are uniformed, and well educated with regard to the localities and other destinations of Mumbai. Fares are very much higher than the basic taxi or the Cool Cabs. There is a minimum fare that is payable, based on the hours or the mileage that has been covered, whichever is larger. All the drivers are provided with mobile phones, and although a vehicle may be diverted from some other point to a new destination, the customer is always charged for the distance covered from the operator's office to the pick-up point, and again from the drop-off point to the same parking place.

The fare structure for a couple of these services is given in Annexure -A.

The current fare charged by the basic taxi is Rs.13.00 for the first 1.6 kms., and then Rs 7.50 for every additional km. covered. The Cool Cabs are permitted to charge 25% more than this, while the Tourist Taxi charges Rs.8/- per km for the distance traveled, or Rs. 800/-, for 6-8 hours, whichever is greater. All of them charge extra for any luggage carried in the vehicle.

### 3.6 Need for Change:

From the foregoing, the need for change is apparent, and the change is urgently required in the quality of both the basic service being provided, as well as the intermediate level of service. The Premium level of service is currently fairly satisfactory, but can be upgraded further to be at par with the Premium Service available in the other parts of the world, such as the Prestige Service of Singapore see (Section 5.1.1).

The *Bombay First* team examined the existing cost structure to determine whether it would be feasible to introduce the improved taxi service at the current price structure. This analysis is given in Chapter 7, Business Model for Taxi Service. However, it was seen that if the change from the existing to the desired level of service is attempted to be made at the level of the individual taxi, the economics would not stand the change. But if the attempt is made for a fleet of vehicles, then the economics would support the change over. It was therefore decide to study a few examples of successful taxi fleet operators, and learn from their experience.

## Case Studies of Operator Systems in India

The case studies of successful conversions from individual owner-driven vehicles to successful taxi fleet operations in India are in Delhi and Calcutta, where there has been a major re-organisation of the taxi operations.

### *4.1 New Delhi*

New Delhi has always had a system of calling taxis from the taxi stands, and it was next to impossible to find a taxi cruising empty on the streets. This is probably because the city's planned neighbourhoods all have at least one designated taxi stand, with a small room built away from the footpath that has all the facilities that the Mumbai taxi stand lacks. Each has a rest room and a wash room, and a tea stall nearby, which caters to their requirements of rest, food and drink. Each of these stands also has a dedicated telephone, and cards with these numbers are distributed to all the residents / commercial establishments in the locality. It has always therefore been the practice in Delhi to "call a taxi", and he comes with his flag already down. Cruising empty is probably not indulged in because Delhi is a city of distances, and the taxi also faces competition from the auto rickshaw, which is a much more ubiquitous and popular option for the general public.

Delhi has however, recently seen the introduction of the MEGA CAB Company, where the taxis are connected by short wave radio, and are directed to the waiting customer. All visitors to the city get the contact numbers through the Short Message Service (sms) to them along with the welcome message of their cell phone service providers, and so most visitors to the city are now availing of this very efficient service. The customer just calls this number, giving his location, and the taxi is dispatched to him, after giving him the approximate time it will take for the vehicle to reach. However, it is now seen that the demand for these taxis is so high, that waiting time is sometimes as long as half an hour.

### *4.2 Kolkatta*

About 10 years ago, taxis in Kolkatta, used to be a desperately ugly affair, with the vehicles apparently held together with tack and twine, and so dirty inside, that one was careful not to wear light colours if a trip via taxi was in the offing. The competition there used to be from the mini-buses and the rickshaws. Rickshaws were many times cheaper than the taxis, and much safer and faster for use in the old parts of the city, where traffic congestion was chronic. Mini buses were again cheaper than the taxi for longer trips, and additionally, all the taxis would systematically go off the roads for their siesta during the period 12.00 noon to about 4.00pm, and so a commuter or traveler simply fell into the habit of not using a taxi. Meters were non-existent, and always tampered with if present.

The situation today is much better, and there are several companies that provide call-taxis, and especially at the airport, these are the only mode available, for security reasons.

The **Blue Arrow Company** has tied up with the Comfort Delgro Group of Singapore. The old taxis in Calcutta were all Ambassadors, poorly maintained and operated by individual owner- drivers. The USP here was the total image change over, from an extremely dirty and unsafe vehicle, with an unsurly driver, to a sleek air-conditioned vehicle, stocked with customer essentials like chilled mineral water and disposable raincoats to tackle inclement weather. These items are paid for separately. The vehicles are connected through GPS and radio with the base office, and have a maximum waiting time of 5 minutes after a booking is made.

Mr. Ram Ray is Chairman of the company called **Arrow Amenities**, which is running the new taxi service in Calcutta. He made a presentation to Bombay First in April. The company has received blanket permission for 5000 new cab permits, and are using the Tata Indicab as the taxi vehicle. All the cabs are air-conditioned and have fool proof meters.

The company arrived at its business plans after in depth study carried out by various professionals. Accenture was deeply involved in developing the financial model for the company. Mr. Ram Ray himself has extensive experience in the corporate world before starting this company.

125 new cars are being introduced per month starting from February 2004. By the end of 2004 Arrow Amenities intends to have more than 1000 cabs on the roads. Since the company owns such a large fleet it has drawn favourable agreements for maintenance, and procuring parts like tyres etc. which adds to its profitability.

The cabs are fitted with GPS receivers and there is a system of curbside pick up. The rates for the same are slightly higher than the system of calling it off the street.

The taxi drivers are put through a training session with a professional agency, which trains them in various aspects of etiquette and city knowledge.

The company has also thought of other revenue streams like stickers on various parts of the car, which are leased out for monthly rentals. The taxi becomes a mobile billboard for many FMCG companies.

Within the car the passenger has facilities like purchasing mineral water or magazines etc., which are also revenue streams for the company.

Arrow Amenities plans to spread its operations to other cities and towns, which would be appealing, based on its feasibility studies.

#### 4.3 Chennai

Chennai also has gone the way of the Demand Responsive Taxi Service, with about 20 private operators, all operating the "Call Taxi Service", but which can also be hailed at the street corner if free. The smaller fleet operators use sms for messaging, while the larger operators use their mobile phones and / or wireless radio for dispatching the cabs. Most of these operators run non-air-conditioned vehicles, but for a higher price, one can also access the air-conditioned cars. Publicity is through bills

pasted over the city as well as through flyers; and these phone numbers are available at all phone booths, bus stands and commercial areas.

Annexure 4 gives a list of all the major operators in Chennai with their phone numbers, fleet sizes, and make of vehicles being used.

## Global Experience in Taxis

This section gives a brief overview of the taxi service available in 4 of the most well known cities of the world- Singapore, London, Bangkok and New York.

### 5.1 The Singapore Experience:

Singapore has about 18 000 or so taxis, and these are more widely used here than in any other country. Many people cannot or do not want to afford a car here, where they cost more than anywhere else, and so a large number of trips are made by taxi, when they are not made by public transport. The fares are fairly reasonable compared to most international cities. Singapore's laws are strict enough to keep all the taxi drivers well behaved, especially where ladies are concerned. They are also by and large honest with regard to the fares being charged.

The common variety of car is a bog-standard Toyota or Nissan model, but if you are prepared to pay more, you can order a Mercedes or London cab for comfort, space and style.

There are basically three types of car – the most common is light sky blue (Comfort Cablink), then comes New-York style yellow (Citicab) and finally there are the beige SMRT (Tibs) taxis, each being operated by a different company.

#### 5.1.1 The SMRT Taxis

Formerly known as TIBS, the SMRT Taxis of Singapore started as a small fleet of 50 taxis in 1989, and has since grown to a fleet of 2100 taxis. The stated Mission of the company is : *“To be the customers’ choice by providing a safe, reliable and friendly travel experience that is enhanced through convenient and innovative services.”*

All their taxis are large capacity vehicles, and range from Nissan Cedrics and Toyota Crowns to Mercedes and the world famous London Taxis. The drivers are uniformed, and speak English, to make the tourist comfortable. The London Taxis can seat 5 adult passengers comfortably.

This fleet operator has its own internal driver training programme, where the drivers are trained in the areas of conduct, cleanliness and standards of customer service. The Company proudly says that it has the best drivers in the industry. They not only hire individuals with a valid taxi driving license, but also hire those without it, and then help them to get the license.

The SMRT Taxi have a wide range of services to choose from:

1. Booking of taxis is through the sophisticated **SKYTREK System**, introduced in 1995, and is a fully automatic vehicle location and despatch system combining Interactive Voice Response (IVR), satellite tracking of taxis using Differential Global Positioning System (DGPS), wireless data communication and Computerized Despatch System (CDS) technologies. Every SMRT taxi has its location updated from time to time by the GPS and when a call comes through, it is connected directly to the file and despatch server, which





The Singapore Taxi

immediately and automatically locates the nearest available SMRT taxi to the customer.

2. They also have Singapore's first Real-time, On-line Taxi Booking Service at [www.etaxis.com.sg](http://www.etaxis.com.sg) . Customers can book a taxi anywhere in the world so long as they have access to the Internet.
3. They have also implemented SMS-A-Taxis, which is a revolutionary ways of booking a SMRT taxi, where customers are able to book a SMRT taxi using the Short Message Service (SMS) of their mobile phones.
4. They also have a Corporate Client Taxi Service to corporate houses, which offers credit payment and a consolidated monthly bill.

They also have the luxury range of taxi service, such as

1. *The Prestige*, where the customer is provided with a range of magazines to read, or can listen to music on a CD player. This service is offered on their London Taxis, which also bears the tag line, Travel in Style. These vehicles are especially built for use as taxis, and have a private, spacious cabin, with well upholstered seats, that can seat 5 adults comfortably. The luggage compartment is located near the drivers seat and is easily accessible.

Source: (<http://www.smrttaxi.com.sg/website/10/index1.html>)

#### 5.1.2 The CityCab Service:

The CityCab has a 12 seater Minibus which is the first of its kind in Singapore. These are called Maxitaxis. The 12-seater Mercedes-Benz taxi is Singapore's largest taxi. The MaxiTaxi is the first and only cab in Singapore to offer commuters a seating capacity of up to 12 passengers. The new MaxiTaxis come with reclining seats and a spacious luggage compartment. Commuters can also enjoy soothing piped-in music during their journey. . Commuters can only make advance bookings and must call at least two hours in advance.

Source:

([http://www.getforme.com/previous260501\\_CityCabIntroducesTheNewMaxiTaxis\\_more.htm](http://www.getforme.com/previous260501_CityCabIntroducesTheNewMaxiTaxis_more.htm))

#### 5.1.3 Comfort DelGro Group:

Comfort DelGro ranks among the three largest public listed passenger land transport companies in the world, with a fleet of more than 36,000 vehicles world-wide. The Group has a global workforce, a global shareholder base and a global outlook. Comfort DelGro's businesses include taxi ,bus , rail , car rental and leasing , automotive engineering and maintenance services , inspection, test and assessment services, learner drivers' instruction services and outdoor advertising . The Group is also Singapore's largest taxi operator with more than 16,000 taxis. In Singapore, Comfort DelGro operates over 16,700 taxis under the brand names of Comfort, CityCab and Yellow-Top Cab with a 90% share of the local taxi market. Through the employment of technology and extensive training, the Group's taxi companies are leading the industry not just in Singapore but globally.



The London Cab

Today, CityCab has about 10,000 drivers operating a fleet of over 5,200 vehicles. This includes over 160 Presido taxis and some 100 MaxiCabs using Mercedes Benz vehicles.

Yellow-Top Cab operates a fleet of over 1,300 taxis including the Sovereign Mercedes limousine cabs. Although it is the youngest taxi company under Comfort DelGro, its drivers have won numerous accolades, including the prestigious national award - Tourism Host of the Year in 2000.

CityLimo and CityDrive, ComfortDelGro's car rental arm, is the largest car rental and leasing service provider in Singapore with a fleet of about 1,600 vehicles. It also has a car-sharing business, CitySpeed CarSharing, which employs the convenience of short messaging service technology for keyless access to cars 24 hours a day, 7 days a week.

CityCab Taxi Bookings can be either current booking or advance booking and can be made through sms booking, on-line reservation, or automated taxi booking service.

For Current bookings, the cabs are equipped with Mobile Data Terminals, and connected thru a satellite-based taxi dispatch system, so that cabs reach within minutes. For Advance bookings, you need to make the bookings 30 minutes in advance.

*Source: (<http://www.comfortdelgro.com>)*

## **5.2 The London Experience:**

"All transport in London is controlled by Transport for London (TfL), which is the integrated body responsible for the capital's transport system. Its role is to implement the Mayor's Transport Strategy for London and manage the transport services across the capital for which the Mayor has responsibility.

TfL manages London's buses, the Underground, the Docklands Light Railway (DLR) and London Trams. It also runs London River Services, Victoria Coach Station and London's Transport Museum. TfL also manages a 580km network of main roads, all of London's 4,600 traffic lights and regulates taxi's and the private hire trade.

The Public Carriage Office as part of Transport for London's Surface Travel Directorate is responsible for licensing the familiar London taxi or 'black cab' and is also in the process of licensing private hire or 'mini-cab' services.

Traveling in a traditional taxi is a unique, convenient and easy method of getting from place to place and, more importantly, from 'door to door' throughout London. Taxis can be hailed in the street or located on designated ranks, which are situated at prominent places, including many mainline rail, underground and bus stations. A telephone booking service is also provided by a number of radio taxi circuits and other providers. They are wheelchair accessible and most have a variety of additional aids for disabled customers. The fares charged are regulated, and with safety paramount all taxi vehicles and drivers must meet minimum standards (for drivers this includes passing the world renowned 'Knowledge of London' examinations). Licensed vehicles are subject to regular checks by the Public Carriage Office.

The Public Carriage Office will soon complete licensing private hire operators. The next stages of the project are the licensing of drivers and vehicles. The aim of



The Bangkok Taxi

licensing private hire services is to improve safety standards. The essential difference between taxis and private hire is that private hire journeys must be pre-booked through a licensed operator. Private hire vehicles cannot ply for hire in the street.

**Taxicard** is a door-to-door transport service for Londoners with serious mobility problems who have difficulty in using public transport. Financed by the London boroughs and the Mayor of London, the scheme increases the independence and the mobility of disabled people by providing subsidised trips in licensed London taxis."

Source: [tfl.gov.uk](http://tfl.gov.uk)

### 5.3 The Bangkok Experience

Taxis and Tuk-tuks are the common forms of IPT in Bangkok. **Tuk-Tuks**" or three-wheel taxis are quite popular among tourists for short journeys inside Bangkok. Fares range from 30 Baht to 150 Baht for this means of transportation. The Bangkok Yellow Pages also lists local and international automobile rental companies, which provide Self-driven or chauffeur-driven automobiles.

Perhaps the easiest and most comfortable way to get around in Bangkok if not always the quickest, is by the aircon **taxi**. These come in quite a few different colours though the green-yellow and red-blue ones are the most common. Bangkok has thousands of taxis, and finding one at any time is never a problem. The occasional exception to this is during a monsoon season downpour. By international standards they're very cheap too, the flagfall rate is 35B (0.85 US\$ approx) including the first 2km and it's 5B/km after that. A surcharge is applied in traffic jams (1.25B/m when moving under 6km/h), meaning at night when there's not much traffic they're definitely the best way of getting around.

There's no exams that have to be passed to become a taxi driver in Bangkok, and so many have a less than encyclopedic knowledge of the city. Communication can be a problem with the majority of Bangkok's taxi drivers too. Many taxi (and tuk tuk) drivers are from Thailand's poor Isaan (northeast) region, and are likely to be fairly uneducated and many speak little English. Even the ones that can will probably not be able to read a map that's written only in English.

The two tone green and yellow taxis are generally reckoned to be the best ones. These are driven by the owner, while all others are rented out by the day. Of course, everything really depends on the driver rather than the color of the car, and there's not really any major difference between any of them. All licensed taxis have yellow and black number plates.. The driver will sometimes claim to have no change to try and force you to leave a 30% tip or thereabouts. If you aren't near any taxis, you can phone 1661 and order one to pick you up. This costs the meter fee + 20B.

*(Taxis in Bangkok <http://www.into-asia.com/bangkok/taxi/>)*

### 5.4 The New York Taxi

The New York City Taxi and Limousine Commission (TLC) was created "to further the development and improvement of taxi and livery service in New York City, to

establish an overall public transportation policy governing taxi, coach and car services and wheel-chair accessible vans, and to establish certain rates and standards." The TLC's regulatory mandate includes:

- Licensing vehicles, drivers and businesses authorized to transport passengers for- hire;
- Establishing licensing criteria and standards of conduct;
- Establishing and enforcing standards for vehicles and public safety, as well as Business accountability
- Developing a comprehensive transportation policy applicable to vehicles for-hire
- Setting taxicab rates of fare.

New York had 12,187 taxis till recently, when the number was increased by 900 new taxis to 13, 087 with the auction of Taxicab Medallions in May 2003, by the New York City Taxi and Limousine Commission (TLC).

This auction of medallions takes place through sealed competitive bids. Prior to the bidding process, TLC conducted several outreach seminars to assist potential bidders and educate the public, on the criteria for ownership, the difference between Individual and Corporate medallions, and the entire bidding process. They also have a web-site, [www.nyc.gov/taxi](http://www.nyc.gov/taxi) giving all information. The medallion sale was preceded by a long and involved process that included amendments to City and State Law and TLC Rules, and a detailed environmental impact statement.

'New York City taxicab medallions have a long history as a solid investment with steady growth. Taxicab medallions also provide both a reliable and consistent income and guaranteed employment. In addition, a medallion is collateral that can assist in home financing, college tuition, or even "worry-free" retirement.....These medallions are considered a unique investment opportunity.'

The TLC have recently also introduced an EZLicense program, that allows a new taxicab driver license applicant to take a condensed, three-day (24 hour) training course, instead of the former 80-hour course. This course 'features 3 concentrated 8-hour modules focusing on the elements that are essential to a successful career in the taxicab industry: Rules and Regulations, Geography, and driver / Passenger Relations. In addition to completing the 24- hour course, students will be required to pass an English language Proficiency Test and a Final examination on taxi-related subjects... The new course...must be completed in full prior to licensure. Each applicant will be permitted to sit for the examination twice per application filed with the TLC.'

TLC also have a "Safe Driver" Program designed to enhance driver safety while rewarding its participants with insurance discounts of upto 15%. They also have a point -based "Persistent Violator" and "Critical Driver" program, which imposes progressive discipline upon licensees who repeatedly commit violations. Repeated offenders risk having their licenses revoked- in 2001, 134 licenses were thus revoked.

(Source: \* TLC Times, Volume 3, Number 1, Winter 2004, "Special Medallion Issue"  
\*\* TLC Times, Volume 2, Number 1, Summer 2003)

## Proposed Structure for Taxi Ownership

The system of taxi operations in Mumbai at present favours the individual for obtaining a permit and running their own taxi as per the tariff structure specified by the RTO. He is expected to handle all aspects of operating the vehicle, from making sure that all his licenses and permits are in order, to procuring spares and otherwise maintaining his vehicle. However, he is also expected to maintain certain standards of upkeep of the taxi, as well as maintain a level of hygiene and cleanliness, and wear a proper uniform while operating his vehicle, as specified by the MVA -- but these are notably missing in the system today.

Until about a decade and a half ago, these standards were being maintained, and vehicle inspection prior to renewal of permit was very stringently enforced. It was very clear that unless the vehicle passed the fitness and road-worthiness test, he was not allowed to operate his vehicle, and the vehicle could be impounded. The same applied to the interiors of the vehicles. The seats were expected to be kept clean, and the covers washed and maintained at least once a week. However, for various reasons, these standards are not being maintained and enforcement of the same as was seen in the past is lacking.

These reasons are the increased number of taxi permits that have been given out over the last 20 years, which increases the competition amongst the taxis for fares; the higher cost of fuels; the spiraling costs of spares and the corruption within the system, which requires the drivers to hand out regular payments to various individuals. Additionally, the higher level of congestion on the roads today reduces the number of fruitful fare trips that the taxi can make. This implies an increase in his spending pattern, with a reduction in his earning capacity -- and therefore he is constrained to cut costs wherever possible- which results in the poorly maintained vehicles that we see on the roads today.

Perhaps in some measure to overcome some of these difficulties that the individual owner- driver faces, individuals known as "Taxi Lords" have appeared on the scene. These individuals directly or indirectly control about 2000 permits each, which perhaps allow them to have leverage in terms of buying spares, etc. It therefore seems that is a natural drift towards improvement in business thru integration, with the Taxi Lords acting as the integrators.

The economics of operating a taxi in Mumbai are currently biased towards the individual- owner - driver pattern, and does not lend itself towards up- gradation of the service to include better riding conditions for the passenger, such as air-conditioned interiors and better-maintained upholstery. It is felt that the individual ownership model may not be sustainable due to the following reasons:

1. The standards for maintaining the taxi, hygiene levels as also the level of customer service that is sought to be implemented, just cannot be enforced by the RTO simply because there are too many taxis. This can only be done when there is an entrepreneur who does it as a part of a business model to enhance his profitability in a competitive environment.



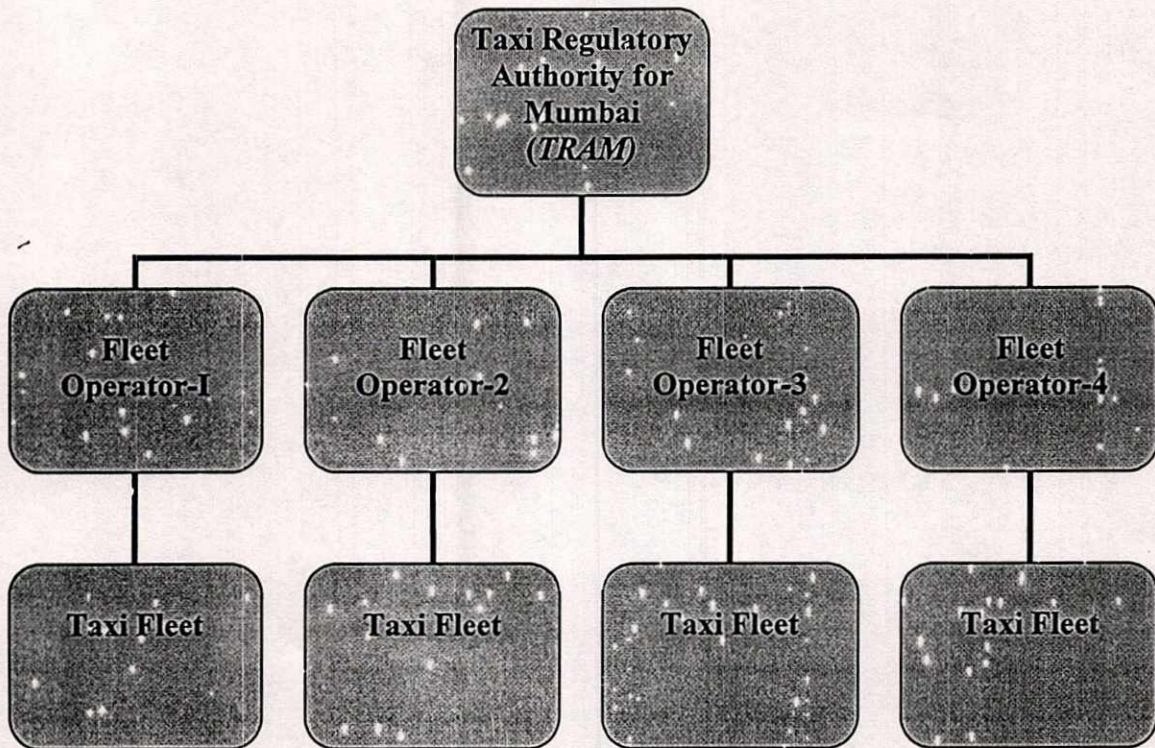
2. The infrastructure investment required to enhance service levels to a Demand Responsive System, viz GPS or similar system for calling a taxi will not be within the reach of an individual owner of a taxi. *These infrastructure services are a must in the current scenario for achieving an acceptable service level.*
3. The economy of scale in purchasing spares and maintenance services is not feasible with individual owners.
4. The level of customer service, driver training, as also the standard of maintenance expected can only be enforced through regular management inputs like regular training and investment which are not practical in an individual model.

The following model is therefore suggested which would be completely implemented over next five to seven years.

1. To have two to four operators owning all the taxis operated in the city.
2. All these operators would own separate companies with a definite identification of their vehicles, such as distinctive colours or markings, and would be competing with each other based on their product and service offerings.
3. Based on the number of taxis expected to be in use, each one would be expected to invest adequately in driver training programmes where they are taught proper driving skills, a knowledge of the city and its roads, cultivation of courtesy and helpfulness etc., as well as invest in the infrastructure required for accessing the taxis, like GPS system, and also regular maintenance and up gradation of taxis, etc.
4. The tariff would be regulated as in the current scenario so as to ensure that the public is not overcharged. However, individual operators may be at liberty to charge lower than a maximum ceiling that will be specified by the Regulatory Authority.
5. The share of business amongst these operators would vary based on the service satisfaction level, and other local factors and niches that each operator would create for himself.

This model should be seen in the light of the mobile phone companies model in the country. There are similarities in each to the extent of high initial capital required and also in an on-going basis to service the customers. Equally high utilization level of the hardware would be critical for profitable operations, as also the high service levels in the competitive environment. This model is succeeding well in Indian cities.

Flow Chart for Control of Taxi Services



## Business Model for Taxi Service

*Chapter contributed by: Tata Motors*

### 7.1 Base Service (Tier I)

The base service would essentially comprise a Non Air Conditioned version of a new car conforming to the latest norms on emission, safety, comfort, etc and having a specified life of operation. In line with the concept, these would be owned by limited number of operators who would let them out either on a rental basis or some similar arrangement.

**Business Model for the base taxi (level 1) service at current tariff rates is as indicated below:**

<i>New Car (Indicab Non AC - CNG)</i>	
Capital cost( Inclusive of Road Tax, Taxi Permit, Octroi & Insurance)	3,40,000.00
Cost of CNG/Kg	20.00
Average per Kg	13
Cost of CNG per km	1.54
Maintenance Cost/km	1.00
Thus, Running Cost per km	2.54
**No. of Paid Km run/day	75
<b>Thus, Running cost per day</b>	<b>190</b>
<b>Revenues per day @ Rs 7.5 /km</b>	<b>563</b>
<b>Net earnings /day</b>	<b>372</b>
<b>Earnings per month</b>	<b>11,163</b>
<b>EMI on a 5 yr loan of Rs 3 lacs @ 11 %</b>	<b>6,523</b>
<b>Take Home Earnings /Month</b>	<b>4,640</b>

Evidently, the model is not economically sustainable at current tariff rates. However a substantial increase in the tariff would also not solve the purpose of making this an affordable and accessible mode of transport. Therefore, in order to make the model a sustainable one, we would like to make the following recommendations:

For a fixed window of 2 years (for example):

- a) Government to waive off Octroi Duty
- b) Give a 50 % concession in Sales Tax;
- c) Waiver of Resale Tax;

- d) For all new cars purchased and inducted as taxis, the fare to be increased by 50 paise over normal fare
- e) Assistance to be provided in obtaining project finance at a cheaper rate by treating this as an infrastructure project
- f) We would also make the assumption that by virtue of having a newer car (with increased customer preference, and greater fuel efficiency) and by virtue of the *radiocab service* (with reduction in idle time), the number of paid km would go up to 100 km a day.

**Revised Business Model (level 1) with above concessions :**

<i>New Car (Indicab Non AC – CNG)</i>	
Capital cost( Inclusive of Road Tax, Taxi Permit, Octroi & Insurance)	315000
Cost of CNG/Kg	20.00
Average per Kg	13
Cost of CNG per km	1.54
Maintenance Cost/km	1.00
Thus, Running Cost per km	2.54
No. of Paid Km run/day	100
<b>Thus, Running cost per day</b>	<b>254</b>
<b>Revenues per day @ Rs 8 /km</b>	<b>800</b>
<b>Net earnings /day</b>	<b>546</b>
<b>Earnings per month</b>	<b>16385</b>
<b>EMI on a 5 yr loan of Rs 2.75 lacs @ 11 %</b>	<b>5979</b>
<b>Take Home Earnings /Month</b>	<b>10406</b>

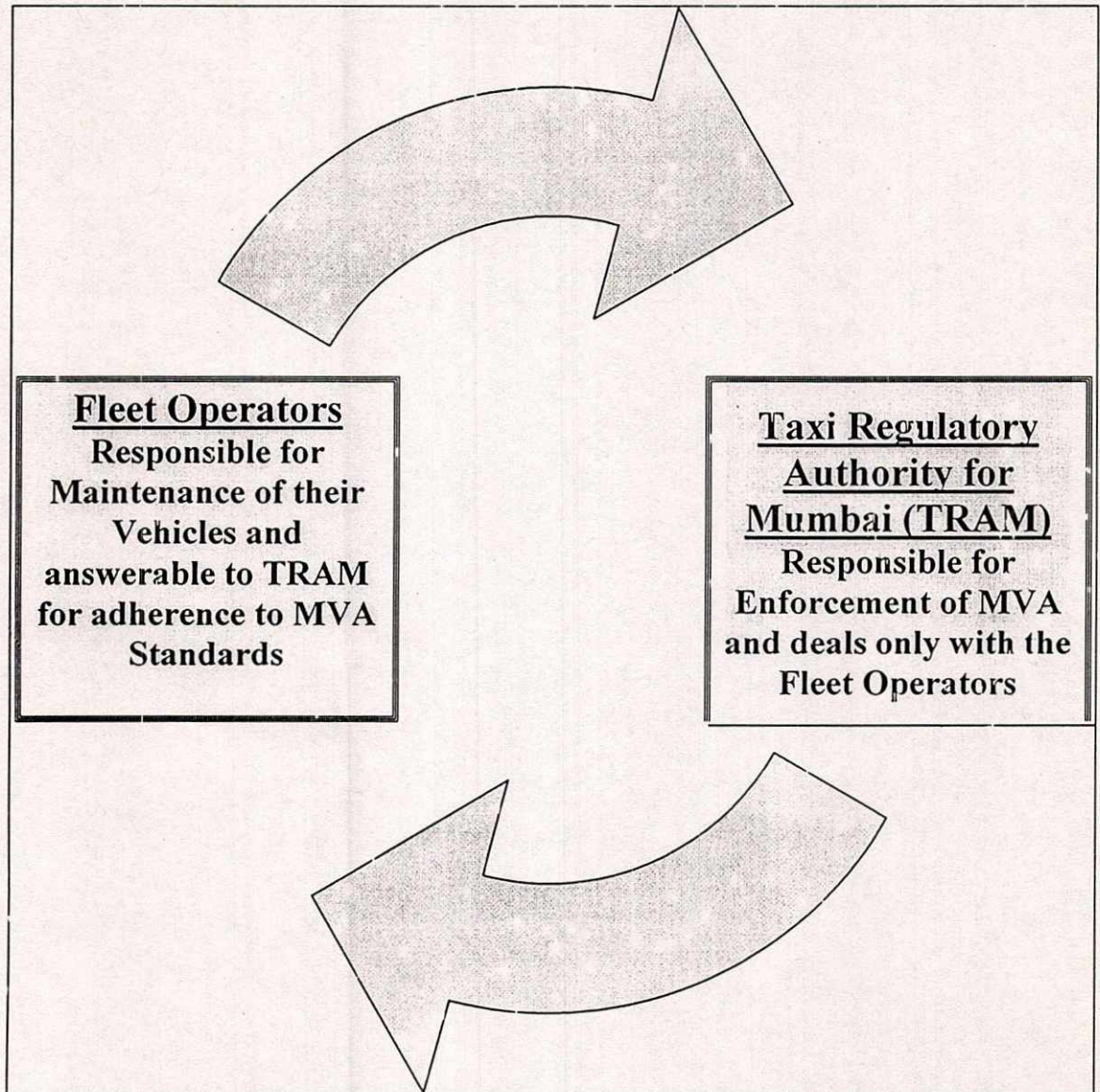
*The take home earnings of Rs. 4,640.00 becomes Rs.10,406/- per month, after all deductions, for a CNG Indicab, after paying the EMI on the loan for the purchase of the car, at 11% pa.*

*Note: -These workings are based on normal conditions and there may be deviations in practice depending on driving habits, routes followed, maintenance of car etc. Capital costs too are approximate and are valid at time of report being made.*

7.2 Differentiated services (Tier 2)

Level 2 service could be AC taxi for the same type of car as in level 1 (i.e. same size, seating capacity, cost etc). Since this is the AC model, the fare structure could be the same as that for the Current AC cool cabs plying in Mumbai with an additional 50 paise, say, for the cost of the Radio cab service to be recovered. The current fare structure for AC taxi envisages a 25 % higher fare which is adequate to compensate

Relation between Fleet Operators and TRAM



for the increased running cost due to an AC as well as the slight reduction in paid Km run as is evident from the model below

**Business Model for Tier 2 with concessions :**

<i>New Car (Indicab AC - CNG)</i>	
Capital cost( Inclusive of Road Tax, Taxi Permit, Octroi & Insurance)	330000
Cost of CNG/Kg	20.00
Average per Kg	13
Cost of CNG per km	1.54
Maintenance Cost/km	1.10
Thus, Running Cost per km	2.64
No. of Paid Km run/day	80
<b>Thus, Running cost per day</b>	<b>211</b>
<b>Revenues per day @ Rs 10 /km</b>	<b>840</b>
<b>Net earnings /day</b>	<b>629</b>
<b>Earnings per month</b>	<b>18868</b>
<b>EMI on a 5 yr loan of Rs 2.75 lacs @ 11 %</b>	<b>5979</b>
<b>Take Home Earnings /Month</b>	<b>12889</b>

*This is, however, true only in case the concessions mentioned in the previous section are offered to the operator.*

7.3 Incentives and Profitability

A further study of existing earnings of current taxi drivers is needed, particularly since the new model needs to improve on the same so as to act as a changeover incentive.

The above study will lead to a detailed recommendation list. However, some of the incentives that would definitely be needed during the recommended window of 2 years are detailed below:

- a) A complete waiver of Octroi Duty on new taxis purchased for this purpose
- b) A 50 % waiver of Local Sales Tax

- c) Complete waiver of Resale tax (which is a minor amount)
- d) A 50 paise / Km increase in the tariff for all new taxis
- e) Catalyze availability of project finance at a concessional rates of interest
- f) Allow alternative sources of revenue earning like advertising on the body of the vehicle. This would prove to be an imperative since this would go towards cross subsidizing the fare, which otherwise may have to be increased.

#### 7.4 Major Factor influencing Profitability

**The most important factor contributing to profitability is the number of kilometers run by a taxi which is currently at 75 -100 per day in Mumbai and constrains earnings.** The possible ways to improve profitability are:

- a) Increase the tariff to make the shift an attractive proposition
- b) Restrict the current fleet of taxis so as to improve mileage run per taxi.

Since the concept is one of a company affiliated system, it *would be imperative to permit transfer/ sale of ownership of existing permits to enable this system to take roots.* This would enable the operators coming in to purchase permits from the market so as to induct their own fleet. Alternatively, the Government could look at issuing fresh permits and simultaneously extinguish similar number of existing permits in the market, of very old vehicles.

## Chapter 8

### Recommendations

#### 8.1 Background.

The *Bombay First* Team has developed the following transition model for a Demand Responsive Taxi Service (DRTS) for Mumbai, keeping in mind the fact that this is not just a simple administrative decision, that can wish away the existing service and bring in a better one, but is in fact a socio-technological problem, that needs to be examined in light of the fact that this service currently serves as the means of livelihood for over 2.2 lakh residents of this city. Any arbitrary decision made could well mean that this large chunk of Mumbai may be left with no alternative means of sustenance, and face the same fate as that of the mill workers, as none of the taxi drivers are trained to do any other job to earn their living. They have continued to operate these obsolete, cash-guzzling vehicles, simply because they have no choices before them. And again, the service has been accepted and sustained by the general public, because of the absence of choices.

The *Bombay First* Team has tried to evolve a system that will be both financially sustainable as well as customer friendly and world class. A study of the existing system has helped to evolve the transition of the service to what we would like it to be: higher levels of comfort, cleanliness, better vehicle maintenance, accessibility and mobility, while reducing the absolute figures of vehicles on the streets. It is also expected to reduce the impact on the environment, and may actually help in reducing the levels of pollution, through the use of more eco-friendly (vehicles), and inducing the shift to the taxi as an alternative mode to the private car, thereby reducing the total number of vehicles using the city streets.

Based on our survey of various user segments of taxi's we would suggest that the taxi trade be distinguished by two categories:

1. **Base Service:** This level will basically be the basic level of taxi service, and will comprise the existing taxis.
2. **Premium Service:** This level will provide various additional comfort features like air-conditioning, better interiors, trained drivers etc.

#### 8.2 Recommendations.

##### 8.2.1 Improvement of Base Service

The shortcomings of the current service are old vehicles, poor service, bad or no maintenance, unhygienic conditions and commercial non-viability. Our first recommendation is that the authorities take all the necessary steps to strengthen the current service, which we refer to as the **Base Service**. The authorities, which directly govern the administration of the taxi trade, are the Transport Commissioner and the RTO. To support the upgradation of the Base Service we suggest that:



- **Government should extend one time subsidies** in order to facilitate the purchase of new vehicles and give the necessary impetus for the shift. These subsidies could be in the form of
  - g) A complete waiver of Octroi duty on new taxis purchased for this purpose
  - h) A 50 % waiver of Local Sales Tax
  - i) Complete waiver of Resale tax
  - j) A nominal increase of 50 paise to Re.1.00 / Km in the tariff for all new taxis
  - k) Catalyse availability of project finance at a concessional rate of interest, through financial institutions.
  
- **The current statutes of the Motor Vehicle Act, which apply to the taxis,** be implemented more strictly with relation to the physical condition of the taxi as well as the knowledge of the driver.
  
- **Allow the formation of loose alliances,** which makes it possible for the taxi's to invest in common infrastructure, which could be required for providing better services.

In order to meet the current fare structure, we will also need to standardize the vehicle cost at approximately Rs 3.0 Lakh as the replacement option, with necessary modifications to meet the demands of the user category, and the installation of a *tamper proof meter*, such as the PULZAR, or equivalent. We recommend :

- The use of both the *Indica run on CNG*. At current market prices, therefore, an Indica that runs on diesel and which costs Rs.3.00 Lakhs (Non A/C ) on the road. This needs to be converted to gas and with the subsidies should be able to operate it with the current fare structure.
  
- Similarly any other small car like Wagon-R, Zen if offered by the manufacturer should be allowed for this base service.

### 8.2.2 Introduction of Premier Service

To cater to the demand for better quality taxis, which exists today, operator should be introduced to provide **Premium Service**.

Instead of the current individual owned/driven model of the cab the operators would be professionally managed companies operating a fleet of taxis, which could number five hundred or more. **Premium Service** would offer services like air-conditioning, better interiors and better-trained drivers. In addition GPS system would be fitted in all the taxis which would allow these to be called over phone. With cellular phones having become popular, this can be a very convenient way to locate a taxi without creating congestion.

Based on the market segments arrived at through our research presented earlier in section we feel that there is a big potential market in Mumbai which is willing to pay for a Premium Service provided quality is guaranteed and is much better than that found in the current taxis.

The Premium Service would also provide an alternative to people who would rather use their private car thereby reducing congestion on the roads. The vehicles in this segment would all be of a more luxurious model than that of the base service, and would be air-conditioned and also fitted with tamper proof meters. The fares chargeable would therefore be the current AC fare plus 10%. Again, the fare structure designed for this system should be telescopic, so that they are encouraged to take short trips also. This would put them in the reach of the middle segment of Users, who do not mind paying a slightly higher price for a better service

It is recommended that *Tata Indica* be used as comfortable and economical model for operation as taxis in this segment. All these vehicles should be fitted with GPS Receivers, clean interior fittings, have well-trained and responsive drivers.

Further advertising and other revenue sources should be allowed to make the service viable at fares that would be at slight premium to the current AC taxis.

In order for the operator to operate the taxis, it is recommended that no extra permits be issued. **The sale of Taxi Permits should be made legal.** Currently, the Motor Vehicles Act does not permit the sale or transfer of Permits, and given the high volume of taxi permits already given out, this step is actually crucial for the improvement in the services. The new operator entering the system will need to source the necessary permits from the existing holders. The existing legislation therefore will need to be amended to legalize these sales / transfers, as this will be a pre-requisite to the operator driven model being proposed.

The scheme to allow transfer of current permits would serve to limit the number of taxis in the short term as well as allow the operators to expand as they succeed in the business, while also giving the financially weak individual operator a way out of a dead-end situation.

The taxi driver selling the permit, could also opt for remaining as a hired driver of the Fleet Operator, subject to fulfilling the expectation of service from him to the potential customers. That may actually bring benefits that go with such employment: viz. fixed times of work, and benefits such as Provident Fund, etc. With fixed work times, he gets to spend more time with his family, and with less exposure to the stress and strain of driving in chronically congested and polluted conditions, his health is also likely to improve. In other words, the existing taxi drivers stand to gain substantially if they opt to sell their licenses to the Fleet Operators, and agree to change their work habits to become service oriented.

These Fleet Operators are also expected to have their own GPS System, ensuring that their vehicles do not have to run idle, looking for a fare, and adding to congestion, but can be dispatched to the waiting customer in the shortest possible time.

### 8.2.3 Strengthening of feeder services

We suggest that the feeder services operating between hub railway stations be strengthened considerably. These railway stations like Churchgate, VT, Dadar etc. see a large number of commuters moving to fixed destinations of work. Once organised and strengthened this will add as an efficient support to the existing transport infrastructure. The current levels of service at these stations are not desirable from point of the quality of the taxis as well as the efficiency of the system. The number of users for a feeder service would go up if a good service is provided.

The Versa would be ideally suited for the shared taxi operations, as it has an adaptable interior that can be easily modified to seat 6 persons in the back, by constructing a drop seat behind the front seat, and pushing the rear seat further behind into the luggage space. The passengers will then be sitting in a face-to-face arrangement. These 6, with the additional front passenger seat, will give the shared taxi operator 7 paying seats in place of the current 3 or 4 passengers that he now carries point to point. Keeping the per seat rate the same as that at present, i.e. Rs.5 or Rs. 10, the taxi driver earns 75% more for the same distance, while the commuter pays the same rate for a much higher level of service. With this higher earning capacity, it is possible to have these vehicles air-conditioned, and at the same time, repay the loan taken for the purchase of the same.

When not in use as a shared taxi, these vehicles can be used for carrying passengers with luggage to and from the train stations and the airports. The drop seat can be folded back to provide extra luggage space behind the driver, while there is still seating space for 3 + 1 passengers. As usual, the cabbie can charge extra for carrying luggage.

### **8.3 Transition over Next Five years**

We feel that if over the next year the government initiates the required legislative changes for trading of licenses and introduction of new operators then the market forces of demand and supply for a good quality service will ensure a fast roll out of a new taxi service. By the end of 2005 we should thus have atleast one new operator and the changing of the individual drivers from their current vehicles to brand new ones.

Providers for technologies like GPS and radio trunking do already exist and it would not be difficult to handle the technical parts of the upgraded service.

The Premium service would become a benchmark service and would induce the base service operator to continuously improve its service levels to retain customers. Equally that would keep the pressure on the premium service provider to continuously upgrade the service to attract customers who are paying higher cost.

Since both the models are financially viable, over time 3-4 operators would emerge ensuring a wide variety of choice for the customers, as the laws of natural competition would take over. It is expected that the entrepreneurial capability would make it a self-sustaining model with least interference from RTO, except for fixing the tariff.

## Areas for Further Action

9.1 This study can look at the improvement in the services of taxies within the existing milieu or it can look at the taxi services as an element in the overall transportation scenario of Mumbai. Although the study per se is confined to the assessment of change within the taxi services, we feel that it is important to put this in the contextual framework of the overall transportation system; and so the recommendations mentioned here are first placed in the context of their impact on the levels of congestion and the environmental impact- both that of the road user as well as that of the resident.

The trend towards the use of private taxies in Mumbai is increasing, with a number of private organizations preferring to use these to investing in their own cars. There are, according to unofficial estimates, about 80,000 tourist taxis, and about 10,000 illegal private taxis in Mumbai. These figures need to be factored into the overall picture, if the proposed system is to succeed. We were given to understand that the private taxi charges only Rs 4 per km, as against the Rs 8 /km that the tourist taxi charges, and the Rs. 7.50 of the black and yellow cabs. These operators are already in a position to provide a superior range of services, and they are already using mobile telephones to dispatch their vehicles. Their services are being accessed by a very wide section of the urban population, and it would be advisable to first explore the possibility of these taxis being developed into the second Tier that we have recommended.

### 9.2 Areas for Further Action:

#### 9.2.1 *By the Government:*

1. The Government needs to develop a Scrapping Policy for vehicles that are over 8 years old. Today, these vehicles are simply sold to smaller towns outside the city where their operation is permitted. If the system that this report recommends is implemented, then the City is looking at having to scrap about 50,000 vehicles over a period of 2-3 years. It is important that this aspect be tackled before it becomes a problem.
2. The Motor Vehicles Act (MVA) needs to be amended in 2 respects:
  - a. The current Act does not permit the transfer or sale of Taxi Permits, except in the event of the death of the Permit Holder. Both the sale and the transfer need to be legalized within the Act, for a monetary compensation, under conditions that will need to be specified, so that the taxi trade does not become a dead end for those who have entered it.
  - b. Advertising on the body of the vehicle, although not permitted by the MVA, is a common practice on buses. The relevant clauses also need to be modified here, so that this can become an additional source of revenue to the taxi operator
3. Special legislation will be needed with regard to the financial institutions and the car manufacturers, for facilitating the purchase of new vehicles meant for the taxi trade. If necessary, a Special Purpose Vehicle may need to be formed to facilitate this change-over.

4. It is necessary that a separate body be constituted, either directly under the Ministry of Transport or as an autonomous body under the RTO, which will directly control the taxi trade. This body should be responsible for the issue of Taxi Driver Licenses, Taxi Permits, Inspection and Maintenance of Taxi Vehicles for all the mandatory tests, conformance to the provisions of the MVA, etc. This Authority will need to interact only with the operators, who will be responsible for the condition of the fleet they own. This Authority should also be vested with the powers to take punitive action against operators for any misconduct on the part of their drivers. A lot can be learned and borrowed from the New York Taxi and Limousine Commission.
5. All operators and their drivers should be required to undergo a Taxi Training Course, where they should be trained on both defensive driving habits as well as etiquette, in addition to a comprehensive knowledge of the city and maintenance of the vehicles with regard to safety, hygiene and comfort. This can be modeled on the Knowledge of London Course that the London Cab driver is expected to complete as a pre-requisite for his Taxi Badge. This can further be enhanced by borrowing the "Safe Driver" Program of New York, which is designed to enhance driver safety while rewarding its participants with insurance discounts of up to 15%. We can also borrow their "Persistent Violator" and "Critical Driver" programs for the corrective actions required.

### 9.3 Related Action Required:

#### 9.3.1 Development of a Telescopic Fare Structure:

The fare structure should be revised to encourage the taxi drivers to accept short trips as well as take their customers to their destinations via the shortest route. A telescopic fare structure that has a very high rate for the first flag down, and a reducing per km rate for subsequent distances can ensure this. Additionally, a look at the fares charged in other cities show that the fares are far higher there for a comparable distance, and a better analysis of the fuel consumption pattern and the other related costs can help to develop a more rational fare structure.

Annexure 3 gives a comparison of the fares charged in other cities, which shows almost a 50% drop in the per kilometer charge for a distance of 40 kms as against that for a distance of 1 km.

If thru curbing the use of cars we can increase the total demand for taxi ridership, this will release precious road space for exclusive bus lanes. This will increase the operating speeds of the buses, cars and the taxies – improving their productivity and user friendliness, increasing the demand and volume of business and reducing the cost per km. Assuming that the mileage per day gets almost doubled, then the major cost component i.e. the fixed cost- will be divided by double the mileage per day and this can enable the taxies to reduce the fares- especially the long distance ones. They can also offer universal air conditioning of all the taxies, for an additional charge of only 10% more on the metered fare, when the air conditioning is used at the request of customer.

#### 9.3.2 Development of a Parking Policy

While the number of cars in Mumbai are less than half that of Delhi, we have more cars per km of road, a fact since the road widths are lower in Mumbai as compared to

Delhi, and if we calculate the number of vehicles per sq km of road space, the situation would be even worse. The number of taxis (and rickshaw) in Mumbai is also higher per 1000 people in Mumbai as compared to other Indian metros in spite of the fact that only Mumbai has a serious suburban train service as compared to Delhi, Kolkata, Chennai and Bangalore.

We therefore recommend the use of some form of restraint that can reduce the use of private cars on the road or make it more expensive to own and use a car in absolute as well relative terms in comparison with buses and taxis. This can make a radical difference to the overall transportation scenario in a highly congested city such as Mumbai.

Parking can be used as a tool to achieve this. Universal Pay and Park- ie making all parking chargeable, and raising the parking charges substantially, can act as a deterrent to the indiscriminate use of the private car, especially for marginal purposes. This will facilitate tackling the other illegal and unfair uses of road space and also protect the interests of pedestrians. This can also raise significant revenue without any investment, merely by setting the rules and giving contracts – through a system that is intrinsically far more efficient and structurally honest. The revenues raised through these parking charges could be substantial and could be ploughed back into a transportation fund to be used exclusively for the improvement of the transportation system.

### *9.3.3 Introduction of bus lanes, and promotion of mass transportation*

Because of linearity, Mumbai is a little more amenable to public transport than other metros in India. Moreover, it has the world's most densely loaded suburban rail service as well as an excellent bus service. However, there is little integration between the various modes, and this needs to be given special attention. It is therefore also recommended that dedicated bus lanes be provided, with taxi/rickshaw stands being provided at some convenient point at some of the key stops, to facilitate the transfer from one mode to the other. Similarly, at all the suburban train stations, as well as the proposed metro and ferry terminals, clearly demarcated and well designed taxi stands need to be provided, and so designed that the commuters can access these modes without exposing themselves to the rest of the vehicular traffic around them.

With reduced demand for road space, it will be possible to provide exclusive bus lanes, thereby improving their operating speeds. This, together with lower turnaround time, should make it possible to offer universal air conditioning on all the buses, starting with the ones on the dedicated lane, at prices which need be only marginally higher than the current bus fares. This can result in drawing a much higher income segment onto these buses, improving their clientele round the clock and make a substantial profit.

The net result of the improved taxis service, as shown in Figure 1, seems to be an overall improvement in the quality of the transportation system, as well as in the overall quality of the environment.

## Annexure- I

### Existing Fare Structure for Tourist Taxis in Mumbai

#### Type I

Vehicle Type	Non-A/C 118 NE	A/C 118 NE	A/C Maruti Esteem	A/C Honda City
8 Hours/ 80 Kms	Rs. 700.00	Rs.1000.00	Rs. 1400	Rs.2550
Extra Km	7.00	10.00	14.00	25
Extra Hour	30.00	40.00	70.00	150.00

#### Type -II

Type of Car	Honda Accord	Toyota Corolla	Suzuki Zen
<u>Daily Charges</u>			
Airport Transfer per trip	Rs. 2,500	Rs. 2,000.00	Rs.650.00
<u>Local usage per day</u> 8 Hours / 80 Kms	Rs. 4,000.00	Rs. 3,000.00	Rs.950.00
Extra Kilometres	Rs. 40.00	Rs. 30.00	Rs. 9.50
Extra Hour	Rs. 400.00	Rs. 300.00	Rs. 40.00
<u>Outstation Usage</u> <u>Per Km</u>	Rs. 40.00	Rs. 30.00	Rs. 9.50
<u>Drivers allowance</u> <u>per day</u>	Rs. 200.00	Rs. 200.00	Rs. 175.00

Sources: Various taxi companies in Mumbai

## Annexure- 2

### Hailing a Singapore Taxi With Satellite Technology

**Singapore, Republic of Singapore, August 1996** -- For the 2.8 million inhabitants and six million visitors in the city of Singapore who rely on taxis to get around, booking a cab has been a slow and frustrating undertaking until now. Citycab, one the largest taxi companies in the world, decided to resolve the problem by installing a GPS (Global Positioning System) receiver from Motorola in each of its taxis as part of a new in-cab control system.

Using signals from the GPS satellites in orbit some 11,000 miles above the earth, the GPS receivers compute the taxi's precise position on the streets of Singapore to within 100 meters. This satellite technology forms part of a mobile radio data communications system developed for Citycab by Spectronics Micro Systems Ltd. (SMS), Cambridgeshire, England.

Now, when the Citycab office receives a booking for a taxi, the information is automatically sent to the cab nearest to the prospective customer. Details of the customer location are displayed to the driver's SMS mobile data terminal on the taxi's dashboard. If the driver declines the job, it is automatically routed to the next closest, available taxi.

This use of GPS technology has radically changed the traditional method of taxi control and dispatch, believes SMS. The company calculates a 20 percent savings in air time by automatically locating the position of each taxi. Customer waiting time also is significantly improved by sending the nearest available taxi to the pick up point, rather than the cab at the top of the waiting list, which may be considerably farther away.

SMS acknowledges that, until recently, GPS technology would not have been equal to the task of vehicle positioning in a city such as Singapore. For a GPS receiver to work, it needs to have a clear view of the sky to lock onto the signals transmitted from the satellites--formerly impossible with skyscrapers lining many of the streets in Singapore.

Motorola, as one of the leading manufacturers of GPS receivers, overcomes this problem with its Oncore series of GPS receivers. The 8-channel Oncore GPS receivers track the best eight available satellites. Sophisticated software allows internal re-acquisition of satellites in less than one second, facilitating high reliability of urban intersection-passing updates, a significant benefit to integrators incorporating map matching and dead-reckoning. Additional software enhancements allow the receiver to track satellites more reliably in between buildings and under dense foliage, where GPS receivers often lose signals or degrade in performance.

With the credit card-sized Oncore GPS receiver costing less than \$200 each, SMS cites the GPS technology now available from Motorola as one of the key components in the success of the £4 million project for Citycab. With the number of taxis on Singapore streets anticipated to increase to 6,000 over the next few years, Motorola's satellite positioning system may be a key element in keeping Singapore on the move.

For more than 65 years, Motorola has played a leading role in the development of



wireless communications, semiconductors and automotive electronic equipment, systems and services for worldwide markets. Motorola continues that leading role with the emergence of GPS technology as the worldwide standard for navigation, positioning and precise timing.

Motorola's Automotive and Industrial Electronics Group researches, develops and manufactures electronic modules and components primarily for original equipment manufacturers of vehicles, vehicle systems and industrial products. The group's products include powertrain electronics, chassis electronics, body electronics, sensors, GPS receivers and power controls

*Source: ([http://www.motorola.com/ies/GPS/docs\\_html/081596.htm](http://www.motorola.com/ies/GPS/docs_html/081596.htm))*

### Annexure – 3

## Taxi Fares in Other Cities

Source : Ashok Datar, Economist, Focus, Mumbai

### Taxi Fares in Different Cities for Different Distances per km Basis

Distance - day time		Tariff of regular taxis per km - in Rs. Equivalent – (day time)				
in km	in miles	Mumbai	Bangkok	Singapore	N York	London
1	0.63	7.5	20	62	96.3	125
2	1.25	7.5	20	37	68.5	102
5	3.13	7.5	20	21	52.0	89
10	6.25	7.5	20	16	67.0	84
20	12.50	7.5	20	14	54.0	81
30	18.75	7.5	20	13.2	49.7	80.4
40	25.00	7.5	20	12.8	47.5	80.1
No of registd. cabs		55000			23000	

The above information is based on various websites pertaining to the cities. Some information could be somewhat outdated but it is still meaningful for comparison.

For the purpose of uniformity, the comparison is restricted to standard daytime tariff. We have ignored toll charges, night charges, out of city charges etc.

In Mumbai, we have a flat rate of Rs. 7.5 / km. In Bangkok too, they have a flat rate of 35 baht per 2 km

In Singapore, the first km is S\$ 2.40 and there after 10 cents for every 225 meters. **as a result, for long distances, the tariff is comparable to Mumbai!**

In London and New York, there is a first flag down charge of Lbs 1.40 and \$ 2.00 and thereafter 20 pence per 219 meters and \$1.50 per mile respectively. Although NY fares were to go up substantially and must have been revised upwards.

#### Annexure 4

### List of Major Call Taxi Operators in Chennai

SI No	Name	Vehicle		Contact
		No.	Make	
1	Bharati Call Taxi	70	Maruti Omni	28142233
2	Chennai Call Taxis	110	Ambassadors	25384455
3	Fast Track	130	Maruti Omni	24732020
4	Ravi Brothers	45	Mixed	
5	Jenov taxis --15 nos	15	Maruti Omni	
6	Cool Taxis	18	Maruti Omni	
7	Minnal Call Taxi	12		26566989
8	Ravi Kumar	15	Maruti	
9	Porur Call Taxi	8		
10	Nanga Nallur	12		
11	Muthu Priya Call Taxi			28520101
12	Metro Call Taxi			28214848
13	Easy Call Taxi			2620 9595
14	Quick Call Taxi			26611888
15	Zig Zag Call Taxi			24749966

## Annexure- 5

### Types of Taxi Services and Regulations Globally

Source: <http://www.vtpi.org>

#### **City of Rimouski's Taxibus ([www.movingtheeconomy.ca](http://www.movingtheeconomy.ca))**

The City of Rimouski, Quebec (population 32,000) has found that taxies can provide a viable and cost-effective alternative to traditional bus transit systems. After studying various transit service scenarios using buses, Rimouski chose to launch its TAXIBUS service. TAXIBUS, established in 1993, is a demand-responsive service which relies solely on local taxicabs. Quebec's Ministry of Transport developed a software to help manage the service.

TAXIBUS operates Monday to Friday, serving 300 stops by predetermined schedules. Passengers, who pay \$2.40 per ride or \$70.55 per month, must reserve one hour ahead of time by phone (schedules are cancelled when no reservations are made). The taxi drivers are paid according to the readings of the taxi meter, from the time the first passenger is picked up, to the time the last passenger is dropped off. A recent cost comparison with other transit services in Quebec cities of similar size showed that costs associated with TAXIBUS are an average of CAN\$12 less per capita.

After four years of operation, TAXIBUS has become increasingly popular, growing by 37% over four years (current figures are 60,000 trips per year). Cost increases were kept down by a 6% increase in productivity (by grouping more passengers together on a single ride, which also has ecological benefits). The number of passengers per ride rose from 1.6 during the first few months of operation to 2.8 by 1996. Service costs per ride have dropped from \$5.18 to \$4.35 per passenger (21% of which are administrative expenses).

Taxies can provide a variety of transportation services. These include: carrying people to a transfer location such as a bus terminal or railway station (called "treintaxi" in the Netherlands); replacing buses between rush hours; extending the service schedule of regular public transit; providing service to scarcely populated areas; acting as a complementary service for transportation of people with disabilities; and transporting groups previously organized by a third party.

#### **Taxi Deregulation Trends (Kang, 1998)**

Taxi service has been deregulated in many countries, including the U.S, U.K., New Zealand, Japan, South Korea, Australia, The Netherlands and Sweden. As an example, The Swedish Transport Policy Act of 1989 provided the framework for the deregulation of the industry in 1990, suggesting that the best service for the lowest economic cost would be supplied by a deregulated taxicab industry subject to free market forces. Deregulation of the Swedish taxi market was carried out in five steps:

1. Barriers controlling entry were removed, so that an operator can have as many taxicabs as desired. This relieved the county councils of their former task of estimating the demand for taxi services in each operating area.
2. Fare controls were removed, so that taxi companies became able to set their own fares. However, they were required to inform customers about the fare prior to trips, and taxicabs must be equipped with receipt writing meters.
3. The requirement for all taxicabs to belong to a radio booking centre was abandoned. At the same time, in order to stimulate competition between centres, publicly owned centres were established in the market as an alternative to the existing privately owned centres.
4. Geographically restricted operating areas were eliminated.
5. Strictly regulated operating hours were removed.

Many U.S. cities have partially or wholly eliminated local taxi regulations during the late 1970's and early 1980's. These included San Diego, Seattle, Phoenix, Portland, Sacramento, Kansas City and Milwaukee, as well as some smaller cities of significant size such as Tucson in Arizona, Oakland and Fresno in California, Raleigh in North Carolina, etc. Further discussions on taxi deregulation are still on going in America, and it has occurred or tried in several cities in 1990's, including Indianapolis (1994), Houston (1995), Denver, Hartford and Boston.

#### **Indianapolis Taxi Regulation Reform (Moore and Rose, 1998)**

In 1991, the city of Indianapolis created a Regulatory Study Commission (RSC) to implement regulatory reforms. One of its major achievements was to reduce unjustified regulation of the city's taxi services.

Like other large U.S. cities, Indianapolis's taxi industry was heavily regulated, yet the quality of service was poor. Long waits were common after calling for a taxi, particularly in lower-income areas. Taxi fares for long trips were higher in Indianapolis than in many other major cities. A small number of companies dominated the Indianapolis taxi market. Only 392 cabs were permitted to operate in the city. One company controlled more than half of those licenses, and competition among cabs was limited. A substantial number of the licensed taxis were not in service at most times on an average day. Owners of a taxi license make most of their money from regular fares, so investing in wheelchair accessibility made no sense. The city did not allow specialized service, so the disabled had to use expensive private ambulances for door-to-door trips.

Minority organizations supported reforms. The restrictions on taxi licenses, fares, and service levels all but prevented low-income drivers from starting their own cab companies, and reduced the quality of service in lower-income neighborhoods.

The RSC rewrote Indianapolis taxi regulations with an eye to increasing competition. This included the following changes:

- Removed the overall limitation on the number of taxis that can be licensed.
- Allows taxi companies to set fares, with some constraints on maximum fares.

- Eliminates arbitrary rules, such as requiring taxi drivers to wear a special badge and cap, and specifying the number of seats taxis could have.
- Allows taxis to "cruise" for customers.
- Provides greater flexibility in safety regulations.
- Allows special taxis to carry passengers in wheelchairs.
- Allows jitney businesses greater operational flexibility.
- Allow jitney businesses to provide a "charter service."

Commuter Transportation Services in Los Angeles suggests for planning purposes one should estimate between 0.5 and 20 percent of current rideshare patrons will use the service. The high end of the range applies to companies allowing rides for overtime, errands or business trips, while the low end applies to companies allowing emergency use only. Given average suburban distance taxi rates, this indicates typical costs of \$2-3 annually per rideshare patron.

**Table 2 Benefit Summary**

Objective	Rating	Comments
Congestion Reduction	2	Helps reduce automobile commuting.
Road & Parking Savings	2	Helps reduce automobile travel and trips.
Consumer Savings	3	Provides savings to users.
Transport Choice	3	Increases travel choice.
Road Safety	2	Helps reduce automobile travel.
Environmental Protection	2	Helps reduce automobile travel.
Efficient Land Use	2	Helps reduce automobile travel.
Community Livability	2	Helps reduce automobile travel.

Rating from 3 (very beneficial) to -3 (very harmful). A 0 indicates no impact or mixed impacts.

### Case Studies and Examples

#### **Ride-On TMA Offers Guaranteed Ride Home ([www.rideshare.org](http://www.rideshare.org))**

*Ride-On*, the Transportation Management Association for San Luis Obispo County in Central California, offers door-to-door Guaranteed Ride Home service anywhere in the area on weekdays between 8 am and 7 pm. Employers can set up a GRH program to fit their needs. In the event of an emergency, authorized staff call Ride-On to request a Guaranteed Ride Home. The TMA will send a vehicle within 15 minutes. This program is insurance against ever being at work without a car, to help increase rideshare commuting. The cost of the rides home range from \$5 to \$20 depending on the distance traveled. Some businesses pay the fare for the actual ride or let the employee pay the fare. The GRH Program has proven to be a significant benefit for employees.

#### **City of Albuquerque GRH Program (<http://www.cabq.gov/transit/ridegu.html>)**

The Albuquerque SunTran's Guaranteed Ride Home (GRH) Program is offered to commuters that use any form of alternate transportation at least three times a week. Monthly bus pass purchasers are automatically registered for GRH. Commuters who use other forms of alternate transportation can register on-line at

<http://www.cabq.gov/transit/grhfrm.html>. This service can be used up to five times a year for personal illness, family illness, unscheduled overtime or any other emergency that requires commuters to leave work or school.

**The Pennsylvania State University TDM Program**  
**([www.psu.edu/ufs/feb1agn.html](http://www.psu.edu/ufs/feb1agn.html))**

All participants in the Pennsylvania State University Rideshare Program are automatically enrolled in the Guaranteed Ride Home (GRH) Program. In case of an emergency (medical, disaster, or work related emergencies) for a rider or driver, GRH provides free transportation home via a rental car or taxi.

**TDM Status Report**  
**([www.fta.dot.gov/library/planning/tdmstatus/FTAGUAR2.HTM](http://www.fta.dot.gov/library/planning/tdmstatus/FTAGUAR2.HTM))**

A 1992 study identified the following GRH programs:

- Hughes Aircraft Back-Up Vanpool Program, Tucson, Arizona: provides an emergency van only for vanpoolers during the day and after work. For after work service, employees must call the Hughes rideshare office before 4 p.m.
- Golden Gate Bridge District Flex-Pool Program, San Francisco, California: provides vanpool services for all commuters using District transit, vanpools, carpools or club buses in downtown San Francisco. Vans are owned by the District and driven by volunteer commuters in exchange for unlimited use of the van. Reservations must be made by 3:30 p.m.
- Montgomery County Government Subsidized Taxi Program, Montgomery County, Maryland: provides county employees who use transit and carpool with reimbursement for taxi or transit use in emergencies.
- Denver Regional Council of Governments, Denver, Colorado: 16,500 registered car-poolers who rideshare at least twice per week are eligible for two free taxi rides for emergencies over a 6-month test period.
- Xerox Company Fleet Car Program, Palo Alto, California: rideshare patrons may use company cars in emergencies. Use is limited to two hours, though cars can be brought home and returned the next day.
- City of Bellevue Subsidized Taxi Service, Bellevue, Washington: carpool, vanpool and transit patrons are eligible for the program. Applicants are given taxi vouchers good for limited mileage for one year. Users must pay for the cab themselves, then send in the voucher to the regional transit agency (Metro) and request reimbursement. Metro refunds the taxi fare less a \$1.00 co-payment.