OPERATIONS DOCUMENT FOR
UNIFIED METROPOLITAN TRANSPORT AUTHORITY (UMTA)

Ministry of Urban Development,
Government of India

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Guidance Document for Operationalization of Unified Metropolitan Transport Authority (UMTA)

Ministry of Urban Development,
Government of India,
Nirman Bhawan, New Delhi - 110008

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The **Ministry of Urban Development** is the apex authority of Government of India at the national level to formulate policies, sponsor and support programmes, coordinate the activities of various Central Ministries, State Governments and other nodal authorities and monitor the programmes concerning all the issues of urban development in the country.

Sustainable Urban Transport Project (SUTP), an initiative of the Ministry of Urban Development, launched in May 2010, is a sequel to adoption of National Urban Transport Policy (NUTP), 2006. SUTP aims at building capacity in Indian cities and pilot projects with the concept of 'priority for moving people, not vehicles'. It is financed by Government of India/ participating States & Cities and aided by World Bank, GEF and UNDP. The project's funding, about INR 17.5 billion, is used in building capacity in Transport planning pan India and demonstration of six projects in different cities. Under technical assistance component of SUTP to improve National, State and local capacity to implement NUTP, various guidance documents are being developed and this operations document is a part of the same.

PREFACE

Urban transport is a vital component of urban infrastructure and the lifeline for a city. A well-planned and developed transport system is integral to economic and social activity and is a key factor in facilitating urban economic growth. In India, multiple agencies responsible for urban transport at the national, state and city levels of government and their programmes, at times, conflict. There exist overlaps and gaps in the functions of these agencies. The multiplicity of responsibilities creates uncertainty and confusion relating to the tasks each agency is mandated to perform, inefficiencies within agencies and wastage of resources. Multiple laws at the Central and State Government levels also affect efficiency of urban transport. This results in a fragmented institutional set up for urban transport.

In 2006, the Government of India (GoI), through the Ministry of Urban Development (MoUD), released National Urban Transport Policy (NUTP), as a response to growing urban transport challenges. The main features of NUTP 2006 are:

- Integrated land-use and transport planning
- Promoting the use of public transport in the face of growing urban transport demand
- Promoting non-motorized transport such as walking and cycling
- Equitable allocation of road space
- Use of cleaner and more efficient technologies in the urban transport sector
- Use of innovative financing mechanisms
- Capacity building of state and city officials and other stakeholders

NUTP 2006, inter-alia, recommends creation of a Unified Metropolitan Transport Authority (UMTA) in all cities of population of ten lakhs or more, commonly referred to as "million plus cities", to facilitate co-ordinated planning and implementation of urban transport programmes and manage integrated urban transport systems. According to the Working Group Recommendations on Urban Transport for 12th Five Year Plan, UMTA is envisaged as a professional body working under the city council with representation from city agencies and stakeholders including those from the surrounding region. UMTA would holistically oversee formulation of proposals by multiple agencies involved in provision and management of urban transport such as municipal corporation(s)/municipality(s), development authority, transport department and traffic police; including their strategy and policy functions, regulatory functions, transport demand management, resolution of day to day matters and monitoring works assigned to these implementing agencies. For UMTA to be effective, the legal and regulatory framework should support its creation and sustenance.

MoUD appointed consultant Deloitte Touche Tohmatsu India Private Limited (converted into Deloitte Touche Tohmatsu India LLP with effect from 1 October 2015) to assist cities in establishing or strengthening UMTA by development of generic operations documents and other support material. In this context, this document has been prepared as a guidance on the procedures that cities could adopt for operationalization of UMTA.

ACKNOWLEDGEMENT

National Urban Transport Policy (NUTP) of the Government of India (GoI) has been framed with the objective to work towards sustainable urban transport in Indian cities. Ministry of Urban Development (MoUD), GoI is undertaking the GEF-Sustainable Urban Transport Project (GEF-SUTP) with support of the Global Environment Facility (GEF), World Bank and UNDP to create a platform for working together with state/local governments towards implementation of the NUTP.

Project Management Unit (PMU), Project Management Consultant (PMC) and the Consultants express their deep gratitude to MoUD for entrusting the responsibility for development of operations document for Unified Metropolitan Transport Authority (UMTA) and Urban Transport Fund (UTF) as part of the GEF-SUTP.

The Consultants are grateful to Secretary (MoUD) and Additional Secretary (MoUD) for providing direction and guidance to the team time to time. The Consultants are also grateful to OSD (UT) & ex-officio Joint Secretary, and Director (UT – 1), MoUD for their useful suggestions, guidance and inputs during the course of development of the document.

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The Consultants are also grateful to all the cities which participated in the workshops organized by MoUD as a part of this project. Their valuable suggestions have contributed immensely in the development of the document.

The Consultants also thank the seven cities (Jaipur, Lucknow, Bhopal, Hyderabad, Kochi, Tiruchirappalli and Andhra Pradesh Capital Region) which were chosen for preparing city specific UMTA and UTF documents. Their reviews and suggestions were very critical and have led to refining of the document from the given city's perspective.

EXECUTIVE SUMMARY

Urban transport is an important component of urban infrastructure. In India, urban mobility is gaining immense importance and emphasis is being given to the movement of people and goods, rather than the movement of vehicles. The institutional framework that governs the urban transport system at the city level plays a pivotal role in the success of the system. A weak institutional mechanism, on the other hand, leads to an inefficient system and isolated function of various transport modes.

NUTP 2006, inter-alia, recommends the creation of a Unified Metropolitan Transport Authority (henceforth called UMTA/ the Authority) in all cities of population of ten lakhs or more, commonly referred to as "million plus cities", to facilitate co-ordinated planning and implementation of urban transport programmes and manage integrated urban transport systems. In this context, this operations document has been developed as a guidance to cities for operationalization of UMTA.

The document elaborates on the need for UMTA in the Indian context and benefits expected from it. The multiplicity of laws and agencies involved in the sphere of urban transport in India have been analysed to highlight institutional gaps and overlaps in urban transport functioning and to throw light on the urgent requirement of integrated planning and coordinated management of urban transport.

The document is broadly divided into two parts: pre-operationalization activities and operationalization activities for UMTA. Guidance has been provided with respect to operational procedures that UMTA may follow for effective establishment and functioning.

The pre-operationalization part includes guidance on identification of Nodal Agency and appointment of a Task Force for setting up UMTA. The options for finalizing the Nodal Agency for UMTA have been elaborated, and functions to be performed by this Nodal Agency have also been provided. The suggestive composition of the Task Force has been included while explaining the rationale for creation of a Task Force. The options for the geographical coverage over which UMTA would have jurisdiction, have been deliberated upon, and the suggestive option has been provided, along with the rationale. UMTA is proposed to have a Governing Board (henceforth called Governing Board/ UMTA Board/ Board), the detailed composition of which has been provided. This is accompanied by the proposed organisational structure of UMTA, including requirements of staff at various levels, and the divisions proposed for executing UMTA's functions. A secretariat has been proposed for executing UMTA's functions in consultation with the Governing Board, and would be headed by a CEO. Detailed qualification criteria for staffing of UMTA have also been provided for reference.

In order to ensure integrated planning and management of urban transport in a city, UMTA is envisaged to be tasked with a set of functions, which have been elaborated in the document. The methodology adopted for suggesting these functions is also provided. An important component of the document is the process for enactment of the UMTA Bill, which will enable establishment of UMTA as an independent legal entity.

The operationalization part of UMTA covers details on procedures to be followed for executing its functions, the development of the organisation, delegation of power and administrative aspects. Detailed guidance on performing the functions proposed for UMTA would enable it to undertake activities for successfully achieving its objectives. The key functions of UMTA include preparation of a Comprehensive Mobility Plan and a Transport Investment Programme, management of the Urban Transport Fund and establishing effective coordination among various urban transport agencies in the city.

The document intends to act as a detailed guidance for cities to successfully establish and operationalize UMTA. It is to be read along with UTF operations document, for a comprehensive understanding of its application and for achieving maximum utility from it.

TABLE OF CONTENTS

Table of Exhibits

LIST OF ABBREVIATIONS

AA	Alternative Analysis
AGM	Annual General Meeting
BRTS	Bus Rapid Transit System
CEO	Chief Executive Officer
CMP	Comprehensive Mobility Plan
CoA	Certificate of Approval
CSOs	Civil Society Organisations
DGP	Development Guide Plans
DRUCC	Divisional Railway Users' Consultative Committee
GoI	Government of India
HR	Human Resource
INCOG	Indiana National Council of Governments
ITS	Intelligent Transport System
LOI	Letter of Invitation
LTA	Land Transport Authority
NMT	Non-motorized transport
MoUD	Ministry of Urban Development
MPC	Metropolitan Planning Committee
MRTS	Mass Rapid Transit System
MYP	Multi-Year Programme
NGOs	Non-governmental organisations
NHAI	National Highways Authority of India
NUTP	National Urban Transport Policy
OD	Origin-Destination
PWD	Public Works Department
RFP	Request for Proposal
SLBs	Service Level Benchmarks
SPV	Special Purpose Vehicle
TDM	Transportation Demand Management
TfL	Transport for London
TOD	Transit-oriented development
TOR	Terms of Reference
UMTA	Unified Metropolitan Transport Authority
URA	Urban Redevelopment Authority
UTF	Urban Transport Fund
ZRUCC	Zonal Railway Users' Consultative Committee

1. INTRODUCTION

1.1 NEED FOR UMTA

The need for UMTA for Indian cities emanates from major demand-side challenges putting pressure on the existing pool of urban transport facilities and services in Indian cities. It also derives from structural supply-side inadequacies prevalent in the system of governance and legislation as discussed below.

Increased demand for transport in Indian cities

India is getting urbanized at a fast pace, with an emergence of large cities or metropolitan areas. The efficiency of the transport system becomes increasingly important as the size of the city increases, so as to allow people and goods to move from one end of the city to another.

The demand for transport in most cities has increased substantially in recent years due to a variety of reasons:

- Burgeoning population as a result of both natural growth and migration from rural areas and smaller towns. This population growth puts increased pressure on roads and public transport system
- High concentration of employment activities in cities elevating the demand for transport
- Rising incomes accompanied by changing lifestyles and preferences
- Urban sprawl, leading to expansion of urban areas to accommodate the population growth, thereby increasing length of travel people need to undertake

The consequences of increased travel demand in the face of limited urban transport facilities and services have been numerous:

- It has resulted in expanding pressure on often insufficient, deteriorated and poorly managed urban transport systems
- Increased motorization has led to issues like congestion, travel delays, loss of productivity, excessive fuel consumption, deterioration in the quality of air, noise pollution and an increased number of road accidents and fatalities
- Limited accessibility to employment, services, education and other opportunities, in turn, has caused problems of social exclusion by preventing people from participating in work or learning, or accessing healthcare, grocery shopping and other key activities

These problems call for urgent attention and concerted action required to be undertaken to renew the existing system of urban transport.

Structural inadequacies in planning urban transport

The complexity arising from the multiplicity of laws at the Central and State Government levels related to urban transport gets aggravated by the multiplicity of authorities/departments that are involved. This situation often hinders the development of integrated and sustainable urban transport solutions. It is also important to recognize that tackling the challenge of urban transport in India requires substantial investments - for adding infrastructure capacity, and maintaining it. Due to lack of recognition of urban transport investment needs, and conflicting demands on the general exchequer, investment in urban transport in the past has not kept pace with the rapidly increasing requirements of the sector (National Transport Development Policy Committee, 2014). This situation further strengthens the case for setting up a Unified Metropolitan Transport Authority, which would be an umbrella body for integrated management and coordinated planning of urban transport.

In the exhibit below, intersections among different levels of government demonstrate the flow from policy to implementation. Certain functions such as land acquisition and route planning are carried out by agencies at all three levels, while there exist others with overlap between any two levels of government. There exist certain functions such as integration of land-use and mobility plans, multi-modal integration, etc. for which no single agency is responsible, creating gaps in the institutional framework. Therefore, better coordination across these three levels is needed for better execution of these functions. Exhibit 1 highlights the institutional gaps and overlaps in urban transport.

Exhibit 1 Institutional gaps and overlaps in urban transport
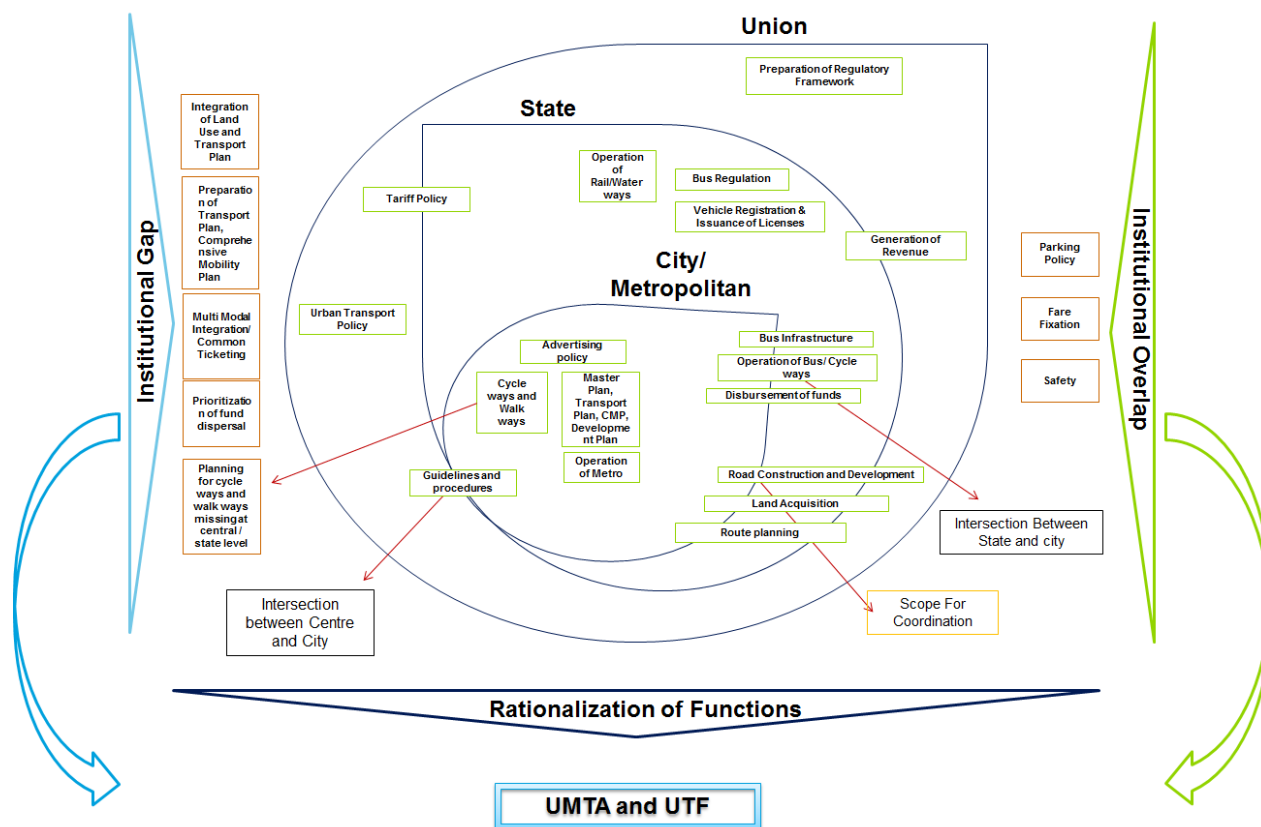
NUTP 2006 recognises that the structure of governance of the transport sector does not provide the right mechanisms to deal with urban transport problems. It is therefore recommends setting up of UMTA in all million-plus cities to facilitate more co-ordinated planning and implementation of urban transport programmes and projects. In order to facilitate the integration of land-use and urban transport planning and to ensure that UMTA meets its goals, NUTP envisages reassignment of existing functions from agencies. According to the recommendations of the Working Group on Urban Transport in the 12th Five Year Plan, UMTA is envisaged to be an executive body governed by a board which would comprise heads of various departments in the city, local elected leaders and eminent citizens. The Board's functions would include policy formulation, regulation, undertaking integrated and holistic planning for transport services and associated infrastructure, organisation and coordination across different organisations and agencies, management of common facilities, etc.

1.2 EXPECTED BENEFITS FROM UMTA

1.2.1 Facilitate integrated planning and management of urban transport

Coordinated transport and land-use plans, infrastructure investments, and urban services involve various departments and agencies at different levels. Functions like land acquisition and route planning are currently performed by agencies at centre, state and city levels. The concerned departments and agencies often have varying missions, objectives, budgets, management styles, and governance structures and staff profiles. Therefore, co-ordination often becomes the obvious casualty, and seamless integration of the transport system becomes difficult. UMTA will render this coordination by including in its purview all planning and implementation functions pertaining to urban transport programmes and projects. The responsibilities of all agencies involved in urban transport are envisaged to be aligned to UMTA. Thus, creation of UMTA is expected to streamline the functioning of the plethora of agencies involved in urban transport.

UMTA is envisioned to be a unified agency to direct planning, operations, and monitoring of various transport modes in a city. This setup would ensure that decisions about transport systems include future planning of urban development. These decisions will have spill-over effect on other development agenda with a key objective of urban mobility to be planned in a holistic and integrated manner. Measures of integration that UMTA is expected to provide are demonstrated in Exhibit 2.

Exhibit 2 Measures of integration to be provided by UMTA

Integration	Description
Physical Integration	The land-use plan and transport plan should enable TOD to identify and spatially connect key demand generators of transport, thereby, providing improved connectivity to residences, offices, and retail outlets.
Network Integration	Different networks should work complementarily to provide smooth and seamless connectivity. For example, bus routes should be designed in such a way that they feed into and support the mass transit systems. An essential part of network integration involves scheduling of services so that intra-modal and inter-modal services connect efficiently and effectively.
Fare Integration	A unified travel card for multiple transit services will facilitate convenient transfer between available modes. Cities such as Hong Kong, Singapore and London have demonstrated that a unified smart card system has underpinned the increase of public transport usage.
Information Integration	Information Technologies (IT) and Intelligent Transport Systems (ITS) can play important roles in integrated transport. For example, in Japan, all major railway stations have very clear signs, differentiating directions to the high speed rail network, the intercity train network, and the suburban/local trains network. In addition, websites provide public transport users with information on the multi-modal transport options available and related details.
Geographical Integration	UMTA shall perform the function of connecting the city to peripheral towns and villages. It should undertake planning in the CMP by first defining the Urban Mobility Area, which may extend beyond the city. Thus, UMTA would ensure geographical integration by including the entire Urban Mobility Area in its jurisdiction and planning purview.
Institutional Integration	The Governing Board shall comprise representatives from all agencies and departments at the local, state and centre levels, performing any urban transport function for the particular city. UMTA will, thereby, create a platform for various

Integration	Description
	planning, financing, monitoring and operational agencies to coordinate and integrate with one another, before performing their respective functions. This would ensure institutional integration and would prevent the agencies from operating in silos.

1.2.2   Facilitate multi-modal integration of transport services

The transport system in a city comprises several components such as land-use plans and development/master plans, road network and its associated infrastructure, parking facilities, different modes of public transport systems and their associated infrastructure, private vehicles, regulatory system, traffic management and enforcement system, etc. It is important that all these components work harmoniously especially in light of the inter-dependency factor which exists among them. UMTA will facilitate multi-modal transport integration, whereby all modes will operate as one 'seamless' mobility for the urban population. This involves integrated ticketing and dissemination of public transport information.

A vital aspect of this integration would be seamless interchanges between different modes. To bring about integrated planning of facilities or systems, there is a need for rationalisation of functions and ownership rights of agencies that are currently undertaking operation of multi-modal integration of transport facilities. Where ownership rights are ambiguously defined, UMTA could take upon itself the responsibility of planning, operating and managing such integration.

UMTA is envisaged to be given complete control in the approval of all major transport initiatives in their jurisdictions. Approvals would be granted on the condition of compliance with CMP. This implies all investments would reach implementing agencies, only after UMTA approves of investments and if the envisaged projects comply with CMP. This unification of power will ensure that adequate attention is paid towards providing services for all modes of transport in all urban transport initiatives, as decided in the CMP.

1.2.3   Facilitate rational fare structures

NUTP proposes that a regulatory authority should regulate charges for different types of public transport services, to ensure that fares that are charged are fair and reasonable. Current central and state laws actively work against this concept. Therefore, such laws would need to be changed for this to be achieved.

Fare structures have a significant influence on the demand for urban transport services. Adjustment of fares can increase the favourability and competitiveness of public transport services in relation to private transport modes. However, lowering the fare charged for public transport services may need to be supported by subsidies in order to prevent service providers from incurring losses. UMTA is envisaged to assign a dedicated source of revenue to enable provision of subsidies. UMTA is expected to set up regulatory/ institutional mechanisms to periodically revise fares of all public and intermediate public transport systems.

1.2.4   Facilitate research studies and awareness

Research and development are other crucial functions which play an indispensable role in ensuring optimum utilisation and channelling of investment. In order to make informed decisions, data and information relating to the urban transport system should be made available to the agencies and the public. This data includes travel patterns, segmented for different categories of city residents and modes of transport, and information on sustainable modes of transport. Such information proves useful in tailoring fare structures, specific to peak and off-peak periods, and enables service providers to practise price discrimination. Moreover, these research initiatives can enable maximisation of revenue, subject to meeting welfare objectives.

State and city authorities are in general ill-equipped in terms of trained staff to deal with the sheer increase in traffic volume or adopt advances in technology that would help them overcome urban transport problems. UMTA is expected to facilitate the application of guidance and consultancy services to urban transport problems in an integrated manner, and address the problems through research, studies, awareness campaigns and promotion of good practices in urban transport.

1.3 PURPOSE OF THE OPERATIONS DOCUMENT

Recognizing the importance of urban transport and the role of UMTA in overall functioning of the sector, MoUD is encouraging State Governments to set up UMTA in all million-plus cities. However, divergent views of state and city governments on the form and functions of UMTA are a major impediment in its establishment. Some cities have requested MoUD to provide guidelines and procedures for establishment of UMTA, so as to help them gain a better understanding.

MoUD intends to assist cities to streamline the establishment/strengthening process by development of operations documents and guidelines to act as reference points for setting up or strengthening of UMTA and Urban Transport Fund (UTF)[1].

1.4 APPLICATION OF THE OPERATIONS DOCUMENT

Decision making processes of UMTA are envisaged to be city specific. While challenges of urban transport development would be largely common across cities, each city has its own uniqueness and context that will require specific measures. Large metropolitan areas in India encompass a number of municipalities. Alternate models for UMTA may be needed for cities with different sizes and characteristics. This operations document has therefore been developed as a guidance document which may be customised by cities which intend to set up UMTA and in most cases, a UTF also. The objective of the generic operations document is thus to provide operational guidelines and procedures that comply with the provisions of the UMTA Act and rules framed under it. The operations document also details other laws of the State Governments which may influence setting up, operation and management of UMTA.

This document may be updated periodically to incorporate developments that may occur over time and be upgraded based on experience gained during the setting up of UMTA.

This operations document spells out processes that cities may follow to set up/strengthen and operate UMTA. It does not include technical and comprehensive details about how UMTA shall carry out each function, although broad guidelines have been provided. Users are advised to refer to toolkits developed by MoUD for specific functions[2] to be carried out by UMTA. The operations document is to be adopted by policymakers/officials at the city/region/state levels for deciding the appropriate institutional structure of UMTA.

1.5 LAYOUT OF THE OPERATIONS DOCUMENT

This generic operations document is divided in two parts: pre-operationalization and operationalization of UMTA.

Pre-operationalization part lays down guidelines for activities to be undertaken to finalise the UMTA structure and the process for finalizing the draft UMTA Bill. **Operationalization part** offers guidelines for activities to be undertaken to mobilise the UMTA Board including selection of a CEO and the Secretariat. It also outlines steps required to operationalise UMTA's functions.

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[1] Please refer to Urban Transport Fund operations document
[2] Please refer to Toolkit for Alternative Analysis by MoUD, CMP Revised Toolkit 2014

Chapter 1 provides an introduction to this operations document, describes the evolution of the concept of UMTA and discusses the benefits of UMTA.

Chapter 2 details guidelines to be followed for identification of a Nodal Agency to initiate the process for establishment of UMTA and UTF. The Nodal Agency shall be the facilitator for setting up of UMTA, UTF, and establishment of Task Force for pre-operationalization activities. Responsibilities of Nodal Agency and Task Force have been provided in this section.

Chapter 3 provides guidelines for finalisation of UMTA's structure including geographical coverage, Board composition, institutional arrangements, organisational structure, and functions.

Chapter 4 details the process for enactment of the UMTA Bill.

Chapter 5 deals with operationalization of UMTA. This covers guidelines for engagement of consultant for handholding support, appointment of CEO and mobilization of UMTA Board, organisational chart, delegation of powers, etc.

Chapter 6 deals with UMTA's functions including development of policies, programmes, standards and guidelines, mid and long term programmes, alternative analysis, regulation, research studies and awareness activities.

Chapter 7 details the guidelines for routine administrative matters of UMTA and its Secretariat such that policies and procedures comply with legislative provisions of the UMTA Act.

PART I - PRE-OPERATIONALIZATION ACTIVITIES FOR SETTING UP OF UMTA

2. IDENTIFICATION OF NODAL AGENCY AND ESTABLISHMENT OF TASK FORCE

2.1 INTRODUCTION

This chapter includes guidelines for identifying a Nodal Agency and initiate the process of establishing UMTA and UTF for Urban Mobility Areas. The Nodal Agency shall be selected from amongst the existing state agencies which are involved in providing urban transport services. The Nodal Agency shall facilitate setting up of UMTA and UTF and establishing a Task Force for undertaking pre-operationalization activities. These activities will include formulation of guidelines about the core tasks to be undertaken by UMTA, finalization of the UMTA structure, and drafting the UMTA Bill. The chapter also details role and responsibilities of the Nodal Agency and the Task Force.

2.2 FUNCTIONS OF THE NODAL AGENCY

To set up UMTA and UTF for an Urban Mobility Area, an agency needs to be identified and made responsible for managing the establishment process. This agency that acts as a nodal point of contact between the agencies involved in a city's urban transport is called the **Nodal Agency**.

The proposed functions of the Nodal Agency have been described in Exhibit 3.

Exhibit 3 Functions of the Nodal Agency
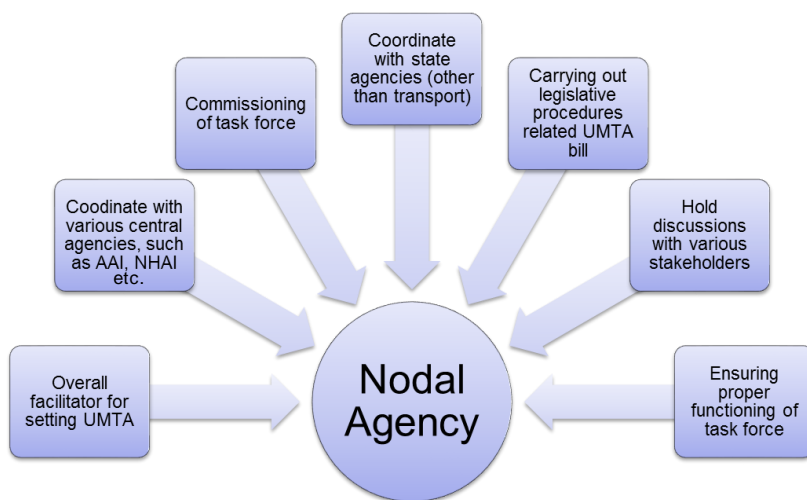
- The Nodal Agency's primary function shall be to facilitate setting-up/strengthening of UMTA. In other words, this agency shall act as the administrative department which facilitates the establishment process of UMTA. It shall provide a common platform for bringing together different implementing agencies[3] across city, State and Central Government departments to set up UMTA. The Nodal Agency shall define procedures and ensure that they are followed for establishment of UMTA, without hampering the day-to-day working of various agencies involved.

- The Nodal Agency shall set up a Task Force responsible for undertaking pre-operationalization tasks of UMTA. Pre-operationalization activities involve preparing guidelines for core tasks[4] to be performed by UMTA, drafting the UMTA Bill, deciding the structure of UMTA, etc. The Task Force

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[3] Implementing agencies are those which execute urban transport plans and undertake implementation activities.

[4] Core tasks have been recommended in section 3.6.4

shall comprise representatives and experts from various fields and levels of governance, and it would be the responsibility of the Nodal Agency to bring together such representatives.

- At the state level, several agencies are involved in planning and implementing urban transport projects. Besides government agencies, these also include various private and semi-private operators, research institutes, etc., which shall be vital stakeholders in the operations of UMTA. The Nodal Agency shall facilitate coordination among them.

- The Nodal Agency shall provide administrative assistance to the Task Force in carrying out various legislative procedures that precede establishment of UMTA through an Act.

- The Nodal Agency shall regularly assess activities performed by the Task Force and ensure their timeliness.

- The Nodal Agency shall also be responsible for holding discussions and seminars with stakeholders to update them about the progress and solicit suggestions regarding implementation.

2.3 IDENTIFICATION OF THE NODAL AGENCY

As discussed before, many organisations are involved in the planning and implementation of urban transport infrastructure and services in a city, leading to confusion and overlap in functioning. UMTA is envisaged to facilitate active coordination among these agencies in planning and delivering transport programmes and projects.

In this context, the Nodal Agency shall be in a position to coordinate with all relevant stakeholders from the local, State and Central Government agencies and departments dealing with urban transport. Since transport is a state subject and extensive co-ordination is required among various levels of the government, it is proposed that the Nodal Agency be formed at the state level.

The potential choice of Nodal Agencies in a city may be between the state's Transport Department and the Urban Development Department.

A state's Transport Department is responsible for issuing licenses, registering vehicles, controlling motor transport, shipping and navigation on inland waterways, railways and ferries, inspecting vehicles, fixing of motor vehicle tax rates, and also has some role in transport planning. It is also responsible for administering the Motor Vehicles Act, 1988 and rules framed under it and is in-charge of bus-based urban transport, including management of inter-state bus terminals.

The Urban Development Department (usually also covers municipal administration) has the overall responsibility of ensuring planned growth of cities and towns, ensuring adequate infrastructure, amenities, and services provided to citizens through the local bodies. It is largely responsible for delivering civic services including public transport and controls investments related to urban transport. Other agencies responsible for urban transport include State Road Transport Corporations, Public Works Departments, and Police Departments, etc. Any of these departments could take up the role of the Nodal Agency, based on their resource capacity.

In case UMTA is already established in an urban area under an existing state or local level agency, then that agency itself could serve as the Nodal Agency and assist in strengthening that UMTA.

2.4 ESTABLISHMENT OF A TASK FORCE

This section details the rationale, functions and composition of the Task Force.

2.4.1 Rationale behind setting up the task force

For UMTA to be a coordinating agency, there is a need to constitute a Task Force, which will be responsible for carrying out pre-operationalization activities of UMTA.

In the process of setting up UMTA, the Task Force is meant to be an independent body, not influenced by any particular stakeholder of the urban transport sector. The Task Force is also expected to be dedicated only towards establishment of UMTA and UTF. This necessitates the constitution of a specialised unit, which proficiently undertakes all planning and management required for the setting up process.

2.4.2 Functions and powers of task force

Key responsibilities of the Task Force have been described below:

Finalisation of the UMTA structure

The Task Force shall be required to finalize the UMTA structure in terms of its geographical coverage, institutional arrangement, composition of UMTA Board, specification of functions, organisational structure, etc. Various options of possible structures that the Authority could adopt, have been proposed in subsequent chapters. Certain aspects related to the structure, functions and purview of UMTA may need to be customized according to city characteristics. The Task Force shall decide and finalize on the structure after a thorough review of the existing urban transport system in the Urban Mobility Area.

Stakeholder Consultations

The Task Force would be expected to organise stakeholder consultations for finalisation of the draft UMTA Bill. The stakeholders shall include all agencies at the city, state and central levels, which are involved in any aspect of urban transport. These may include public and private sector institutions, transport associations, chambers of commerce, non-governmental organisations and citizen representatives. The Task Force will be required to facilitate consultations for soliciting inputs and opinions of all stakeholders, before finalising UMTA's structure, functions, powers, etc.

Assistance in enactment of UMTA Bill

The Task Force will be required to undertake all activities on behalf of the Nodal Agency in passing the legislation for enactment of the Bill by the State Government. It will act as an interface between the various agencies involved in urban transport and the State Government, in finalizing the UMTA Bill. In this regard, it is expected to work alongside the state's legal department and provide it with all necessary support.

Assistance in organising initial Board meetings

The Task Force shall assist in preparation of invitation letters and notices to be sent to the UMTA Board for participation in the Authority's meetings. It shall also assist in organising initial meetings of UMTA, with the objective of identifying and finalizing the vision, mission, and goals of UMTA. The Task Force will identify any further course of action required for operationalising UMTA.

In addition to the above, the Task Force shall make itself fully aware about the transport situation in the Urban Mobility Area and be equipped with all information for finalisation of UMTA and UTF structures.

2.4.3   Composition of the Task Force

The Task Force shall be constituted by the Nodal Agency and shall decide and finalize the blueprint of UMTA and UTF. Therefore, it is important that it is composed of officials who have functional expertise in the areas under the purview of UMTA and UTF, and at the same time, have domain expertise in the urban transport sector. The Task Force shall have representatives from the following departments at local, state and national levels:

- State Urban Development Department
- State Transport Department
- State Road Transport Undertakings
- City Bus Transport / Bus Rapid Transit (BRT) / Special Purpose Vehicle (SPV)
- City Metro Rail Corporation
- Metropolitan Development Authority
- City Municipal Corporations
- State Police Department
- Public Works Department
- State Finance Department
- Planning Authorities / Committees
- Indian Railways
- National Highways Authority of India

2.5 CONCLUSION

This chapter provided guidelines for identification of a Nodal Agency and establishment of a Task Force for operationalizing UMTA. It also discussed functions that the Nodal Agency and the Task Force would be expected to perform and provided the suggestive composition of the Task Force. The next chapter discusses some of the major decisions to be taken by the Task Force, such as geographical coverage, structure of the Governing Board, its functions, institutional arrangements and organisational structure.

3. FINALISATION OF UMTA'S FUNCTIONS AND STRUCTURE

3.1 INTRODUCTION

This chapter provides guidelines to be used for finalisation of UMTA's structure and functions. This is the first activity that the Task Force would be required to perform. The finalised structure of UMTA would be a prerequisite for customising the generic legislation for establishment of UMTA in any given Urban Mobility Area. The institutional framework for urban transport is a crucial aspect to be considered while bringing about coordinated and integrated planning, implementation and operation of urban transport. UMTA will be able to achieve its desired result of becoming a comprehensive urban transport agency only if its structure and functions are appropriately designed. Adjustments also need to be made to the functions of other agencies, and these need to be aligned with the functions of UMTA.

This chapter includes guidelines for the following aspects of UMTA:

- Geographical coverage
- Composition of the Governing Board
- Functions
- Institutional arrangements
- Organisational structure

Various options available for the above mentioned aspects have been provided in the following sections. Guidance is provided for finalisation of a suitable option, according to the specific requirements of the Urban Mobility Area.

3.2 GEOGRAPHICAL COVERAGE

In India, there are a total of 55 urban agglomerations[5] having a population of more than 1 million. Ideally, each of these million-plus urban agglomerations should have an UMTA. However, the constitutional structure and characteristics of urban agglomerations vary from area to area. While most urban areas are covered under a single municipal jurisdiction, some may share the jurisdiction of multiple municipal corporation/councils. The latter are referred to as Greater or Metropolitan Urban area. There may further be some urban areas/Union Territories like Delhi and Chandigarh which have a unique constitutional structure altogether – they may share the jurisdiction with different states. In light of varying constitutional structures across urban cities, no uniform model can be followed for selection of geographical coverage of UMTA. The following sections give guidelines to be followed for selection of geographical coverage of the Authority.

3.2.1 Guidelines for selection of geographical coverage

UMTA is envisaged to be central to a city's transport system. Therefore, UMTA's geographical coverage shall include the entire urban area, so that all residents of the urban area are able to benefit from the developments in urban transport. Based on the existing constitutional structure of million-plus cities, an urban area could fall under any one of the following four categories shown below:

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[5] Census of India, 2011

a) **State Capital Urban Area with one major Municipal Area:** This type would include an urban area which is a state capital and which falls under one major municipal jurisdiction. Examples of this type of cities are Lucknow, Bhopal, and Jaipur.

b) **State Capital Urban Area with more than one major Municipal Area:** This type would include an urban area which is a state capital and which falls under more than one major municipal jurisdictions, covering a number of adjoining municipal jurisdictions. An example would be Ahmedabad, where the urban area is mostly covered under jurisdictions of Ahmedabad and Gandhinagar Municipal Corporations.

c) **Non-State Capital Urban Area with one major Municipal Area:** This type would include an urban area which is not a state capital and which falls under one major municipal jurisdiction. Examples of this type of cities are Kanpur and Jabalpur.

d) **Non-State Capital Urban Area with more than one major Municipal Area:** This type would include an urban area which is a not a state capital and which falls under more than one major municipal jurisdictions, covering a number of adjoining municipal jurisdictions. Examples of this would be twin cities like Pimpri Chinchwad/Pune, and Kochi, etc.

While the State Government may decide and define the jurisdiction of any given UMTA in that state, it is recommended that the geographical coverage for UMTA shall include the planning area considered in preparation of land-use plan/master plan for the city/metropolitan area. This is necessary to facilitate integration between land-use plan and CMP that is envisaged to be prepared by UMTA. Further, UMTA's jurisdiction is recommended to extend beyond the planning area. This will enable UMTA to achieve the important objective of promoting development of systems for seamless public transport access beyond an urban area.

In case UMTA is already established under an existing local level agency, then its jurisdiction is proposed to extend beyond the planning area, and shall also include peripheral areas to ensure seamless transport connectivity. It shall not be restricted to the jurisdiction of the agency under which UMTA is set up.

It is imperative that the jurisdiction of UMTA is clearly defined in the UMTA legislation. This defined territory may extend beyond the city, as the city may experience sprawling population. Therefore, the clause defining the Urban Mobility Area shall be flexible to incorporate revision, as and when the jurisdiction of the master plan extends.

The options for geographical coverage of UMTA have been discussed in detail in Annexure III.

3.3 GOVERNING BOARD STRUCTURE

The Governing Board is envisaged to be an independent decision-making body with representation from all city, state and national level transport agencies which are stakeholders in the city's transport system. The Task Force, which has been set up to initiate UMTA and UTF, is expected to nominate a Governing Board for the Authority. The UMTA Governing Board forms the core decision-making management of UMTA. The Governing Board is expected to meet at regular intervals, and undertake decisions regarding execution of all functions that the Authority has been assigned.

The composition of the Governing Board of UMTA will have a major impact on streamlining its functions and coordinating with various stakeholders in the urban transport sector. The composition of the Board shall, by its very nature, be representative of the organisations that are being coordinated by UMTA. It shall comprise central, state and city level government representatives from all such agencies that perform or affect urban transport functions. The Board shall also represent beneficiary groups such as citizen forums, civil society, etc. as all these members are stakeholders in urban transport matters and decisions. The idea behind stakeholder representation on the Governing Board is to allow for interest groups to be directly

involved in making decisions regarding planning, coordination, oversight, and management of all transport related matters.

The Governing Board of UMTA shall have the following functions:
- To monitor and oversee proceedings of the Task Force in setting up UMTA
- To be accountable to the State Government in matters of urban transport
- To undertake overall responsibility of UMTA's functioning
- To undertake strategic decisions regarding UMTA's functions related to CMP preparation, project prioritization, Alternative Analysis, Transport Investment Programme preparation, regulation
- To set timely targets for UMTA and conduct progress reviews to assess performance
- To provide a forum where stakeholders can have discussions on the decisions and direction of the Authority
- To ensure compliance of all implementing agencies with the CMP

3.3.1 Composition of Governing Board

The Governing Board of UMTA is proposed to have adequate representation from all relevant stakeholders, i.e. those agencies, institutes or individuals that are involved in any aspect of urban transport of the city. In this context, and as shown in the exhibit below, the Governing Board shall comprise both government and non-government representatives. These may include members from the administrative services as well as elected representatives. Among non-government stakeholders, representation shall be drawn from the private sector, various beneficiary groups as well as academic institutions to assist in undertaking research and development activities. The proposed composition and functions of the governing board are highlighted in Exhibit 4.

Exhibit 4 Composition and functions of Governing Board
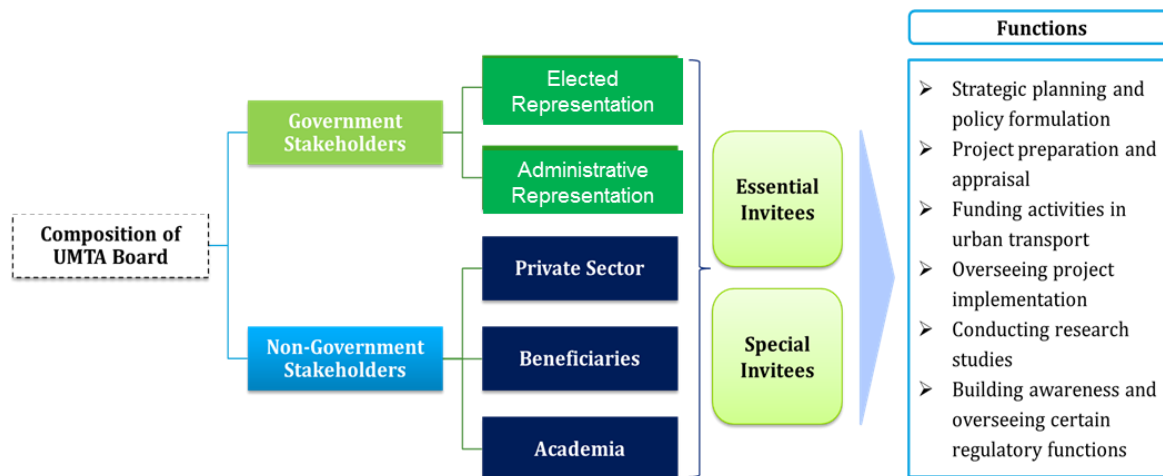
The UMTA Board shall comprise the following:

1. **Chairperson:** The Chairperson shall be de jure head of UMTA. It is proposed that the Chairperson of the UMTA Board may be decided and appointed by the State Government. Possible options for the position of the Chairperson could include the Chief Minister or Chief Secretary of the state, Divisional Commissioner or District Collector. The position could be finalized based on the specific context of the particular city for which UMTA is being established.

2. **Members:** These shall comprise officers from various departments of the State Government and city ULBs. The Task Force shall propose various departmental heads and senior level officers as members on the UMTA Board. UMTA members shall contribute to the decision making process and where necessary, by exercising their right to a single vote. All matters of UMTA shall be decided by consensus, and in case no consensus is reached, decisions would be taken by majority [6].

3. **Special Invitees:** These shall comprise officers from Central Government departments such as the Indian Railways, Airports Authority of India, NHAI and MoUD. They may be invited to be a part of the Governing Board for specific meetings, at the request of the Chairperson, as and when deemed necessary. They may be invited only when the subject matter and agenda of the meeting holds potential concern and interest to their respective departments. Special invitees are not to have voting rights; however, reasons for dissent, if any, shall be recorded.

4. **Essential Invitees:** This category includes other urban transport stakeholders who have not been included in previous categories. These include experts from various realms relating to urban transport including finance, law, public transport; citizen representatives and organized beneficiary groups; and technical and research institutes undertaking transport research. A fixed proportion or all of these persons may be mandatorily invited to all UMTA meetings. These persons shall be consulted so as to make the decision making process inclusive, transparent and technically sound. Essential invitees are not to have voting rights; however, expert advice tendered by them shall be recorded.

While the scale and scope of activities of UMTA may differ from city to city, the primary planning and coordination functions of UMTA would remain consistent across all Urban Mobility Areas. The composition of the UMTA Board should reflect its capacity to carry out its functions. The size of the UMTA Board would depend on the scope of functions proposed for the particular UMTA. International examples also reflect similar Board sizes, such as 13 in LAMATA (Lagos), 17 in TfL (London), 3-15 in LTA (Singapore), 13 in MBTA (Boston) and 7-9 in Auckland Transport.

In the event of an Urban Mobility Area choosing to roll out UMTA in a phased manner[7], i.e. implementing only a certain set of functions initially and incorporating the remaining over a period of time, the composition of the UMTA Board may be suitably modified to reflect the strategy so adopted.

It is recommended that the Board composition be made flexible and the final decision on who are to be members may be taken by the Task Force. The number of staff required for regular operation of UMTA can be finalized by the Chairperson at the time of formation of the Board.

A preliminary list of potential members has been provided in the generic UMTA Bill. The Task Force may decide the final composition, based on city-specific availability. The composition of the Governing Board of UMTA in each city will depend upon the size and complexity of the Urban Mobility Area. The geographical coverage of UMTA's jurisdiction and scope of functions to be performed will also have a bearing on the Board composition. Exhibit 5 demonstrates a recommended structure of Board for UMTA for four different types of cities.

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[6] The majority voting system of undertaking decisions by the Board may be simple, absolute or mixed, as decided by the Governing Board. The Board may choose to follow a mix of simple and absolute voting whereby it shall undertake important functional decisions of UMTA pertinent to CMP, Transport Investment Programme, etc. by an absolute majority voting, and the rest of the decisions by simple voting. The voting structure may be prescribed in the rules of the UMTA Act.

[7] Discussed in Section 3.6.4 : Options for Implementation of UMTA's Functions

Exhibit 5 Suggested composition of UMTA's Governing Board

Name of Department from which representation is proposed	Representation in UMTA as
Representation from state/ local level	
As decided by the State Government	Chairperson
Development Authority	Member
Urban Development Department of the state	Member
Town and Country Planning Department of the state	Member
Municipal Corporation(s) of Urban Mobility Area	Member
Transport Department of the state	Member
Finance Department of the state	Member
Public Works Department of the state	Member
State Road Transport Corporation	Member
Police Department	Member
Metropolitan/ District Planning Committee (as applicable)	Member
City Bus Transport Corporation	Member
Metro Rail Corporation (as applicable)	Member
Non-official members of Municipalities, as nominated by the State Government	Member
Pollution Control Board	Special Invitee
Port Trust/ Authority (as applicable)	Special Invitee
Irrigation Department	Special Invitee
Water and Sewage Department	Special Invitee
Island Development Authority	Special Invitee
Power distribution company in the state	Special Invitee
Representative from Central Government	
Ministry of Urban Development, GoI	Special Invitee
National Highways Authority of India	Special Invitee
Indian Railways	Special Invitee
Inland Waterways Authority of India	Special Invitee
Airports Authority of India	Special Invitee
Ministry of Defence, GoI/ Cantonment Board	Special Invitee
Non-governmental representation	
Traffic and Transportation Expert(s)	Essential Invitee

Name of Department from which representation is proposed	Representation in UMTA as
Corporate Governance Expert(s)	Essential Invitee
Law and Finance Expert(s)	Essential Invitee
Cyclists/Pedestrians welfare groups	Essential Invitee
Public transport beneficiaries	Essential Invitee

It is proposed that representation from Divisional Railway Users' Consultative Committee (DRUCC) and Zonal Railway Users' Consultative Committee (ZRUCC), or any committees of the Central Government agencies, be included in the UMTA Board, which could be done through representation from the agency itself, such as the Indian Railways. Also, the Chairperson of the UMTA Governing Board could nominate one of the members from UMTA to be included in the meetings of any committees created by the Central Government agencies such as the Indian Railways (ZRUCC, DRUCC), NHAI, etc. This would ensure that decisions of the central agencies, having a bearing on the transport system in the Urban Mobility Area, are taken after incorporating UMTA's suggestions.

In case UMTA has already been formed under an existing authority and its initial Governing Board composition has been proposed, it may further be strengthened based on the rationale provided in the above sections. Some members that are currently missing from the composition could be included so as to ensure fair representation of all relevant stakeholders. The Board shall comprise both governmental and non-governmental representatives, and representation shall be drawn from the private sector, various beneficiary groups as well as academic institutions to assist in achieving the objective of the Authority. An indicative template for modifying the existing composition of the Governing Board and UMTA's functions has been provided in Annexure XIV of the UMTA operations document.

3.4 INSTITUTIONAL ARRANGEMENT

Institutional arrangements for an authority need to reflect to whom the authority reports, both legally and administratively. UMTA may report to the City Government or to a department within the State Government. Urban areas today have several government entities which have varying institutional arrangements, for example, some urban areas have city bus transport SPVs that report to the City Governments. Certain agencies, such as regional development authorities, report to the State Governments. An appropriate institutional arrangement for UMTA needs to be identified.

3.4.1 Guidelines for selection of institutional arrangement

The institutional mechanism that needs to be put in place for UMTA should fulfil the following requirements:

1. UMTA should be a statutory autonomous body with full technical and financial authority as well as accountability.
2. The institutional framework of UMTA should enable decision making with autonomy.
3. It should provide a robust model for transport service delivery and accountability in governance of the urban transport sector.

3.4.2 Options for Institutional Arrangement

Generally, an Urban Mobility Area would find the following options for selection of a suitable institutional arrangement for UMTA:

1. UMTA reporting directly to the State Government;
2. UMTA as a subsidiary to an existing state department (Urban Development Department/Transport Department/Development Authority/Metropolitan Planning Committee); or
3. UMTA accountable to the municipal level of government.

Ministry of Urban Development or Ministry of Transport: Responsibility for urban transport within a state lies with either the Ministry of Urban Development or the Ministry of Transport. Since urban transport is interlinked with both these departments, it is logical for UMTA to ultimately report to the Minister of Urban Development or Transport, as applicable. The advantage of this option is that UMTA would have a clear status as an independent statutory authority, directly accountable to the State Government while its mandate would be for a specific metropolitan area.

Subsidiary of a State Government department: UMTA could also be organized as a subsidiary of a State Government department. Possibilities for parent State Government department include the Urban Development Department and the Transport Department.

Alternatively, UMTA may be created within the state's Urban Development and Planning Act or Town and Country Planning Act, instead of being set up through a special act.[8] This option, however, has several limitations. At present, the subject of urban transport is not specifically covered within a single legislation. Also, the implementation of various plans/schemes relating to transport is not the responsibility of any single authority in a state. Transport is only an incidental subject covered under the existing Town and Country Planning Act/Urban Planning and Development Act of various states rather being the main subject of any legislation. Urban transport planning has not been given due importance owing to lack of effective coordination among multiple agencies.

Some of the key reasons for not establishing UMTA under Town and Country Planning Act/Urban Planning and Development Act are as follows:

1. An important objective of UMTA is to promote development of integrated systems for urban transport, including seamless transport connectivity extending beyond an urban area. This requires the jurisdiction of UMTA to extend beyond the territorial boundary of planning area of a city. Establishing UMTA under Town and Country Planning Act may limit its jurisdiction to the geographical area defined in the Act. A separate UMTA Act, would, on the other hand, give flexibility to the State Government to define the jurisdiction of UMTA, which may extend beyond the territorial boundary of a city.
2. Since the subject of town planning is scattered across many legislations, it would require multiple amendments. (refer Exhibit 6).
3. An overriding clause under Town and Country Planning Act may not override conflicting clauses in other Acts related to transport.
4. In addition to the transport planning function, UMTA will also play a key role in policy formulation, regulatory functions, project implementation, funding, and monitoring, etc. However, Town and Country Planning Act of the state mainly focuses on planning and development of land-use.
5. The main objective of the Town and Country Planning Act of a state is to plan and develop use of land, and thus, transport is not adequately addressed in the Act.

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[8] While the generic recommendation is to set up UMTA through a separate legislation, cities may choose to establish UMTA through an amendment to an existing Act, depending on the unique requirements. Pros and cons of the same have been provided for reference.

Exhibit 6 Case Study- Uttar Pradesh

Multiple Acts pertaining to planning: The case study of Uttar Pradesh

Town planning and development in Uttar Pradesh is not confined to a single legislation. Multiple legislations exist on planning (Urban Planning and Development Act, 1973, UP Industrial Area Development Act, 1976 Uttar Pradesh Special Area Development Authorities Act, 1986), having applicability in different areas, as illustrated below:

- Uttar Pradesh Urban Planning and Development Act, 1973 provides for development authorities *for notified areas*. Section 8 and 9 provide for Master Plan and Zonal Plan respectively for the *particular development area*.
- Similarly, UP Industrial Area Development Act, 1976 provides for constitution of an authority for development of *certain areas* in the State into industrial and urban township and for matters connected therewith.
- NOIDA Authority and Taj Expressway Industrial Development Authority are constituted under UP Industrial Area Development Act, 1976, whereas Ghaziabad Development Authority is constituted under Uttar Pradesh Urban Planning and Development Act, 1973.

Establishing UMTA under these Acts would require amendments in multiple Acts. It will also restrict the jurisdiction of UMTA to the geographical area covered by that particular Act only. A separate legislation will provide flexibility to extend the jurisdiction of UMTA to areas beyond those notified by these specific Acts. Also, an overriding clause under Town and Planning Act may not override all conflicting clauses relating to transport.

Development Authorities: Development authorities are responsible for preparation of land-use plan for urban areas and this generates transport demand; it would be desirable that a land-use plan is approved only when its associated Transport Management Plan is also approved. The basic function of UMTA is preparation of CMP which would guide the overall development of urban transport. In line with this, another option for institutional arrangement could be UMTA reports to the Development Authority of a city.

However, this option has associated limitations. Development Authorities have their major focus on development of land, change of land-use and less focus on integration of transport modes. By establishing UMTA under a Development Authority, transport may not get the desired focus. The Development Authority's concerted focus on preparing the land-use plan may shift focus away from transport planning. Additionally, the purpose of establishment of UMTA is to act as an umbrella body for overall planning of urban transport, including co-ordination among multiple authorities. Establishing UMTA within a Development Authority, which is one amongst various stakeholders, would defeat this purpose. However, there might be a possibility that UMTA has already been set up under an existing Development Authority. In this case, UMTA could be strengthened in terms of its composition and functions, based on guidelines provided in this operations document. Once the existing UMTA matures, it could be set up as separate authority under special legislation.

Metropolitan Planning Committee (MPC): The Constitution of India makes it mandatory for states to set up Metropolitan Planning Committees (MPCs) in metropolitan areas. A metropolitan area is defined as an area having a population of 1 million. Article 243ZE of the 74th Amendment to the Constitution mandates that, "There shall be constituted in every Metropolitan area, a Metropolitan Planning Committee to prepare a draft development plan for the Metropolitan Region as a whole." An important task of the MPC will be to

streamline and rationalize planning for the metropolitan area such that it caters to the mobility demands of a large and growing population.

The main role of the MPC is to prepare a draft development plan for the metropolitan area as a whole. Since urban transport planning is an important part of development planning, an option could be to place UMTA within the MPC. It may, however, be noted that exercise of this option would be contingent on the existence of MPC and provision of adequate power and technical competence with such MPCs.

Since MPCs comprise elected members, ensuring good urban transport would become an incentive for any elected member. The composition of the MPCs involves representatives of the local, State and Central Governments, thus, ensuring coordination among all three tiers of government. However, it has been observed that in many states the establishment of MPCs has not been done on a priority basis.

Municipal level government: The city is the prime beneficiary from improved urban transport, so the city should have a major say in the development and management of its urban transport. From this perspective, UMTA could be established with direct accountability to the municipal level of government. The Municipal Corporation is responsible for planning and managing all activities including urban transport under its jurisdiction and has a better understanding, as compared to other city and state-level authorities, about the urban transport needs of the city.

However, it may not be easy for a city level agency such as the Municipal Corporation, without backup from the state, to coordinate with Central Government agencies such as Indian Railways and NHAI in urban transport matters. Exercising this option would also be dependent on the capacity of municipalities to oversee an entity such as UMTA, and guide it in dealing with numerous concerned agencies. Feasibility of this option would be affected by the jurisdiction of the Municipal Corporation. Unless the jurisdiction of Municipal Corporation covers the entire Urban Mobility Area, which would be the jurisdiction of UMTA, effective planning and implementation would be a challenge. This option may also not be feasible when an Urban Mobility Area includes multiple Municipal Corporations, as UMTA may not be accountable to all of them.

Based on the feasibility of options suggested above, the Urban Mobility Area shall identify a suitable institutional mechanism for UMTA. The objective shall be to identity a mechanism where UMTA is able to function as a statutory autonomous body with full technical and financial authority. The institutional arrangement shall be such that it is clearly accountable and responsible for planning and development of urban transport. Where the Urban Mobility Area is entirely within the jurisdiction of a single municipality, it could be possible for UMTA to report to the municipal government. Where this is not the case, other options may be considered.

The various options for institutional arrangement of UMTA along with their pros and cons have been further discussed in Annexure VI.

3.5 ORGANISATIONAL STRUCTURE

The organisational structure of an authority reflects the division of responsibilities among its units that work in coordination to accomplish its overall objectives. Generally, while designing the organisational structure of an authority, specific individual units that handle one or more of the distinct responsibilities of that authority are identified. Additionally, some support units shall be identified that enable other units to carry out their functions. These units may be referred to by different terminologies such as cells, divisions, wings, departments, etc.

The other important consideration related to organisational structure is staffing. This entails identifying the required number of staff, their experience levels and background, etc. Guidelines for the same are provided below.

3.5.1   Guidelines for finalization of organisational structure

The major functions of UMTA include:

- Comprehensive transport planning
- Transport management
- Funding urban transport activities
- Regulation
- Monitoring
- Conducting policy, research studies, and awareness related functions

Since all these functions are crucial and distinct, individual units shall be put in place to carry out each of the functions. An important consideration while identifying individual units is the synergy among them. For example, the research and studies function is distinct from policy making function, however, a single unit envisaged for these functions will bring in synergy. In case any of these functions are not included as function of UMTA, suitable modifications may be considered.

A suggested approach to ensure efficient operations is to keep the Authority lean and suitably outsource activities to specialized entities. A lean organisational structure will lead to identification of selected positions with specific responsibilities. This will also depend on the size of the Urban Mobility Area which comes under UMTA's purview and other local factors. In this regard, options for functions that may be outsourced could include UTF management, accounting, information technology, ITS and communications, etc. Consultants could be beneficially engaged for distinct activities such as preparation of CMP, development of standards and guidelines, review of proposals and audit of implementation, preparation of contracts, preparation, and delivery of awareness campaigns, and conducting research.

Because of the high level of responsibility, UMTA will need to attract and retain highly experienced, capable, and professional staff for effective and efficient discharge of its functions. Generally, the following options would exist for staffing UMTA:

- Deputised staff
- Permanent employees
- Mix of deputised and permanent staff
- Contract employees, e.g., Lagos UMTA counterpart, called LAMATA

Exhibit 7 presents a case study on the organisational structure of LAMATA.

Exhibit 7 Case study- Organisational structure of LAMATA

Organisational structure of LAMATA[9] (Lagos Metropolitan Area Transport Authority)

To meet its objectives and goals, LAMATA needed qualified and experienced staff in departments such as traffic management, for which there was a limited supply of suitably qualified professionals in Nigeria. LAMATA has, therefore, taken innovative steps in recruiting its staff by widening the net beyond Nigeria so as to engage staff with the necessary experience. Sometimes, recruitment has also been undertaken via agencies avoiding situations whereby pressure is placed on LAMATA to employ favoured candidates.

The remuneration and retention packages of LAMATA staff are pitched at private sector levels so as to attract, retain and motivate high calibre staff that can enable LAMATA to meet the challenges of transforming transportation in Lagos.

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[9] Refer Annexure XI for detailed case study of LAMATA

The organization has also prepared and is implementing several policies designed to assure effective operations. These include an employee handbook, a financial management system manual, a procurement procedures manual, IT policy, staff training needs assessment and plan, and LAMATA policies and procedures manual. In addition, LAMATA has undertaken rigorous staff training needs assessment, identifying the types of training needed by the staff to support them in their functions. Frequently, staff is engaged in study tours within and outside Nigeria to expose them to solutions to issues and problems that can be applied in Lagos.

UMTA staff will need to work closely with several other agencies - State Town and Country Planning Department, State Finance Department, State Transport Department or Corporation, Metropolitan Development Authority, Traffic Police, the Indian Railways (where suburban railways are involved), Metro Rail Corporation (where metro rail exists or is planned), Municipal Corporation, etc.

Option I – Deputised Staff	
Pros	**Cons**
➢ Would allow UMTA to be staffed quickly ➢ Could be returned if found unsuitable or no longer needed ➢ Could be offered a permanent position if found suitable after a trial period	➢ Limited to those staff available and willing to be deputised ➢ Skills and knowledge may not be the best available ➢ Could continue to have loyalty to their parent organisation, which could compromise UMTA's independence ➢ UMTA will lose skills and knowledge when staff return to their parent agency ➢ Unlikely to be able to obtain all required staff by this method

One option could be deputizing staff of existing departments and agencies such as Urban Development Department or the Development Authority, to work for UMTA. This would facilitate quick staffing with professionals who have had similar experience. Initially, when UMTA is being set up, it would require staff who are aware of working in similar set ups, so deputations should be the key resources in initial stages; later when the organisation is established, the deputations can either be retained or be sent back to their respective departments.

Another option could be to staff UMTA with permanent staff recruited by the Authority itself from the open market for its core activities. This option would be time consuming but would ensure staffing of professionals with precise experience and qualifications. Change in management would not be an issue and professionals are likely to stay longer than deputised staff.

Option II – Permanent Employees	
Pros	**Cons**
➢ Can select the best persons available, by head-hunting if necessary ➢ More amenable to a new culture ➢ Potential to be more dedicated and loyal to UMTA ➢ Potential to stay longer than deputised staff ➢ Can grow with the organisation	➢ It is likely that they would need more training than deputised staff in certain areas

It is preferable that UMTA staffs are recruited on a full time basis. However, in case of unavailability of suitable persons on a full time basis, staff may also be deputed. A mix of both options may be a workable option. The deputised staff could be used to get UMTA functional, and with passage of time, they could either be made permanent or replaced by permanent staff.

Option III – Mix of Deputised and Permanent Staff	
Pros	**Cons**
➢ Deputised staff can be used to get UMTA functional while more permanent staff are recruited and trained ➢ Also, most of the benefits of Option II can be leveraged	➢ Implies need for significant amount of training

While selection of a suitable option would depend on local conditions, an approach of mixed staffing could be considered. This would ensure quick staffing to get the Authority operational, while carrying out parallel recruitments for other staff.

In case UMTA has been established under an existing local level agency such as the Development Authority, then some staff of the same agency could also serve as staff of UMTA. Some selected staff members from the same agency could be deputised as UMTA staff, or could continue to work for that agency, and additionally, also serve UMTA. The number of staff required for UMTA could go down significantly as some functions such as administration, IT, and human resources could be shared with the parent agency. However, additional technical experts can be hired from the open market to carry out specific functions.

3.6 FUNCTIONS OF UMTA

Functions assigned to UMTA will dictate aspects of its design. Hence, attention needs to be given while deciding these functions which would be the generated outcomes of analysis of functional gaps and overlaps, and the overall situation of urban transport. Based on such analysis, the objectives and requirements of UMTA may be firmed up. These would serve as starting points for the formation of its structure. The key urban transport functions are illustrated in Exhibit 8.

Exhibit 8 Urban Transport Functions

Urban Transport Functions

Function	Details	Responsibility
Strategic Policy Making	• Setting Vision & Objectives • Policy Formulation • Long run Planning • Fiscal Measures	Central/State Government
Infrastructure Planning	• Roads • Bridges • Highways • NMT • Freight Movement • Intersections • Parking • Public Transport	UMTA
Service Planning	• Route/Network Design • Demand Assessment • Service Planning • Intermodal Coordination	UMTA
Common Facilities	• Smart Ticketing • Data Management • ITS	UMTA
Regulations	• Driver Licensing • Vehicle Registration • Fare Setting • Route Permission • Enforcement	UMTA
Public Transport Operations	• Metro/Rail Systems • Buses and Paratransit services • Taxi Systems	State Govt./ Local Govt.
Construction & Maintainence of Infrastructure	• Roads • Bridges • Highways • NMT • Freight Movement • Intersections • Parking • Public Transport	State Govt./ Local Govt.

As highlighted in the above exhibit, urban transport functions can be broadly categorized into groups such as policy making, planning for infrastructure and services, regulatory functions, operation of public transport and construction and maintenance of infrastructure. Strategic policy making is generally done by Central and State Governments. NUTP offers an example of a policy drawn at the Centre, which incentivise various cities and states to improve and develop their transport systems by providing the requisite directions and resources. Apart from this, UMTA is expected to undertake planning and regulatory functions, and ensuring a well-coordinated urban transport system exists in the city.[10] Since UMTA would be a planning and regulatory body, it is not expected to undertake functions related to public transport operations, construction, and maintenance of infrastructure. The local or State Government may continue to perform these. The following sections discuss considerations and guidelines that may be referred to for finalizing UMTA's functions. Examples of UMTA counterparts are briefly discussed in Exhibit 9.

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[10] Refer to Section 3.5.3 for core and non-core functions of UMTA

Exhibit 9 Case study- UMTA counterparts around the world

Instances of Unified Transport Agencies across the world

Various cities across the globe offer examples of their governments' organisational arrangement to manage urban transport:

1. **STIF (Transport Syndicate of the Ile de France)** is a unified transport authority accountable for transportation of the whole region of Paris across all modes of ground transport. STIF is in charge of organizing, coordinating, modernizing and financing public transport. It also formulates the urban mobility plan; defines the transportation routes; selects and appoints operators; sets the operational, management and financing guidelines; and ensures that the investment programmes have certain coherence.

2. **Transport for London (TfL)** is an integrated transport authority accountable for London's transport system. TfL is responsible for planning and operation of transport facilities in the city which clocks more than 24 million commuters every day. TfL controls several modes of transportation such as London Underground, Dockland Light Railway, London Overground Train services, Croydon Tramlink, London River services, London Transport Museum and London Road Network. TfL manages a total of 580 km of road network in London and 6000 traffic lights installed in the UK capital. It is also responsible for administering the taxi and private hire trade.

3. **TransLink Vancouver** is the regional transportation authority of Metro Vancouver. It is responsible for regional transit, cycling, commuting options and installation of Intelligent Transportation Systems. TransLink, along with the municipalities in Metro Vancouver, is also involved in the Major Road Network (MRN). It is the first North American transportation authority to be responsible for the planning, financing, and management of all public transportation systems. The services that come under TransLink are bus, ferry, commuter rail, skytrain, roads, and bridges, among others.

4. The **Land Transport Authority of Singapore (LTA)** is the authority responsible for land transport development and regulation in Singapore. It is accountable for both public and private transportation. LTA was one of the first integrated transport authorities to be formed in the world, adopting the approach of a one-stop agency for all land transport functions.

The following table demonstrates the broad functions under the domain of unified urban transport agencies in various countries:

Country	Strategic Functions	Infrastructure Planning	Regulation	Service Planning	Infrastructure & Construction Maintenance	Public Operations	Transport
						Common Facilities	Independent Services
Paris	✓	X	✓	✓	X	X	X
London	✓	✓	✓	✓	X	✓	X
Vancouver	✓	✓	✓	✓	X	✓	X
Singapore	✓	✓	✓	✓	X	✓	X

3.6.1   Considerations for finalisation of UMTA's functions

The main aspects to be considered while finalizing the functions of UMTA are highlighted in the box below.

> **KEY CONSIDERATIONS:**
> ✓ Is the UMTA filling institutional and governance gaps currently curtailing the urban transport sector?
> ✓ Is the UMTA able to resolve the existing legal and institutional overlaps, leading to unambiguous urban transport planning and operation?
> ✓ Does there exist clear assignment of responsibilities and powers between urban transport agencies?
> ✓ Are urban transport functions rationalized and logically assigned?
> ✓ Has the UMTA been given the right balance of authority and accountability?

3.6.2   Guidelines for finalisation of UMTA's functions

The key institutional issues relating to urban transport for an Urban Mobility Area are:

Institutional gaps: In most states, some urban transport functions are not carried out by any agency and as such, there exist institutional gaps. Such gaps could include preparation of CMP, integration of land-use plan with CMP, multi-modal integration, etc. These functions can be considered to be undertaken by UMTA.

Institutional overlaps: Multiple urban transport laws exist that give rise to multiplicity of transport related agencies. The resultant overlap disables unified and comprehensive planning and implementation. Such functions can also be assigned to UMTA.

Rationalisation of functions: Certain functions which are currently being performed by existing agencies could be rationalised and assigned to UMTA so that the urban transport system can be integrated and coordinated. Possible examples include providing direction in issuing licenses for public transport, recommending on route planning, fare structuring of public transport services, etc.

The exhibit below provides the broad methodology which may be adopted to propose the functions and powers of UMTA. Various urban transport functions currently being performed by multiple agencies need to be studied in order to identify gaps and overlaps in existing functions. Then, certain functions which are currently being undertaken by some agencies but can be better performed by UMTA can be identified and accordingly be assigned to UMTA.

Rationale for finalization of functions to be performed by UMTA are presented in Exhibit 10.

Exhibit 10 Finalizing functions to be performed by UMTA

KEY URBAN TRANSPORT FUNCTIONS
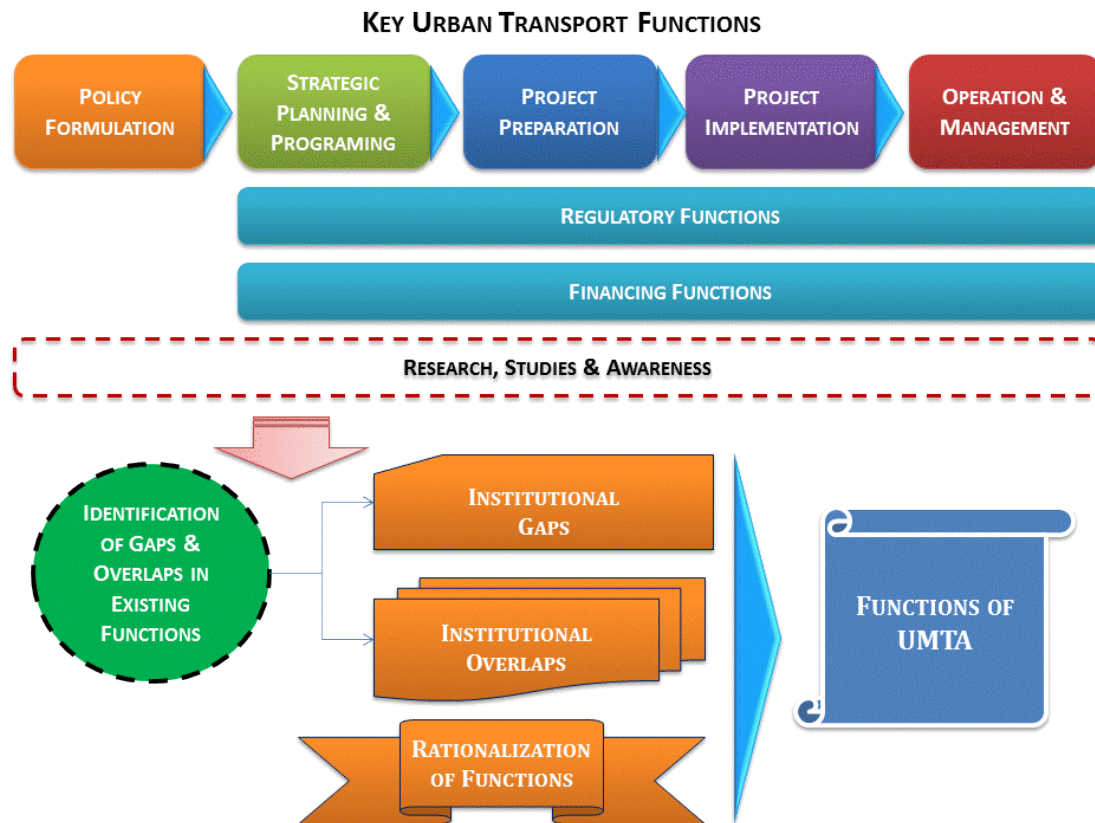
3.6.3 Roles and responsibilities of UMTA

The urban transport functions and related activities for managing and funding the urban transport system can be divided into eight broad categories. These include:

1. Inputs in policy formulation

UMTA shall provide inputs to the Central and State Governments in developing policies and strategies for removing bottlenecks and modernising the city's transport system. UMTA, being a local-level government body, will have in-depth and precise knowledge about urban transport challenges that exist at the ground level. These may range from infrastructural inadequacies to institutional and governance bottlenecks. UMTA would be in the appropriate position to advise the government on the city's current and future urban transport needs and the mechanisms for addressing challenges.

2. Strategic planning

Urban planning functions are assigned to various agencies at the state and city level such as the State Town and Country Planning Department, Planning Committees, the Urban Development Authority and urban local bodies. However, the scope of most of these agencies is limited to land-use planning. Land-use plans do contain a transport component, including transport infrastructure provisions, yet there is seldom a comprehensive planning undertaken for urban transport operations. Preparation of a CMP, which includes planning for mass rapid transit, para-transit, and non-motorised transport, as well as the road and highway network and associated facilities of multi-modal in nature, is generally not a responsibility of any

agency. Similarly, the responsibility of ensuring that urban transport initiatives of various implementing agencies are integrated and scheduled in a logical sequence, is also not assigned to any specific agency. In this context, UMTA shall undertake planning functions that set direction for the city's long-term transport planning, thereby providing a framework for transport policy and investment decisions to respond to key challenges. In case an integrated mobility plan in the form of CMP or Comprehensive Traffic and Transportation Study has already been prepared or conducted for an urban area, UMTA could be assigned the responsibility of periodically updating such plans.

3. Project approval

Since UMTA would be accountable for the responsibilities assigned to it, it should also be given powers to ensure that other agencies comply with UMTA's decisions. Funding approvals for urban transport initiatives is one such power that may be assigned to UMTA, to give it the necessary authority to execute its functions.

To route funds currently provided by the Finance Department through UMTA, a proposition could be to make it mandatory for proposals issued by implementing agencies to obtain a no-objection clearance from UMTA, before funds are allocated from the Finance Department for those proposals. UMTA shall expedite this by issuing 'Certificates of Approvals' for projects drawn by implementing agencies which are in consonance with CMP. This would ensure compliance with strategies, plans, programmes, standards and guidelines.

It would also be important that UMTA reviews and approves projects for which it facilitates funding in whole or in part, so that it can be assured of gaining value from putting in its resources. Project approvals will be based on compliance with CMP and other guidelines and standards prepared by higher authorities.

4. Ensuring project implementation

UMTA would be responsible for ensuring effective implementation of plans and projects related to urban transport in the Urban Mobility Area. Accordingly, it would be vested with powers for giving directions to existing urban transport agencies for implementation of any urban transport project or operation of an existing urban transport system which are multi-modal in nature.

5. Overseeing operation and management

Operation, maintenance and management of transport infrastructure and operations involving public transport services are generally carried out, either by public agencies or private companies. Operations and management requires fitting technical staff and equipment and is recommended to be left to infrastructure and facility owners and service providers. In this regard, UMTA shall be made responsible for overseeing operation of integrated facilities and systems for public transport.

6. Regulation

Regulatory functions with respect to urban transport include registration and licensing of public, private and freight transport vehicles, fare fixation, issuance of permits, designation of public transport routes and service levels, inspection of vehicles' construction or condition, enforcement of traffic laws and management of traffic. These functions are generally carried out by a number of agencies, mostly at the state level. By enabling UMTA to issue recommendations on performance of some such functions by the state departments, UMTA would be empowered with some degree of responsibility for matters that occur solely within its area of jurisdiction.

On the other hand, matters like registration and licensing of private and commercial freight vehicles, which apply to the entire state, would not be a suitable function for UMTA. The same argument applies to licensing and fare fixation for public transport vehicles that operate outside the purview of UMTA's jurisdiction. UMTA shall, however, be allowed to provide recommendations on licensing and fare fixation of public transport

vehicles operating within its jurisdiction and regulate fees and charges for other urban transport facilities and services.

It is suggested that UMTA shall not get involved in inspecting vehicles' condition, or enforcing traffic laws or managing traffic.

7. Funding

The fund requirements of the urban transport sector are huge. Urban transport reforms recommend establishment of a UTF so that initiatives are less dependent on government budgetary allocations. As part of these reforms, it is envisaged that UMTA's planning shall regulate expenditure from UTF for urban transport initiatives in the Urban Mobility Area and ideally, UMTA would be responsible for utilisations from the UTF. In this regard, UMTA shall be made responsible to manage UTF. The funding role that shall be assigned to UMTA can include the following functions:

- Resource mobilization
- Treasury management
- Utilisation / disbursements of funds
- Funds management
- Monitoring of fund utilisation

8. Research studies and awareness

For achieving the desired development of urban transport, research studies need to be conducted regularly. UMTA shall be made responsible for conducting research specific to the Urban Mobility Area, including up-grade and extension of urban transport and be made responsible for effective measures that will ensure public safety in urban transport. UMTA would also be responsible for collation of information on urban transport within the Urban Mobility Area and provision of the same to the relevant agencies with a view to contribute to the national database on urban transport.

The methodology and detailed guidelines for carrying out each of the above mentioned functions has been discussed in Chapter 6 "Operationalization of Functions". The Urban Transport Fund Operations document provides guidelines on various aspects related to setting up and operationalization of UTF to carry out all functions relating to funding.

3.6.4   Options for implementation of UMTA's functions

For a phased implementation of UMTA in an Urban Mobility Area, an evolving approach is best followed in adopting possible functions of UMTA. These functions could be categorised into two types i.e. Core Functions and Additional Functions. The Core Functions include coordination, preparation of CMP, analytical inputs in preparation of policy and strategy, etc. An Urban Mobility Area may choose to assign additional functions to its UMTA, or it may choose to assign only core functions initially and gradually take up additional functions over time.

In this regard, an Urban Mobility Area may exercise any of the following options:

Under **Option I – Integrated planning and coordination only (core functions)**, UMTA shall be made responsible for integrated planning, consolidation of transport projects and programmes of transport agencies and other aspects of coordination.

In **Option II – Rationale group of functions (additional functions)**, UMTA shall be made responsible for a rational set of functions. This option shall involve transferring some functions from agencies currently carrying them out.

In **Option III – All urban transport functions** mentioned above with possible roles shall be assigned to UMTA.

The option, so adopted, may involve significant change to current agencies and result in a much larger UMTA organisation, and consequently, an even larger range of skills required.

The extent of each of the options is illustrated in Exhibit 11.

<center>**Exhibit 11 Options for UMTA's functions**</center>

FUNCTION	Option I	Option II	Option III
POLICY FORMULATION			
Assist and advise government on urban transport matters	Yes	Yes	Yes
Prepare and administer urban transport policies, strategies, standards and guidelines	Yes	Yes	Yes
STRATEGIC PLANNING			
Prepare a CMP integrated with land-use plan	Yes	Yes	Yes
Prepare an Alternative Analysis report	Yes	Yes	Yes
Prepare a Transport Investment Programme	Yes	Yes	Yes
Monitor and audit compliance with the above plans	Yes	Yes	Yes
PROJECT PREPARATION AND APPROVAL			
Approve major urban transport projects and activities		Yes	Yes
ENSURING PROJECT IMPLEMENTATION			
Promote development of integrated facilities and systems for urban transport		Yes	Yes
OVERSEEING OPERATION AND MANAGEMENT			
Oversee operation of integrated facilities and systems for urban transport		Yes	Yes
REGULATION			
Issue guidelines and standards for urban transport		Yes	Yes
Recommend on issuing licenses/ permits public transport services	Yes	Yes	Yes
Monitor and advise on fees and charges		Yes	Yes
Enforce regulations for which UMTA is responsible		Yes	Yes
FUNDING			
Fund public transport services for integrated mobility		Yes	Yes
Fund, or arrange / recommend / approve funding for urban transport		Yes	Yes
Monitor and audit use of UTF		Yes	Yes
RESEARCH STUDIES AND AWARENESS			
Maintain common database relating to urban transport		Yes	Yes
Develop and manage local performance indicators for urban transport		Yes	Yes
Monitor and advise on safety relating to public transport		Yes	Yes
Conduct research studies and awareness programmes		Yes	Yes
OTHER			
Build and maintain major infrastructure (stations, interchanges, roads, etc.)			Yes

FUNCTION	Option I	Option II	Option III
Operate buses, trains and other forms of public transport			Yes
License and register vehicles and drivers			
Inspect vehicles' construction and condition			
Enforce traffic laws and manage traffic			

Functions that need to be rationalized

The functions encircled in red are those that would require rationalization.

The Core Functions that UMTA is mandated to discharge form the intersections among the three options posed above and are briefly discussed as follows:

1. **Policy Formulation** –UMTA is expected to assist and advise state and city level government bodies in all matters related to urban transport, prepare and administer urban transport policies and strategies. It shall also set benchmarks and give suitable guidelines to various agencies in executing transport policies.
2. **Strategic Planning** –UMTA is expected to prepare CMP and integrate it with existing land-use plans of the city, by coordinating with appropriate agencies. The Authority is expected to monitor conformance to the laid out plans, audit and report compliance, at the city, state or national level.

Additional (or optional) functions may be adopted depending on the size, characteristics and structure of the cities, as well as the degree of acceptance of the stakeholders involved.

It is suggested that an Urban Mobility Area should opt for Option II, where a rationalized group of functions are assigned to UMTA. Cities may strive progressively bring an increasing number of functions under the purview of UMTA, in order to enable it to comprehensively oversee the urban transport system and ensure its efficiency.

3.7 CONCLUSION

This chapter discussed guidelines for finalisation of the UMTA structure, the first activity that the Task Force would be required to perform. In case UMTA has already been established under an existing local level agency, and certain functions have been assigned to it, then these functions could be strengthened based on guidelines provided in this chapter. The guiding principle should be to ensure that UMTA fills in current gaps in integrated urban transport planning while removing any overlaps. The next chapter describes guidelines for activities to be carried out by the Task Force during enactment of the UMTA legislation.

4. PROCESS FOR ENACTMENT OF BILL

4.1 INTRODUCTION

The Task Force is envisaged to be a specialised unit, to proficiently undertake all planning and management required for setting up UMTA. This chapter describes various activities to be carried out during pre-drafting the Bill, development of draft legislation and finally, its enactment.

4.2 PRE DRAFTING STAGES

4.2.1 Stakeholder Consultation

The Task Force shall initiate the process by organizing consultations with all concerned stakeholders for discussions on matters pertaining to UMTA including the following.

- Necessity for the proposed legislation;
- Background of the legislation;
- Background material – generic legislation provided by MoUD; and
- All other details relevant to the proposed legislation.

4.3 GUIDELINES FOR DEVELOPMENT OF DRAFT LEGISLATION

4.3.1 Development of draft UMTA legislation

Referring to the generic UMTA legislation, the Task Force may customize the document for preparing the city specific legislation; which would involve the following.

a. Based on the finalized options for structuring of UMTA and UTF, the Task Force shall customize the generic legislation with respect to:

- Geographical coverage
- Governing Board structure
- Institutional arrangement
- Functions and powers
- Funding sources and utilization

b. Finalization of other sections of the draft generic legislation which contains other important sections as shown below. The Task Force shall customize such sections as it may deem necessary, based on prevailing state norms/other state or local constrains/conditions such as:

- Definitions
- Members not to have certain interest
- Term of office and condition of service of members
- Resignation, removal or suspension of the Chairperson or other members
- Powers of the Chairperson
- Functions and powers of the Authority
- Sources of funding for UTF
- Officers and staff of the Authority
- Meetings of the Authority
- Committees constituted by the Authority (for specific subject matters)
- Declaration of Urban Mobility Area
- Establishment of Urban Mobility Area and alteration of their limits
- Offences and penalties

4.3.2   Circulation of draft city specific legislation and Stakeholder Consultation Workshop

Upon finalizing the draft city-specific legislation, the Task Force will need to:

a. Circulate the draft legislation to all concerned stakeholders for their review and suggestions.
b. The Task Force may organize a consultation workshop where a detailed presentation on the proposed draft UMTA legislation could be made. The consultation workshop shall be held within three months from the circulation of the first draft.
c. During this workshop, detailed discussions on the draft legislation, suggestions, and comments from all stakeholders shall be expected.
d. The draft legislation would probably undergo numerous modifications and a second consultation may be needed such that by end of this workshop a final draft, acceptable to all stakeholders will result.

Record of the feedback, discussions, comments and suggestions and proceedings of the workshop will be necessary and useful in preparation of the appreciation note for the State Government and sending the draft legislation for approval.

4.3.3   Revision of the draft legislation based on feedback from stakeholders

Based on the approved modifications discussed during the workshop held, in accordance with 4.3.2 above, the Task Force shall update the draft legislation and prepare the second draft of the legislation. The Task Force shall complete this reviewing activity within one month of completion of the consultation workshop(s).

4.4   PREPARATION OF NOTE FOR STATE GOVERNMENT'S CONSIDERATION

4.4.1   Approval from the State's Minister of Urban Development/ Transport

After consultation with the stakeholders has taken place, and the revised 2nd draft legislation has been prepared, the Task Force shall develop a note and refer the same for approval from the concerned Minister.

The note for the State Government will:

1. Clearly bring out the need, scope, and objectives of the proposed legislation;
2. Present the views of the concerned stakeholders and the agreed finalized options that have been incorporated in the draft legislation; and
3. Provide a copy of the draft of the proposed legislation.

An indicative format of the note to be sent to the State Government has been provided in Annexure VIII.

4.5   ACTIVITIES DURING ENACTMENT STAGE

4.5.1   Sending the Note for approval of the State Cabinet

After approval by the concerned Minister, the Task Force may proceed with the note to the state's Cabinet Secretariat for placing the same before the Cabinet for its consideration and approval. The cabinet may suggest some changes in the draft legislation. The Task Force in consultation with the state's Legal Department shall incorporate such changes. Thereafter, the Task Force shall prepare following documents:

1. A Statement of Objects and Reasons relating to the Legislation to be signed by the Minister-in-charge
2. Notes on clauses to be appended to the Statement of Objects and Reasons
3. Financial Memorandum to be prepared in consultation with the Department of Finance giving details of proposed sources of funds and their estimates
4. A Memorandum regarding Delegated Legislation explaining the scope of the proposals and stating whether they are of a normal or exceptional character.

All the above documents shall also be shown to the state's Legal Department before finalization.

It should also be noted that in light of the approved Financial Memorandum, which will include sources of funding as provided under the draft legislation, some amendments may be required to be incorporated under other existing laws and also budgetary allocations would need to be made under the Finance Act, so as to ensure that the UTF is financed. Therefore, co-ordination and approval from other concerned Ministries will also be required. This may be carried out while the first and second drafts of the legislation are being prepared.

4.5.2 Sending legislation to Legislative Assembly

When finalized, the state's Legal Department shall send the proposed legislation for obtaining proof of copy.

The state's Legal Department will:

1. Simultaneously send proof copies each of English, Hindi and local language versions of the proposed legislation to the Secretariat of the state's Legislative Assembly; and
2. Return the file to the Task Force.

The Legislative Assembly Secretariat shall receive the fair copy of the draft legislation printed at every stage and send a copy of it simultaneously to the administrative department (Transport/Urban Development Department) and to the Legal Department for scrutiny for ensuring accuracy. The administrative department, after scrutiny of the draft legislation, shall return it within a pre-defined period to the Legislative Department so as to enable the Legislative Department to incorporate corrections/suggestions, if any and shall send the final scrutinized copy to the Legislative Assembly Secretariat.

The administrative department shall then send a notice of the motion for introduction of the Bill in its respective state assembly.

4.5.3 Introduction of the Legislation

On a date specified by the Department of Legislative Affairs, the bill shall be put down for introduction in the Vidhan Sabha and thereafter, published in the State Gazette by the Vidhan Sabha Secretariat. An indicative format of the same is provided in Annexure X.

4.5.4 Motions after introduction

After the Bill is introduced, the Minister (member in charge) may send it to the Secretary-General, Vidhan Sabha, a notice of his intention to move:

a. That it be taken into consideration and passed; or
b. That it be referred to a select committee of the house; or
c. That it be circulated for eliciting public opinion.

When the motion that:

a. The Legislation be taken into consideration; or
b. The Legislation as reported by the Select Committee be taken into consideration is carried; or
c. The Legislation will be taken up for clause-by-clause consideration. Members can, at that stage, move amendments to the Legislation.

4.5.5 Amendments

When a motion has been agreed to by the Vidhan Sabha that the Bill shall be taken into consideration, any member may propose an amendment of such Bill. Notice of a proposed amendment shall be sent to the Secretary at least three clear days before the sitting of the Assembly at which the Bill is to be considered. The amendment shall, unless the speaker otherwise directs, be considered in the order of the clauses to which they respectively relate.

4.5.6   Circulation for Public Opinion

When the draft legislation is to be circulated for eliciting public opinion, necessary action shall be taken by the Vidhan Sabha Secretariat.

Time permitting, proposals to amend the provisions of a Legislation shall be submitted to the State Cabinet for approval. Where, however, for want of time this is not possible, the Minister in charge shall take a decision in consultation with the Chief Minister. As soon as possible thereafter, a note in the usual form will be submitted for post-facto approval of the State Cabinet.

4.5.7   Passing of Legislation

After the Legislation is passed:

1. A copy of the Legislation, as passed shall be sent by the Vidhan Sabha Secretariat to the state's Legal Department for scrutiny with a view to correct any errors and for making such other changes as are consequential to the amendments accepted by the Legislative Assembly.
2. On its return from the state's Legal Department, it shall be reprinted by the Vidhan Sabha Secretariat with the superscription "as passed by the State of [ ]."
3. The date of assent which is the date on which the Legislation becomes an Act, shall be intimated to the administrative department and the Department of Legislative Affairs by the state's Legal Department.

4.5.8   Publication in the Official Gazette

The state's legal department will:

a. Publish the Act in the Gazette of India Extraordinary
b. Printing of copies of Act for sale
c. Get copies of the Act printed in a suitable form for sale to the general public.

4.6 CONCLUSION

This chapter discussed guidelines for activities required to be carried out by the Task Force during pre-drafting stage, development of draft legislation stage and enactment stage. This considered the case when UMTA legislation needs to be drafted and passed, and no initiative has been taken in the past for legislating UMTA in urban areas. However, if UMTA has already been established through an existing Act, then a change or amendment can be brought about in the provisions of that Act, with respect to aspects such as composition of the Authority, powers, functions, etc. Such changes, if permitted by the Act, can be notified by the State Government. The same shall be brought about through a notification in the Official Gazette by the State Government. In the absence of an enabling provision, however, an Amendment Act will have to be passed in the concerned legislature, to amend the exiting Act and modify the relevant clause. The process of amending an Act is the same as passing an Act in the legislature since an amendment is an Act in itself.

PART II - OPERATIONALIZATION OF UMTA

5. OPERATIONALIZATION OF UMTA

5.1 INTRODUCTION

The objective of this chapter is to guide city officials for setting up a fully functional UMTA. Upon completion of pre-operationalization activities and issuance of government notification for enactment of the UMTA Bill, operationalization activities of UMTA shall commence. The following sections outline the process of operationalization of UMTA, including aspects such as the structure of the organisation, functions of various divisions, delegation of powers, engagement of consultants for handholding support, mobilisation of the UMTA Board, and procedure for appointment of the Chief Executive Officer (CEO) and other key professionals.

The guidelines are generic and cities may customise these according to their unique requirements, based on their structure, Urban Mobility Area's geographical coverage and mobility requirements.

5.2 ENGAGEMENT OF CONSULTANT FOR HANDHOLDING SUPPORT

Given the capacity limitations of existing agencies of Urban Mobility Areas, a necessary step towards operationalization of UMTA would be engagement of a competent consultant for assisting in setting up and operationalisation of functions of UMTA.

MoUD has empanelled consultants who will be available for providing handholding support for setting up of UMTA (refer Annexure IV for list of empanelled consultants). This is intended to save time as well as cost of the cities for procurement of consultants. Cities may, however, choose to procure consultants by themselves. The indicative Terms of Reference (ToR) for engagement of consultants attached as Annexure V for reference.

The outlined ToRs are generic and may be modified by the Nodal Agency/Task Force. Consultants may be appointed at any stage during UMTA's operationalization, as deemed necessary by the Nodal Agency/Task Force. The situation with respect to operationalization of UMTA, may significantly vary across cities; as some cities may already have an existing UMTA. Cities which do not have UMTA in place in any form may have to engage a consultant as the first requirement to initiate the process of UMTA's establishment.

5.2.1 Finalisation of Terms of Reference

The detailed scope of services for each Urban Mobility Area may be prescribed at the Request for Proposal (RFP) stage. In some cases, UMTA and/or UTF may already be in existence, and the required services would be handholding assistance in operationalising and strengthening the Authority. In other cases, scope of services would additionally require reviewing and "validating" or "updating" the draft legislation and operations documents specific to the Urban Mobility Area. The ToR shall be finalised by Nodal Agency/Task Force depending on the requirement of the Urban Mobility Area.

5.2.2 Carrying out the selection process

The Task Force in consultation with the Nodal Agency shall carry out the process of selection of the consultant. The empanelled consultants may be considered for submission of proposals by the cities, if so desired by them. Cities shall, however, be at liberty to directly invite Technical and/or Financial bids from selected empanelled consultancy firms following the prevailing procurement procedure in respective states/cities. The list of empanelled consultants will be available with MoUD and cities will have the option to invite limited tenders and thereby, accelerate the procurement process.

5.3 SETTING UP OF THE GOVERNING BOARD

The consultant appointed for handholding assistance shall assist the Task Force in setting up of the Governing Board. The structure and composition of the UMTA Board have already been discussed in Chapter 3. The consultant shall assist in preparing invitation letters/notices to mobilize the Board members for carrying out initial meetings and preparing strategy for operationalization of UMTA.

5.3.1 Organizing initial Board meetings

Once the Governing Board of UMTA comes into existence, the next step towards mobilisation shall be organising the UMTA Board meetings. The Task Force, with the help of the consultant, shall be responsible for drafting and circulating a note on the details of the first UMTA meeting to all members of the Governing Board, informing the Board on the following.

- Date and venue of the meeting
- Activities performed till date
- Way forward

The agenda of the first UMTA Board meeting may include the following:

- A distinct vision/mission and goals statement for UMTA
- Discussions on the organisational structure of UMTA
- Discussions on appointment of CEO and Secretariat
- Delegation of powers and functions to the executive office members
- Plan of action to achieve the vision for the Urban Mobility Area

5.4 APPOINTMENT OF CHIEF EXECUTIVE OFFICER

The CEO of the Authority shall be appointed by the UMTA Board in consultation with the Task Force. The consultant appointed for handholding support shall provide assistance to the Task Force and the Board in selection and appointment of the CEO. The process and terms of appointment of the CEO along with roles and responsibilities are highlighted below.

5.4.1 Appointment process and terms

The CEO would be overall in-charge of the UMTA Secretariat and may be appointed by selection from the open market by the State/ Governing Board or be nominated on deputation. The official heading the Task Force may also be appointed as the UMTA CEO at the discretion of the State/ Governing Board. The appointment of the CEO shall be carried out in accordance with procedures set out in Chapter 7. The team constituted for interview for the position of CEO shall include at least three members from the Governing Board. The CEO shall be appointed on a full time/deputation basis for a minimum period of 3 years with reappointment options for a maximum of two consecutive terms. In case of reappointment, the CEO shall be informed two months prior to the end of his/her on-going term.

5.4.2 Role and responsibilities of CEO

The CEO shall be responsible for all day-to-day activities of UMTA in accordance with policies approved and delegations given by the Board. The CEO shall initially be responsible for operationalization of UMTA including recruitment of staff, setting up of divisions envisaged under UMTA with help from the handholding consultant and approval of the UMTA Board. Once UMTA gets operationalised, the CEO shall be responsible for the functions of the UMTA staff and presentation of periodic Progress Reports to the UMTA Board. These progress reports shall be submitted time to time in a format agreed upon by the UMTA Board.

The roles and responsibilities of the CEO of UMTA are recommended as below:

- Operationalization of UMTA
- Carrying out and administering appointments of other key professionals and support staff as decided in the operations document or as deemed necessary
- Scheduling and conducting Board meetings
- Coordinating between the Board and Authority's staff for implementation of UMTA's functions
- Evaluating the progress of the Authority's functioning
- Advising and assisting the Governing Board members on various functions of UMTA
- All administrative and technical functions which the Authority may present before the CEO time to time.

Details on the profile of the CEO have been provided as a template in Annexure VII.

5.5 DEVELOPMENT OF ORGANISATION

The Governing Board of UMTA will be assisted by a full-fledged organisation headed by the CEO. In order to perform various functions envisaged for UMTA, six function-based divisions have been proposed. These divisions will be responsible for discharging the functions assigned to them in coordination with other divisions. An organisational chart of UMTA is depicted in Exhibit 12.

Exhibit 12 Organisational chart of UMTA
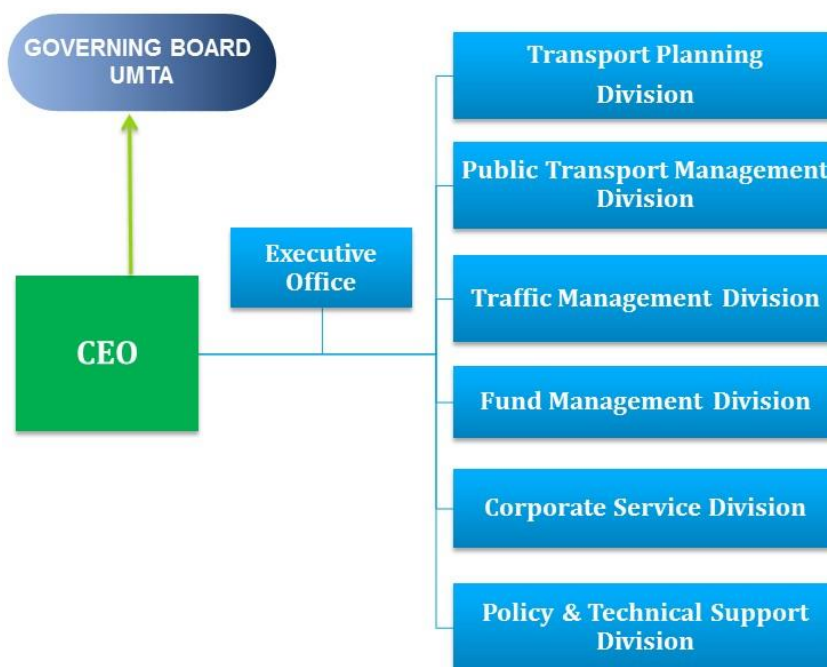
The roles and responsibilities of each of the divisions are highlighted in the following sections.

5.5.1   Roles and responsibilities of divisions

A. **Transport Planning Division:** One of the major functions of UMTA would be to work with various stakeholders for provision of urban transport services and infrastructure and to prepare a CMP for the Urban Mobility Area in coordination with the land-use planning agency. The Transport Planning Division of UMTA would have the following responsibilities:

- To comprehend a vision for a sustainable urban transport system for the Urban Mobility Area
- To formulate policies for a sustainable urban transport system within the Urban Mobility Area
- To revise the CMP for the Urban Mobility Area
- To conduct Alternative Analysis on the basis of the proposed outcomes of the CMP
- To oversee the integration of CMP with land-use plan
- To oversee preparation of MYPs for urban transport by various implementing agencies
- To coordinate with all relevant implementing agencies and monitor compliance with the CMP and the Transport Investment Programme
- To estimate and prioritise short, medium and long term plans
- To coordinate with other divisions of UMTA for integrated and holistic development of the transport system within the Urban Mobility Area
- To assist and advise the State Government on matters relating to urban transport, in consultation with the other divisions
- To perform all such other functions as may be allocated by the CEO time to time

B. **Public Transport Management Division:** The Public Transport Management division will be responsible for integration of all modes of transport and overseeing operation of integrated facilities and systems. Regulatory functions assigned to UMTA to ensure integrated public transport will also be performed by this division. Some of the key functions that may be assigned to this division include:

- Create plans for an integrated and sustainable public transport system for the Urban Mobility Area with emphasis on non-motorized transport and facilities
- Prepare strategies for integration of all modes of transport
- Oversee operation of integrated facilities and systems for public transport
- Develop standards and guidelines for public transport services specific to the Urban Mobility Area in consonance with the land-use pattern of the city
- Coordinate with all other relevant implementing agencies and supervise project implementation
- Provide rationale for recommendations to be provided by the Governing Board on issuance of licenses for public transport services
- Advise on monitoring and regulation of fee, charges
- Promote innovative public transport solutions suitable for the Urban Mobility Area
- Promote development of integrated multi-modal public transport systems for the Urban Mobility Area
- Facilitate/ensure implementation of common ticketing system for public transport modes
- Perform all such other functions as may be allocated by the CEO time to time

These functions shall be carried out by the Public Transport Management Division of UMTA in coordination with inputs provided by the Transport Planning Division. These two divisions shall, in coordination, plan about integrated facilities and systems to be developed.

C. **Traffic Management Division:** The Traffic Management Division shall have five key missions to: improve safety, efficiency of city roads, provide timely and accurate real-time traffic information,

facilitate cooperation between public and private partnerships that integrate transportation services, and to disseminate information to the public on transport services. The broad functions of this division would include:

- Coordinate with various implementing agencies and ensure seamless mobility within the Urban Mobility Area. In order to achieve this objective, a centralised command and control center is to be operated by select implementing agencies in coordination with UMTA. This center may be responsible for planning and monitoring of a signalling system for better management of traffic.
- Promote creation of public information system.
- Promote technology for improvement of traffic and transport management
- Ensure implementation of other ITS applications
- Parking management

D. **Fund Management Division:** This division shall manage all financial matters including management of the UTF, preparation of financial plan, preparation of budgets and accounts, etc. This division shall also be responsible for monitoring expenditures of implementing agencies/fund using bodies, which have been granted funds from the UTF. The list of functions of this division, inter-alia, includes:

- Manage UTF
- Fund public transport services so as to provide mobility and integrated public transport
- Fund/arrange/recommend/approve funding for urban transport infrastructure in whole or in part, in consultation with Transport Planning Division
- Prepare Transport Investment Programme with inputs from other divisions of UMTA
- Maintain all financial records and accounts of UMTA
- Prepare annual reports, budgets and financial atatements of UMTA
- Monitor and audit UTF's utilisation by implementing agencies
- Perform all such other functions as may be allocated by the CEO time to time

E. **Policy and Technical Support Division:** This division shall conduct research and studies to enable all other divisions and urban transport agencies to take informed decisions. It shall provide technical input to all divisions and will prepare technical standards and guidelines. This division will also maintain a database of information on activities for which it is responsible. Depending on the functions assigned to UMTA, the database shall contain details of projects, funding, public transport routes and services, licenses, etc. Some of the key functions that may be assigned to this division include:

- Provide policy assistance to local, State and Central Government departments in the form of analytical inputs to prepare nation/state/local level urban transport policies, standards, and guideline
- Conduct research studies, education and awareness about good practices in urban transport
- Maintain records relating to urban transport, including details of projects, services, funding and public transport safety
- Develop, monitor and report performance indicators for urban transport as allocated by Central and State Governments
- Prepare guidelines on public transport safety
- Undertake research on innovative sustainable transport solutions and their applicability in the Urban Mobility Area at large
- Prepare standards and guidelines specific to transport engineering or as deemed necessary time to time
- Provide technical inputs and support to other divisions as and when required

- Coordinate with all relevant implementing agencies and supervise project implementation, if required
- Oversee development and operation of transport systems and facilities
- Review and ensure project implementation timelines are met
- Supervise and monitor implementation of projects (by consultants or otherwise)
- Hold capacity building programmes for staff time to time, in coordination with Corporate Service Division
- Perform all such other functions as may be allocated by the CEO time to time

F. **Corporate Service Division:** This division will be responsible for providing administrative and human resource support to all divisions of UMTA. Key functions of this division would include:

- Prepare human resource and administration policies
- Perform all information technology and communications related functions
- Prepare annual plans and reports
- Procure stationary and other goods needed for the Authority's functioning
- Perform all such other functions as may be allocated by the CEO time to time

In case UMTA is established under an existing local level agency, then it would not be necessary to set up a dedicated Corporate Service Division for it. The administrative and human resources staff of the parent entity could be shared to serve that UMTA as well.

5.6 UMTA Secretariat

The previous section demonstrated the organisational structure of UMTA, in terms of divisions functioning under the CEO, responsible for various functions of UMTA. Each of these divisions will comprise a divisional head, and staff responsible for assisting the divisional heads in implementing UMTA's functions. UMTA will therefore comprise a full-fledged Secretariat of full-time employees, working under the CEO of UMTA. The following shall be the main functions of the Secretariat:

- Provide technical inputs to the Governing Board, whenever required, in undertaking strategic decisions;
- Implement the decisions undertaken by the Governing Board;
- Monitor implementation of the commitments of implementing agencies under CMP and Transport Investment Programme through collection, analysis and review of information and data;
- Appoint and engage consultants in providing services for supporting UMTA's operations;
- Provide day-to-day administration and management support to UMTA; and
- Organize and keep records of meetings conducted by the Board.

5.6.1 Organisation Staffing

Each of the above mentioned divisions shall be headed by a Director. The Directors shall report to the CEO and will be responsible for ensuring that all Board matters are managed in a systematic, orderly and timely manner, in accordance with policies and procedures agreed upon by the Board. Each Director will be supported by a minimum of 2-3 staff (or as deemed necessary by the Board for efficient operations of the division) depending on the extent of activities to be performed by the division.

The organisational chart below, details out various professionals to be recruited within the UMTA Secretariat. The details of educational qualifications, roles and responsibilities of these officials have been specified as templates provided as part of Annexure VII to this operations document.

Apart from the key professionals outlined in the organisational chart, support staff shall also be appointed for smooth functioning of the Authority. It may be noted that the organisational structure and the number of

staff proposed here considers the case where all functions of UMTA are performed in-house. However, some aspects of UMTA's activities, such as functions related to auditing of UTF, accounting, and information technology implementation, can be outsourced to service providers. Consultants may be employed for distinct activities such as preparation of CMP, development of standards and guidelines, review of proposals and audit of implementation, preparation and delivery of awareness campaigns, and conducting research studies. Based on the policy adopted by UMTA in carrying out these activities, by either outsourcing them or implementing them through in-house staff, the actual number and layer of staff shall be finalized. An indicative staff requirement based on activities performed internally and outsourced, is provided in Annexure XIII.

The detailed design of the organisation will also depend on the size of the Urban Mobility Area for which UMTA is responsible and other local factors. The detailed organisational designs and roles and power of each division of UMTA may vary from city to city. The suitable organisational structure can be decided by the CEO in consultation with the UMTA Board. Exhibit 13 below provides suggestive organisational staffing for UMTA.

Exhibit 13 Organisational staffing within UMTA
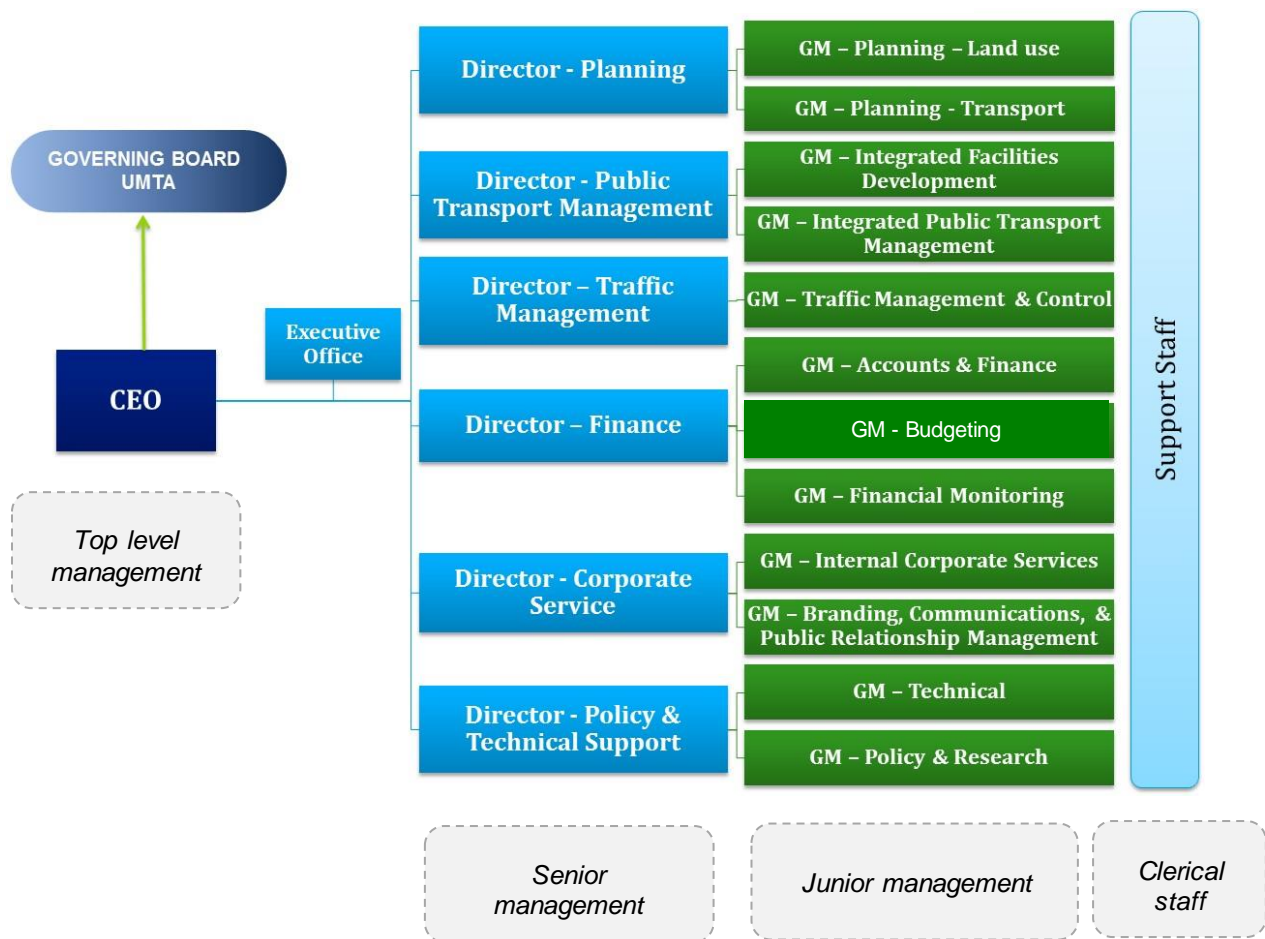
5.6.2   Appointment of Secretariat

After finalisation of the organisational structure of UMTA, the CEO shall appoint a head of each division and support professional staff for each division in consultation with the Board. The consultant appointed for

handholding assistance will provide assistance to the CEO in recruitment of staff. The number of staff and their necessary qualifications will be determined by the Board in consultation with the CEO. Details of educational qualifications and roles and responsibilities of these officials have been specified as templates as part of Annexure VII. Because of the high level of responsibility, UMTA needs to attract highly experienced, capable, and professional staff for preforming its functions in an effective and efficient manner.

It is suggested that the staff of UMTA comprises a mix of permanent employees recruited from open market, public employees on deputation and contract employees. The staff on deputation can be brought from relevant agencies such as Urban Development Department, Development Authorities, Finance Department or Transport Department, etc. This would allow UMTA to be staffed quickly and the staff to be repatriated to their parent department, if they are no longer needed. Also, the staff on deputation may be given the option of being permanently absorbed in UMTA, after assessing their performance for a period of two to three years. The recruitment processes to be followed are provided in Chapter 7.

Other staff can be recruited from the open market as permanent staff of UMTA. This would build employee stability and loyalty and would ensure an employee base that is dedicated to the functioning of UMTA.

In case UMTA has already been established in an urban area, its organisational structure could be strengthened and modified to make it in line with the proposed generic structure, while keeping in mind city specific characteristics.

5.7 DELEGATION OF POWER

The delegation of power shall be exercised in conjunction with delegation of powers provided under the UMTA Act. The generic legislation provides that the Board may, by order, delegate any of its powers or duties under the Act or any rule made under the Act to the CEO, to one or more than one of the officers employed in its Secretariat or to any sub-committee of the Board. Delegation of powers may be broadly categorised into two parts:

- Functional delegation
- Financial delegation

5.7.1 Delegation of functional powers to the CEO

The Governing Board shall have the right to delegate any of its powers or duties to the CEO or to one or more officials as deemed necessary by the Governing Board. The Board may delegate to the CEO the following functional powers:

- to sign any contract for or on behalf of the Board;
- to manage UMTA's functions;
- to collect revenues as applicable, on behalf of UMTA;
- to discharge debts owed by the Board;
- to sign, accept, negotiate, endorse and receive any negotiable instrument on behalf of the Board;
- to authorise disposal of securities of any kind of belonging to the Board;
- to open and operate current, deposit or credit accounts on behalf of the Board at the bank or financial institution agreed upon with the Board; and
- any other powers as the Board deems necessary for efficient control and implementation of day-to-day activities of UMTA.

5.7.2   Delegation of financial powers to the CEO

The Governing Board shall have the right to delegate financial powers to the CEO. The Board shall delegate to the CEO the financial power to approve expenses of high value (say up to Rs. 30 crore or as decided by the Board at the time of UMTA's establishment and as updated time to time).

The Board shall establish whether the financial limits proposed within the operations document are reasonable in relation to:

- the current financial position of the Board;
- annual budgets approved;
- prior experience regarding transaction flows within the Authority; and
- future financial prospects of the Authority

The delegation of powers to the executive office members have been provided in the subsequent section.

5.7.3   Delegation of powers to executive office members

This section outlines functional and financial powers delegated to officials in the executive office[11]. Exhibit 14 broadly outlines the powers recommended to be delegated to officials in the Authority.

Exhibit 14 Delegation of powers and functions within UMTA

Designation	Functional Powers	Establishment Powers	Financial Powers (per instance)
CEO	• Signing of contracts • Line management for all staff	Full powers for: • Promotion related matters • Leave approval • Disciplinary matters • Recruitment related matters • Establishment related operational expenses	Up to Rs. 30 crore for approved expenses within the annual budget
Director	• Public relations management • Disbursement of loans	• Leave approval up to General Manager level • Disciplinary matters (along with the CEO) • Establishment related operational expenses – up to Rs. 50,000	Up to Rs. 1 crore for approved expenses within the annual budget.
General Manager	• Execution of decisions as directed by Director/ CEO	• Leave approval up to support staff level • Establishment related operational expenses – up to Rs. 10,000	Up to Rs. 20 lakhs for approved expenses within the annual budget.
Support Staff (At the level of Manager)	• Day-to-day activities, with	-	Up to Rs. 10,000 for approved expenses within the annual budget.

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[11] The provision of a delegation may be made by the Board initially and can be amended time to time. For amounts exceeding the financial limit, special approval from the next level official would be required.

Designation	Functional Powers	Establishment Powers	Financial Powers (per instance)
	guidance from General Managers		

The details of roles and responsibilities to be performed by each of the executive officials have been outlined for reference as templates in Annexure VII.

5.7.4 Management of delegation of powers

The delegation of powers shall be reviewed annually by a team selected by the UMTA Board. This team shall be responsible for proposing changes to the Board for consideration and approval as deemed necessary. The CEO shall be responsible for undertaking the update required for power delegation. The original instruments containing the delegations authorised by the Board shall be tracked by the Director Finance. Both the Director Finance and General Manager - Accounts and Finance shall obtain and maintain specimen signatures of the financial authorizing senior officials of UMTA at all times. All new contracts and any renewal of existing contracts to be signed by the Board shall be authorised by the CEO. The General Manager – Internal Corporate Services shall maintain originals of all contracts.

Disposal of all redundant stores/company assets/fixed assets are to be authorised in writing by a Disposals Committee delegated by the CEO. Where a financial authorising person takes leave or the person is away for a long period, a senior official shall be designated in absence with a written approval of the Board.

5.8 CONCLUSION

This chapter described the process of operationalization of UMTA, with description of various aspects such as engagement of consultant for handholding support, mobilisation of Board, procedure for appointment of the CEO and other key professionals, structure of the organisation, functions of various divisions, delegation of powers, etc. The next chapter outlines guidelines for carrying out various functions by UMTA.

6. OPERATIONALIZATION OF FUNCTIONS

6.1 INTRODUCTION

The functions assigned to UMTA are envisaged to fill in institutional gaps in transport management, address institutional overlaps and rationalize transport functions. In this context, this chapter lists guidelines for discharge of various functions of UMTA. Typical work flow charts have been provided for each of the specific functions. Guidelines detailed in this chapter are generic and the Urban Mobility Areas may customize these to suit specific requirements.

6.2 FORMULATION OF POLICIES, PROGRAMMES, STANDARDS AND GUIDELINES

There exist various policy issues concerning urban transport that confront cities. Some of them relate to balancing supply and demand of various transport services, type of mode share, technologies required for vehicles, types of fuels, split between public and private modes, operation of public transport modes and finally, decisions relating to financing urban transport investments. These policy decisions may be taken across all three tiers of the government (centre/state/local), depending upon which level is better equipped to handle the related financial and technical issues.

Policy decisions on land-use, which are usually undertaken by development authorities and town planning departments, will have long term implications on urban transport. Compact cities are characterized by shorter travel distances which allow for larger share of travel needs to be met by NMT as well as public transport. On the contrary, sprawling cities offer generously spaced out locations, where travel distances tend to be longer and personal motor vehicles become more important in meeting travel needs. In such cities, policies may give preference to TOD.

Considering the fact that UMTA of a city would be closely involved in overseeing local urban transport needs, it would be expected to provide expert inputs and insights to all levels of government in developing policies and programmes. In view of this, it has been suggested that UMTA's role in such functions would be to:

➢ Assist and advise the State Government on urban transport matters which would include providing analytical inputs, recommendations, advice and assistance to the Central and State Government agencies that prepare urban transport policy, standards, and guidelines.

➢ Provide inputs to the local government and/or other relevant agencies for developing urban transport policies, strategies, standards and guidelines for the Urban Mobility Area in accordance with national and state level policies, standards, and guidelines.

UMTA, through its Policy and Technical Support Division, would carry out activities required to implement these functions.

6.2.1   Guidelines for providing inputs in urban transport policy

The process of developing public policy is an activity that generally involves research, analysis, consultation and synthesis of information to produce recommendations. UMTA's Policy and Technical Support Division in coordination with the implementing agencies shall be responsible for providing inputs to local, State and Central Governments for preparation of transport policy for the Urban Mobility Area. The inputs to be provided by UMTA shall, inter-alia, include:

- **Analytical inputs:** UMTA shall provide practical and relevant analytical inputs based on deep analysis. For example, it could provide inputs on costs incurred in management of parking infrastructure, revenue potential from infrastructure used for advertising, etc.

- **Research inputs:** UMTA shall carry out a research exercise either by itself or upon the request of any State or Central Government agency for preparation of urban transport related policies, standards, and guidelines. For example, UMTA can provide research inputs on traffic management related issues, use of information technology in urban transport, etc.

- **Strategic and operational inputs:** UMTA through its experience of working in urban transport may also provide any strategic inputs in overall improvement of urban transport. For example, it can make suggestions on aspects related to inclusion/exclusion of regulatory functions from its purview, or it may suggest on applicability and feasibility of congestion charging schemes. UMTA shall provide inputs on identifying innovative sources of funding for urban transport, etc.

Exhibit 15 Process flow chart for providing inputs to urban transport policy
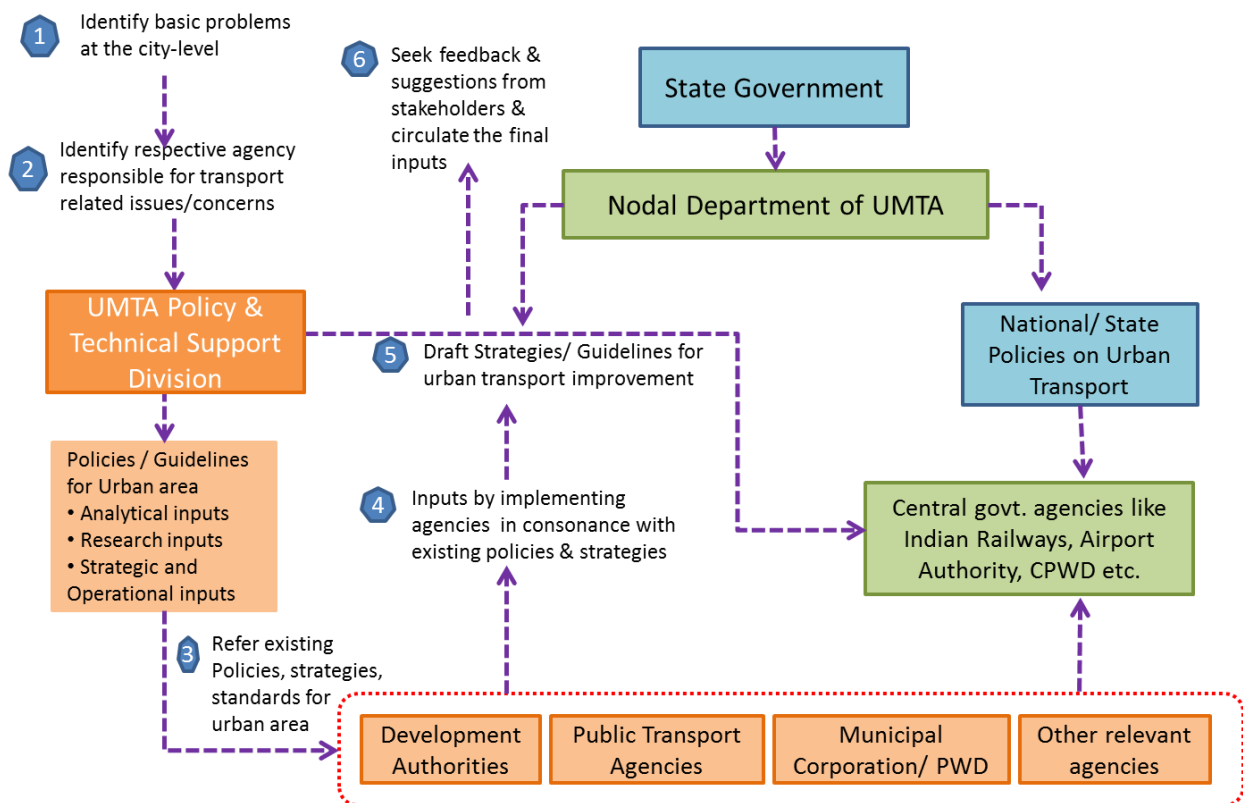
Exhibit 15 depicts that UMTA's Policy and Technical Support division will be responsible for preparation of urban transport policies and standards for the Urban Mobility Area as deemed necessary by the state time to time. The steps involved in carrying out activities as illustrated in the flow chart are described below:

Step 1: The first and foremost step in the provision of policy recommendations shall be identifying the problem at hand and defining it clearly. It is important to distinguish the repercussions of the problem from the actual problem. For example, a city may face heavy congestion, which may be a symptom of a number of issues such as lack of enforcement of traffic discipline, insufficient availability of public transport, etc.

Step 2: Following problem identification, UMTA shall determine the nature of the problem. Increasingly, urban transport issues and solutions to them are multi-faceted and multi-layered, often involving more than one department and level of government. Due to the cross cutting nature of these problems, UMTA would need to identify the department which was involved in developing the policy or is capable of addressing the challenge at hand.

Step 3: Following this, UMTA shall deploy suitable resources in the form of policy advisors and provide them with the required infrastructure (such as information technology support, access to database, research studies, etc.). It is noteworthy to point out that UMTA may exercise the option of outsourcing any of these activities to a consultant with a clear set of terms of reference.

Step 4: UMTA shall refer existing policies and guidelines that have been prepared for its jurisdiction. This is important because:

1. It ensures that UMTA does not work towards developing policies/ standards/ guidelines that already exist;
2. It allows undertaking activities for improvement of existing policies, standards, and guidelines to ensure functional and institutional gaps and overlaps are identified and addressed. For example, safety guidelines for operating a bus may be available in certain cases. In such a scenario, UMTA shall focus on building guidelines related to other aspects, which are not covered in existing guidelines.

Step 5: UMTA shall refer any existing policies and guidelines[12] that have been prepared by the Central/ State Government. This is important because:

1. It ensures that UMTA does not work towards developing policies/ standards/ guidelines that already exist;
2. It allows undertaking activities for adaptation / adoption of existing policies, standards, and guidelines.

Step 6: The next step shall be to seek inputs from other agencies (including implementing agencies, public transport operators, other planning agencies, etc.) on urban transport policies, standards, and guideline. These inputs would help to understand the perspectives of such agencies and assist in preparing practical and appropriate policies, standards, and guideline.

Along with steps 5 and 6, UMTA may conduct its own research studies and reviews of best practices.

Step 7: Based on its experience, review of existing works and inputs from other agencies, UMTA shall draft its inputs on different policies, standards, and guideline and also develop performance indicators for monitoring its propositions, wherever applicable. This could be put to use by central/state/local level of government for improvement of urban transport.

Concurrently, UMTA may provide inputs on reviewing and updating existing policies and strategies to reflect new directions and changing circumstances to improve transport provision.
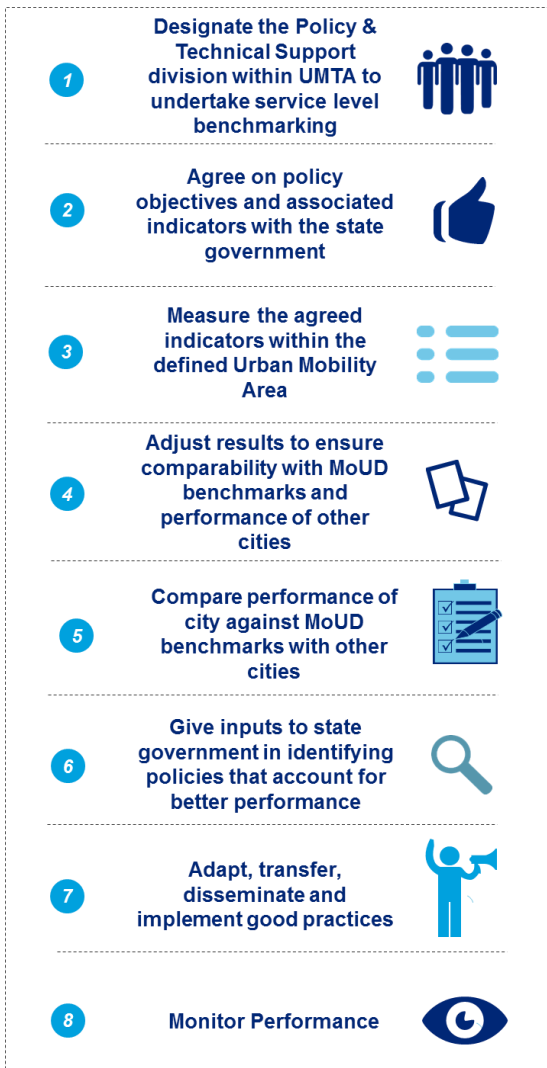
Step 8: The draft inputs prepared may be further strengthened by taking feedback and suggestions from different stakeholders. The finalised inputs may be then circulated to relevant agencies.

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[12] It is advisable that UMTA officials refers to the document - "A Guide to Policy Development", Office of the Auditor General, Manitoba, 2003 – as a useful guide related to policy making.

6.2.2 Service Level Benchmarking

Exhibit 16 Process of service level benchmarking

1. Designate the Policy & Technical Support division within UMTA to undertake service level benchmarking

2. Agree on policy objectives and associated indicators with the state government

3. Measure the agreed indicators within the defined Urban Mobility Area

4. Adjust results to ensure comparability with MoUD benchmarks and performance of other cities

5. Compare performance of city against MoUD benchmarks with other cities

6. Give inputs to state government in identifying policies that account for better performance

7. Adapt, transfer, disseminate and implement good practices

8. Monitor Performance

Service level benchmarking in the context of urban transport is a process of comparing performance levels against set targets or best practice cases. It helps in identifying the existing gaps and challenges in urban transport systems. Benchmarking is well recognized as a crucial mechanism for introducing accountability in service delivery. It can help a city in identifying performance gaps and facilitating improvements, through continuous sharing of information and best practices, ultimately resulting in better service delivery. The process of service level benchmarking is depicted in Exhibit 16.

To measure the performance of urban transport parameters over time in any given city, it is important that performance levels are monitored against set benchmarks. In this context, MoUD has initiated an exercise to define Service Level Benchmarks (SLBs), for the following areas of intervention:

- Public transport in a city
- Pedestrian infrastructure facilities
- Non-motorized transport facilities
- Use of ITS
- Travel speed along major corridors
- Road safety
- Availability of parking facilities
- Pollution levels
- Land-use and transport integration
- Financial sustainability of public transport

In the context of a city, the role of UMTA would be to adopt parameters highlighted by MoUD. These performance measurements, once estimated by UMTA, shall be reported to the State Government, which will then undertake steps for disseminating data. For UMTA to precisely measure the performance in relation to set benchmarks, it would have to adopt clear definitions and methodologies to eliminate any bias in measurement and reporting.

The output expected from UMTA in this context would be periodic performance reports on the SLBs. The periodicity of these reports can be finalized by the Governing Board at the time of finalization of functions of UMTA. The following guiding principles would be useful for initiating performance reporting:

- To begin, data formats and processes defined for performance measurement shall be kept simple.
- The Chairperson of UMTA shall take lead in making SLBs operational
- UMTA staff shall be provided training and orientation on SLBs to enable them discharge their respective roles in overall performance management.

For the SLBs defined by MoUD, reference to "Service Level Benchmarks for Urban Transport at a Glance"[13] is indicated.

6.3 COMPREHENSIVE MOBILITY PLAN

One of the prime functions of UMTA is the preparation of CMP for the Urban Mobility Area. CMP shall act as a macro-level plan and a vision statement, which shall determine the direction in which the transport system of the Urban Mobility Area will grow. It shall focus on achieving a desirable accessibility and mobility pattern for people and goods within UMTA's jurisdiction. It shall integrate land-use and transport planning processes to meet the mobility needs of the Urban Mobility Area. It shall aim at developing sustainable urban transport strategies for providing a safe, secure, efficient, reliable and seamlessly connected urban transport system that supports and enhances economic, social and environmental stability. The main features of a CMP are presented in Exhibit 17.

Exhibit 17 Main features of a CMP

Main features of a CMP

➢ Encourages efficient and inclusive transport modes such as public transport and non-motorized modes
➢ Prioritizes mobility for all socio-economic groups and genders, by identifying the socio-economic background of different groups and their travel patterns
➢ Ensures provision of a recognized and effective platform for integrating land-use and transport planning
➢ Plans for integration of all public transport systems for seamless mobility of people and goods
➢ Focuses on optimization of passenger as well as goods transport
➢ Addresses impacts of transport on air quality, safety, and social aspects

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Conventional transportation plans are focussed on improving vehicular movement, without adequate attention to the overall concept of accessibility and mobility of people and goods. General emphasis on infrastructure development, road networks, and flyovers, etc., does not factor in non-motorized use, pedestrians' facilities egress and access, etc. A CMP differs from conventional transport plans on at least two counts:

a. It adopts a scientific approach to understanding the mobility needs of people, optimizing network designs so as to best utilize the available infrastructure, improve public infrastructure, and non-motorized vehicles facilities.
b. It aims at integrating land-use and transport planning. Since land-use planning influences travel patterns, CMP shall scrutinize the land-use patterns from the perspective of developing urban transport. For example, in achieving Transit-Oriented-Development (TOD) and reducing reliance on private vehicles, the CMP shall integrate commercial and residential area development with mass transit development.

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[13] Refer - http://jnnurm.nic.in/wp-content/uploads/2010/12/SLB-Urban-Transport.pdf

Exhibit 18 presents a case study on Boulder's transport master plan.

Exhibit 18 Case study- Boulder, Colorado

Boulder's Transport Master Plan, Colorado

Transport Master Plan or TMP was first adopted by the city of Boulder in 1989 with a vision to create a safe, convenient and sustainable transportation system. The five prime areas of focus of TMP are:

1. TDM (Transportation Demand Management) - TDM provides a suitable and accessible system to increase the use of public transport and manage the same with respect to the demand. Several TDM strategies have been implemented. For example, distribution of Eco Pass (annual bus pass), van-pooling assistance, developing a toolkit to assist developers and employers in transport operations, etc.
2. Complete Streets - It aims at planning an infrastructure design to accommodate all modes of transportation. A Complete Street Transit action plan was formulated in 2014 to improve the bus rapid transit system, expand bike capacity, support regional flex service, etc.
3. Funding - TMP focuses on creating a sustainable funding model that focuses on judicious spending. 84% of the total funding is used in basic maintenance and operations.
4. Sustainability - Apart from planning travel and improving accessibility, TMP also aims at reducing greenhouse emissions arising from transportation and improving the liveability of the neighbourhoods by integrating transport planning.
5. Regional Travel – Under TMP, the city works with various regional agencies to provide assortment of multi-modal transport and improve regional travel. The management includes that of 250,000 vehicles that commute in and out of Boulder every day.

Key Outcomes – More than 250,000 vehicles commute in and out of Boulder every day. Since TMP's formation, the use of local transit route has increased by 300%. The use of bus in Boulder is twice the national average.

Relevance to the Indian context – The use of a CMP can bring substantial changes in transportation planning of a city. It can help in TOD and improve the liveability for residents as was the case with TMP.

The following sections highlight some of the broad guidelines and components of CMP, which will act as a guide in preparing of CMP.[14] During the process of CMP preparation, UMTA shall take suggestions and feedback from implementing agencies and major stakeholders and discuss with them at length and internally with divisional heads. CMP shall be prepared after considering each of these comments and suggestions. The consultation process has been discussed in detail in the following sections.

6.3.1   Guidelines for development of a CMP

The successful development of a CMP shall involve collaboration among various levels of government and relevant urban transport stakeholders. It shall give consideration for all modes of transport in a city, and focus on their interconnectivity. The key steps to be followed during preparation of CMP would include the following:

Step 1: Understanding the city

The first task shall be to fully identify the planning area, land-use distribution and mobility patterns of the city so as to understand the mobility needs of the people. This can be done by carrying out surveys and studies to review the socio-economic characteristics and demographic profile of the city, using the following

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[14] For detailed guidelines, refer to CMP Revised Toolkit, 2014 of the Ministry of Urban Development, Government of India

indicators:

- Spatial distribution of population
- Population growth rate
- Population density
- Sex ratio
- Literacy level
- Employment structure
- Economic profile

Step 2: Identifying issues and challenges

The existing transport system in the city shall be assessed and reviewed to understand where it currently stands, how the transport system is used, and what are the major roadblocks and challenges. Review of the existing urban transport scenario would include review of:

- Land-use pattern
- Existing transport infrastructure
- Public transport system
- Traffic movement pattern (including urban goods/ freight movement)
- Traffic safety and enforcement
- Growth in vehicle registration
- Institutional and financial framework
- Environment and social situation

The current scenario in urban transport can be ascertained by conducting primary transport demand surveys such as:

- Traffic volume count survey
- Origin-destination survey (household O-D, roadside O-D)
- Turning movement survey at intersection
- Occupancy survey
- On and off-street parking survey
- Road network inventory survey
- Passenger terminal inventory survey
- Speed flow survey
- Bus Transport: Boarding/ Alighting survey
- Bus passenger user survey
- Other Public Transport Modes: Boarding/ Alighting survey
- Other Public Transport Modes: User survey
- Intermediate Public Transport: User survey
- Intermediate Public Transport: Operator Survey
- Goods Focal Point – Entry exit survey
- Goods Focal Point – Parking survey
- Goods Focal Point – Vehicle operator survey
- Establishment survey
- Work place survey
- Floating vehicle population survey
- Home interview survey

Step 3: Outlining a vision for the CMP

A strategic vision would need to be outlined to guide the overall planning process within CMP. This vision

shall be based on the needs of the city, and should aim at maximizing benefits for the community rather than simply planning a more efficient transport system.

Examples of vision for CMP can be:

- To ensure seamless inter-modal transfer and single travel experience to the commuter by connecting various transportation modes including non-motorized transport in a safe, comfortable, and timely manner.
- To evolve an integrated transportation system that contributes to the city's productivity and improves communities' quality of life with minimal environmental impact.
- To achieve a sustainable transport system in the city, that achieves and balances social, economic and environmental objectives.

Step 4: Set objectives and strategic targets

CMP shall set specific objectives driven by the city's travel patterns, time taken to travel, and all kinds of costs involved. The objectives shall reflect the visions set, and have support from the local government representatives. Targets shall be aligned with objectives, and shall provide a benchmark for measuring achievement.

Step 5: Integration with Land-Use Plan

It is imperative that CMP be integrated with existing land-use plan of the city for minimizing the gap in travel demand and supply. In the process of integration, CMP shall include the forecast of future land-use patterns from the mobility optimization point of view and select a preferred pattern of land-use/transport integration if necessary. In view of this, section 6.3.2 provides guidelines of integrating land-use plan and CMP.

Step 6: Predicting future scenarios

Based on data collected and vision and objectives laid, a likely future scenario shall be predicted with a 'business as usual' approach and a 'desired' approach. This would enable identification of gaps between current and likely future situations, considering where the transport system stands today, and which direction it is envisaged to go in the short, medium and long term. This stage would involve preparation of a model for planning, including:
- Trip generation model
  - Trip production model
  - Trip attraction model
- Trip distribution model
- Mode choice model
- Traffic assignment model

After having identified gaps between existing and future scenarios, it shall be possible to identify areas that need intervention to change the status quo.

Step 7: Ascertaining future funding provisions

Prior to developing strategies for urban transport to meet the desired scenarios, it is important to ascertain funding sources to meet the potential propositions. Even though it is true that funding sources vary time to time, depending on the state of the economy, the political agenda, etc. an attempt should be made to predict the funding provisions that will be available in the short, medium and long term, so as to set a fund estimate in the process of planning. This process would involve seeking inputs from the Finance and Transport Departments at the State as well as Centre Departments and agencies which provide funding for transport and infrastructure development.

During this step, as well as the next, it is also encouraged to explore the potential for private sector

partnerships, especially where there are clearly identifiable benefits to private sector interests.

Step 8: Designing mobility improvement strategies

Strategies for a sustainable and desirable future transport system shall be identified in a realistic and achievable time frame. Strategies shall include plans and proposals pertaining to the following:

- Integration of land-use and transport planning
- Travel demand management and inducing behavioural change to alternate transport options from car use
- Transit oriented development proposals and congestion management
- Public transport improvement plan including more efficient use and rehabilitation of existing transport infrastructure capacity
- Street design and street classification system with the aim of achieving better urban design for promoting and integrating non-motorized facilities
- Development of complete road proposals, including:
  - Route alignment plans
  - Network improvement
  - Pedestrian network plan
  - Dedicated bicycle network plan
- Parking plan and management strategy not only for cars but for other road users
- Freight movement plan
- Passenger/goods terminal proposals for nodal points
- Last mile connectivity and inter-modal facilities
- Signage and way finding plans
- Disabled-friendly transportation plan
- Low emission plan

Each strategy shall involve multiple actions that are aligned to the relevant strategy and to achieving the stated objectives.

Step 9: Prioritizing strategies and programmes

It is imperative that strategies and actions are prioritized into short, medium and long term, to guide implementation. Therefore, the planning process shall involve a cost and benefit analysis of each strategy and action to assess its positives and negatives. The economic analysis and prioritization framework has been discussed in detailed in the following sections.

Step 10: Developing an implementation plan

The prioritized strategies and their corresponding actions shall be packed into an implementation plan clearly specifying roles, responsibilities and delivery timelines of implementing agencies. The implementation plan shall include the following:

- Implementation strategy of the selected

Exhibit 19 Key outputs of CMP

Key Outputs of CMP

- Develop an Immediate Action Plan (0-2 years' horizon) for addressing critical traffic issues of the Urban Mobility Area.
- Collection/updating of household, land-use, and travel demand data.
- Formulation of transport strategy for the Urban Mobility Area.
- Formulation of proposals for TOD and integration of all public transport systems within the Urban Mobility Area.
- Identification of a phased programme of transport investments proposals.
- Formulation of proposals for future expansion of public transport systems.
- Training and knowledge transfer to other agencies if required.
- Propose action plan for achieving the standard service level benchmarks.
- Propose project prioritization plan.

plan
- – Short term plan
- – Medium term plan
- – Long term plan
- Corridors for MRTS (rail and road)
- Redevelopment of existing urban areas
- Local area plans
- Street redevelopment programme

Step 11: Obtaining Approval

After the CMP has been prepared, UMTA shall be required to organise a review meeting and present it before the CEO and the Governing Board for approval. All necessary comments/ suggestions provided by the Governing Board shall be incorporated in the final CMP report before submission to the State Government for its consideration and approval.

Step 12: Reviewing Outcomes Post CMP Preparation

The implementation processes shall be reviewed regularly and priorities shall be set to achieve proposed objectives.

Exhibit 20 Process of CMP approval
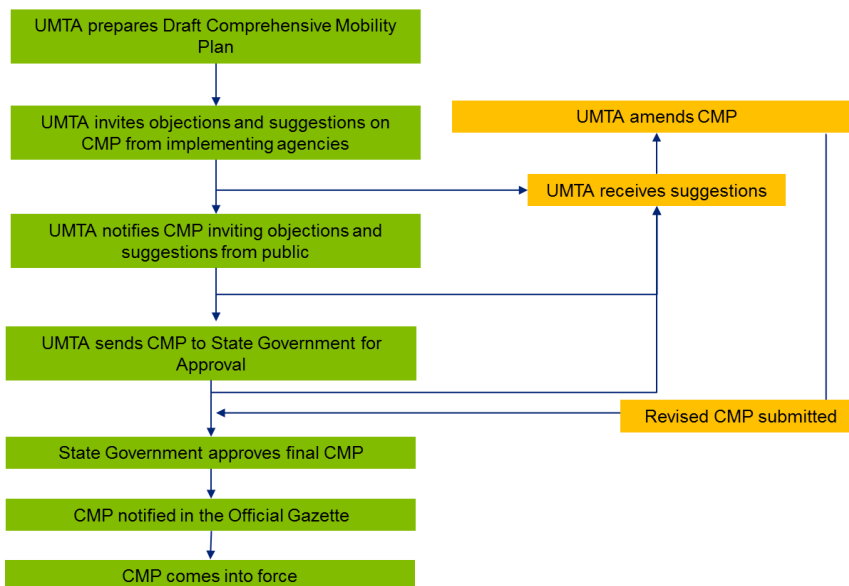
Exhibit 19 highlights the key outputs of a CMP. Exhibit 20 presents the process of CMP approval.

The following sections discusses in detail, some elements of the CMP, which would be central to its preparation.

> **A review of the CMP during the planning process and post implementation should answer the following questions:**
>
> - Are the vision and objectives set earlier in the CMP still relevant, given the dynamic social and economic environment of the city?
> - What have been the results and outcomes of the CMP? Were these outcomes originally intended?
> - Has the CMP fulfilled expectations of all concerned stakeholders?
> - How can the results of the CMP be improved through revisions?

Responsibility for CMP preparation/revision

UMTA shall be solely responsible for preparation of CMP for the area under its jurisdiction. Considering the volume of work involved in preparing a CMP, UMTA may need to hire a specialist or an agency to successfully carry out the task. In case CMP has already been prepared for an Urban Mobility Area, then for any required revision/ update/ modification of the same, UMTA may either appoint a consultant or deploy its own staff. Also, since UMTA shall be solely responsible for the document, it should closely coordinate

with consultants during the process of CMP preparation.

The detailed tasks and survey information for preparation of CMP to be undertaken by the Urban Mobility Areas may be referred from the Revised CMP toolkit issued by MoUD, GoI. The UMTA staff/consultants deployed to develop the CMP shall be required to detail out the CMP document based on guidelines specified in the Revised CMP toolkit 2014.

Planning Horizon

CMP is a macro-level strategic document that proposes investments in transport sector with long term impacts on climate change and other issues. Since the mobility plan implementation shall have long term impacts, the planning horizon for the CMP should be at least 20 years. Considering a 20 year time period, the project prioritisation for the CMP is recommended to be divided in the following manner:

- Short-term: 0-5 years
- Medium-term: 5-10 years
- Long-term: 10-20 years

Since the transportation network of a city has an intrinsic relationship with the city's land-use pattern, the planning horizon of CMP should be synchronized with that of land-use plan so that planning and implementation of both plans may be carried out in a coordinated manner.

Revision and Updating of CMP

CMP document and project prioritisation plan are recommended to be reviewed by the UMTA Governing Board in a timely manner, as prescribed by the State Government. This shall essentially entail planning for the prioritised projects in the CMP to be implemented. Review of CMP shall be finalized after due consideration of and integration with the revised land-use plan.

For cities such as Hyderabad, where a CMP counterpart (called Comprehensive Traffic Transportation Study) already exists, UMTA shall update the existing CMP in a timely manner. The update would include revisions of all projections administered in CMP including those of population, employment, revenues and costs. Based on updated projections, UMTA shall aim at planning for modifications of capacities and proposing new systems and facilities, to meet changing demands of the city.

6.3.2 Relationship between Land-Use Plan and CMP

A direct two-way relationship exists between land-use and transport planning. A land-use plan or master plan is a long term statutory document for guiding and regulating the prospective growth and development of a city/town, majorly based on the components of population growth, infrastructure requirement, city growth pattern and existing land-use. It is prepared by development authorities of metropolitan areas, and addresses planning issues in different sectors affecting the urban area and addresses two vital aspects.

- The nature of an urban area, including its population density and the mix of residential, commercial and industrial properties, will have a long lasting influence on the volume of, time and type of transit journeys and have socio-economic impact on citizens.
- The magnitude of access provided by a transport service has cascading impact on demand for and use of land located in proximity of the transport service.

Different transit modes will have varied impacts on land-use patterns. For example, public transit modes with heavy infrastructure needs such as heavy and light rail are likely to encourage increased density and consequently, particular types of land-use in their vicinity. In contrast, bus routes which do not require fixed infrastructure may have different land-use outcomes characterised by low density.

Given the strong relationship between land-use and transport, the prime requirement in urban planning is that land-use and transport get planned in an integrated manner in order to

Exhibit 21 Relationship between land-use plan and CMP

minimize the transport demand-supply gap. Fulfilling this requirement is one of the prime functions of UMTA. In this process of integration, CMP reviews future land-use patterns from mobility optimization point of view and selects a preferred pattern of land-use/transport integration if necessary. Exhibit 21 illustrates the relationship between the land-use plan and CMP.
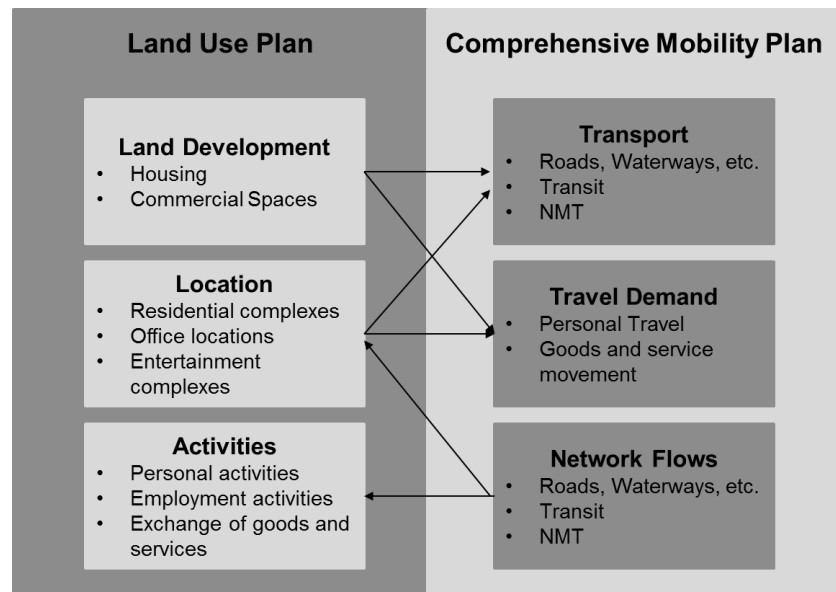
Guidelines for integration of Land-Use Plan and CMP

The process of integrating land-use and transport plan may be undertaken after assessment of current transport scenarios, prediction of likely future scenarios, but before formulation of urban transport strategies. The following are guidelines for undertaking integration of CMP with land-use plan[15]: A process flow chart showing this integration is presented in Exhibit 22.

Step 1: Deploy competent persons to initiate the process of integration

UMTA may hire a consultant or form a committee of its own staff, responsible for integrating CMP with land-use plan of one or more urban local bodies since the jurisdiction of UMTA may extend outside the delineated city boundary.[16]

Step 2: Review all previous land-use plans/ city-development plans for the Urban Mobility Area

The next step shall be to review and assess in detail all previous plans pertaining to land-use of the particular Urban Mobility Area[17]. In most cities in India, the land-use plan is already in place[18] through the Development Plan mechanism or through the Master Plan. Therefore, the land-use plan, where available,

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[15] Refer to Handbook on Integrating Land Use Considerations into Transportation Projects to Address Induced Growth, 2005 for methods for integrating land-use and transport planning.

[16] During the process of integration, UMTA is envisaged to work alongside the land-use planning agencies (either in the form of periodic consultations, or deputizing urban planners from different departments for the process of integration).

[17] In places where the UMTA jurisdiction extends over more than one urban local body, the land-use plans for each of these urban areas need to be considered and integrated in the CMP preparation process.

[18] It is suggested that in places where there is no land-use plan currently, the CMP should be prepared alongside the land-use plan, so as to comprehensively integrate all aspects of land-use and transport. In the event that a CMP is prepared first, it can be used as a crucial input and starting point to land-use planning.

shall serve as an input to the preparation of CMP. Assessments of land-use changes are necessary for three main reasons:

- To predict future land-use to be expected in the absence of any investments or policy changes.
- To assess the impact on land-use attributable to specific infrastructure construction or expansion in the past.
- To assess land-use impacts attributable to changes in transportation policy changes (e.g., pricing or parking policies).

This step shall also involve assembling data that will be necessary to conduct the analysis. Existing database, surveys, statistical trend analysis, remote sensing technology, and GIS are likely to be required for analysis.

Step 3: Establish assumptions for the future

This step involves determining anticipated changes in regulatory or economic policies, which will have impact on the future land-use. This step may require discussions with regulatory practitioners and policy makers.

Step 4: Estimate the population and employment growth of the Urban Mobility Area

This step shall use local population and employment trends, broader state and national economic industry trends, and economic forecasting models in order to establish future population and employment trends for various scenarios.

Exhibit 22 Process flow chart for integration of land-use plan and CMP
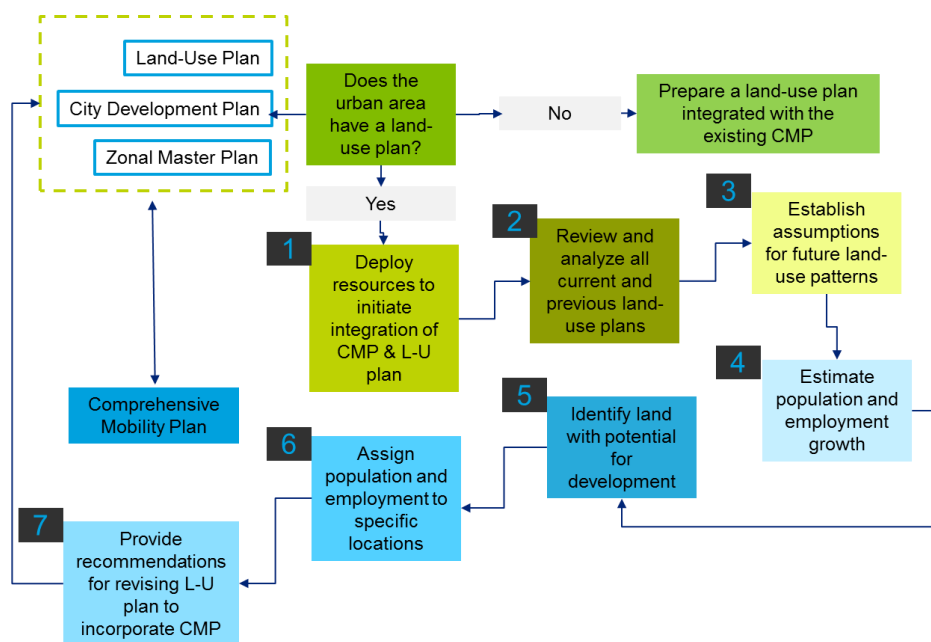
Step 5: Identify land with potential for development

This step shall identify undeveloped and underdeveloped land and, in compliance with environmental restrictions and zoning regulations, quantify land available to absorb growth.

Step 6: Assign population and employment to specific locations

This step shall use land availability, the cost of development, and the attractiveness of various areas to estimate the amount and type of growth that will occur in each area. This stage may require expert interviews and discussions, statistical trend analysis, and/or integrated transportation and land-use models.

Step 7: Provide recommendations for revising the land-use plan to incorporate the CMP

UMTA shall also provide recommendations on revisions/preparation of the city's land-use plan, in order to incorporate the component of transport planning undertaken in the CMP. The recommendations should essentially strive to achieve the following:

- Functional cohesion of land-use and transport structure in the Urban Mobility Area. While planning for the city, it needs to be ensured that all the land-uses are well integrated with proper accessibility and connectivity.
- The land-use plan should ensure that the transport network, existing as well as proposed, is well integrated with the spatial framework of the city and accordingly plan for land-use along major transport corridors.
- The land-use plan should strive for sustainable land-use options through land-use plans which minimise the need to travel.

Consideration of these aspects while planning/revision of the land-use are of prime importance and should be taken up as prime responsibilities of the Town Planning Authorities. The State Governments/Union Territory administrations should be sensitized regarding the importance of these incorporations in the process of land-use plan revision/preparation. The procedure for change in land-use plan shall be based on the Act prescribed by the Urban Local Body. Change in the existing Land-use plan is possible in case the Authority opines that such changes do not affect important alterations in the character of the plan and which do not relate to the extent of land-users or population density. The broad procedure undertaken for modification of land-use from that specified in the Master/Development Plan to be undertaken by the Development Authority is provided in Exhibit 23.

Exhibit 23 Process flow chart for modifying land-use plan

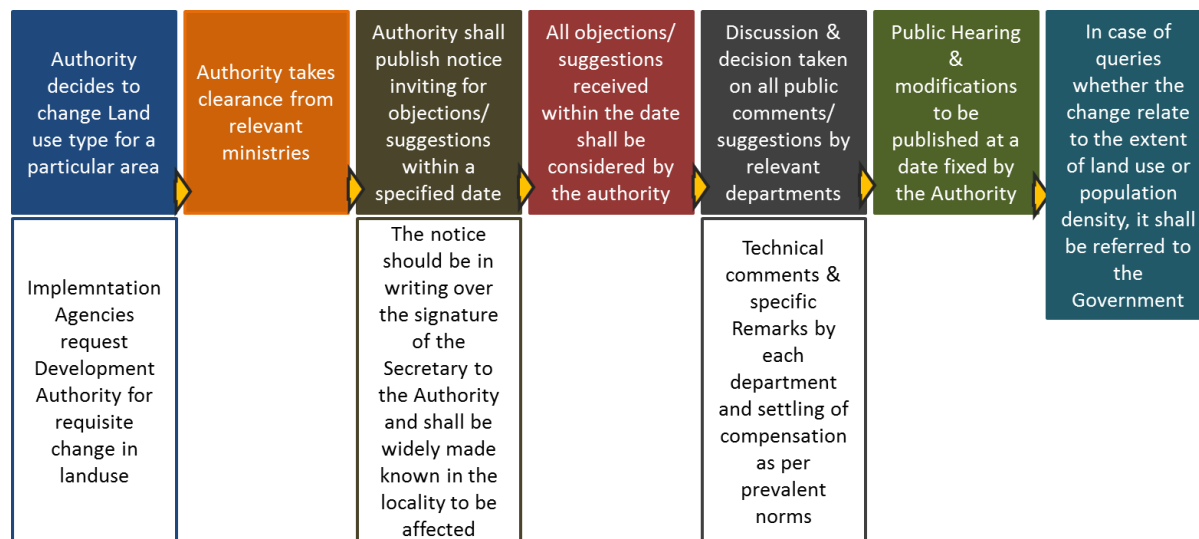| Authority decides to change Land use type for a particular area	Authority takes clearance from relevant ministries	Authority shall publish notice inviting for objections/ suggestions within a specified date	All objections/ suggestions received within the date shall be considered by the authority	Discussion & decision taken on all public comments/ suggestions by relevant departments	Public Hearing & modifications to be published at a date fixed by the Authority	In case of queries whether the change relate to the extent of land use or population density, it shall be referred to the Government
Implemntation Agencies request Development Authority for requisite change in landuse		The notice should be in writing over the signature of the Secretary to the Authority and shall be widely made known in the locality to be affected		Technical comments & specific Remarks by each department and settling of compensation as per prevalent norms		

Exhibit 24 presents a case study on land-use and transport integration in Singapore

Exhibit 24 Case study- Singapore[19]

Land-use and transport integration in Singapore

Land-use and transport planning in Singapore is facilitated by two agencies: Urban Redevelopment Authority (URA) and Land Transport Authority (LTA), respectively. URA prepares long term strategic plans, known as **Concept Plans**, which represent a successful example of integrated strategic planning. The Concept Plan lays out the vision for development over at least a 20 year horizon, and the key actions to achieve the vision. It shows the main land uses (residential, commercial and industrial) and the MRT and main road networks.

The Concept Plan is not a statutory plan, but provides the framework for the preparation (also by the URA) of statutory land-use plans – known as Development Guide Plans (DGPs), which together form what is known as the Master Plan. Further, the Concept Plans incorporate transport policies and the major transport infrastructure networks and facilities, and provide the framework for the formulation and implementation of more detailed transport strategies, policies and programmes by the LTA in support of the Concept Plans. The Concept Plans, therefore, cover aspirations that the community wants to achieve, and confronts major strategic trade-offs and dilemmas. The DGP and the Transport Plans (TPs) take the Concept Plans as a starting point and provide the details of how the aspirations are to be achieved. The operational plans, which are further detailed plans prepared by implementing agencies (Housing and Development Board and Jurong Town Corporation) then bring the Concept Plans to fruition. It can be argued that the relative absence of departmental silos and use of cross-agency committees make a great contribution to integration of government policy formulation and decision making in Singapore. This can be replicated for the Indian case, given the will of technical staff and leadership.

The process for preparation of a CMP is presented in Exhibit 25.

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[19] Refer Annexure XII for detailed case study of Singapore LTA

Exhibit 25 Process for preparation of CMP

CMP PREPARATION PROCESS

	1. Evaluate Existing situation	2. Develop integrated LU & Transport Strategy	3. Development of Urban Mobility Plan	4. Implementation Program
Laying objectives	Set Scope and Objectives	Develop of Visions & Goals		
Data Collection & Review	City Profile / Land-Use Patterns / Existing Transport Systems			
Strategic analysis	Existing Traffic & Transportation Conditions / Identification of Issues	Future Urban Growth Scenarios / Future Transport Network Scenarios / Evaluation of Growth and Network Scenarios / Strategies for LU & Transport Systems Development		List of Mobility Improvement Projects and Measures / Alternative Analysis / Selection of Priority Projects / Selection of Implementation Agencies
Planning			Public Transport Improvement / Road Network Development / NMT Facility Improvement / Intermodal Facilities	
Solution Development			Regulatory and Institutional Measures / Fiscal Measures / Mobility Improvement Measures and NUTP Objectives / Social and Environmental Considerations	Financing Options / Implementation Programs

Stakeholder Consultation

Updation & Maintenance of CMP

6.3.3 *Stakeholder consultation*

It is of paramount importance that preparation of CMP is an inclusive process, and stakeholders, including beneficiary groups, are involved at the time of its formulation. This will ensure a shared understanding of the future urban transport system. Exhaustive consultation with identified stakeholders will be important for CMP preparation, implementation, and review. The stakeholders in CMP preparation process shall include the following:

1. Government bodies like Municipal Corporation, Development Authorities, Public Works Departments, Traffic Police, Transport Department, Environment Pollution Control Authority, Transport Corporations, etc.
2. Central Government agencies like NHAI, IWAI, IR, Defence, etc.
3. Elected Representatives from city (Ward councillors), state (Transport minister) or centre
4. Experts in the field of transport from academic institutes and research bodies and consultants or practitioners in the field.
5. Non-government organisations / civil society organisations
6. Operators like auto rickshaw unions, private bus operators, or informal operators
7. Organized user and beneficiary representative groups

Why consult stakeholders?

- Understand stakeholder/public sentiment and the ground situation
- Provide a channel for stakeholders to be heard and enable greater participation in the policy development process
- Gather diverse views and insights from stakeholders/public
- Ascertain feasibility of intended policy change or new initiative
- Obtain buy-in from stakeholders by seeking their contribution to the policies/initiatives to be implemented
- Mitigate or find resolutions to opposing interests to prevent conflicting views at implementation stage
- Couch appropriate public communication messages, particularly for controversial or contentious issues.

It is important to work with key stakeholders identified above individually and collectively. Consultations could take the form of surveys, meetings or workshops, to identify transport issues and test the likely effects of strategies in addressing them. Divergence in perspectives would need to be articulated and discussed. Public consultation/ workshops may be required if deemed necessary by the UMTA Board. The master plan consultations in the case of Singapore is discussed in 26.

Guiding principles for stakeholder consultations[20] are set out below:

- Policy-making shall be inclusive and take into account the views of stakeholders. Public officers shall see inherent value in stakeholder feedback.
- The outcome of consultations should not be pre-determined.
- Consultations should involve a fair representation of all stakeholders who are affected, interested and/or can contribute to the policy development process.
- Modes of consultation should be carefully considered and selected to reach the relevant stakeholders and gather the appropriate types of information.
- The consultation process should be conducted in a transparent, consistent, structured and timely manner. Sufficient time should be given to those being consulted to understand and respond to an issue.
- Consultation material should provide sufficient background information that is clear and easily understandable by participants.
- The scope and parameters of the consultation should be clear to the participants to set the right expectations. Participants should be provided with a clear understanding of how their input will be sought and managed.
- UMTA should be responsive and follow up with stakeholders on how their feedback was considered and the extent of its impact on the policy in a constructive manner.

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[20] Refer to Public Consultation Toolkit, Ministry of the Information, Communications and the Arts (MICA), Singapore, 2010

- UMTA should ensure that the consultation process is mutually respectful, non-discriminatory and equitable, regardless of gender, race, age, educational levels or religious beliefs.

Exhibit 26 Case study- Master Plan Consultations, Singapore

Public Consultations for URA Master Plan 2008

Urban Redevelopment Authority (URA), Singapore, prepared a master plan in 2008 to guide Singapore's physical development over the next 10 to 15 years, of which public consultation and stakeholder engagement were integral components. During the preparation stage, URA conducted dialogues with key stakeholders such as architects, developers, business organisations, non-governmental organisations, academicians and the community. The dialogues allowed the plans to be detailed out to the stakeholders and for them to give URA feedback on the proposals. Based on the input received, URA refined the proposals for the public exhibition. Following this, the draft version of the plan was exhibited to obtain public feedback. This entailed virtual plans and videos being uploaded on URA's website and physical plans, scaled models and videos being exhibited at the URA Centre.

Over 185,000 people viewed the draft plan at the URA Centre and the website and 300 written feedback forms were received on the plan. Based on this input, the master plan was refined and improvised further before being gazetted.

In order to further increase public awareness, URA developed an exhibition of its Master Plan 2008 in eight heartland malls, thereby educating the public of the plan and key proposals and informed the wider populace of changes that would take place in their neighbourhoods. They also allowed the public to provide meaningful feedback on the upcoming developments.

6.3.4 Economic analysis and project prioritization

CMP would comprise a number of strategies which would be broken down into projects that would drive the investment plans for urban transport in the long, medium and short term. Undertaking a thorough economic analysis to check for the viability of identified strategies and projects and prioritizing them, therefore, becomes imperative before embarking on such long gestation and high investment programmes. Some of the projects identified by CMP that would require prioritization could related to the following:

- Road improvement by way of strengthening and widening
- Construction of new roads
- Construction of bypasses, freeways, and expressways
- Developing metro corridors
- Developing, improving, upgrading and extending MRTS and BRTS corridors
- Improving junctions
- Constructing and improving pedestrian footpaths
- Constructing and improving subways/ foot-over bridges/ road signage/ cycle tracks/ ramps, etc.
- Traffic management
- Improving parking facilities
- Constructing terminals integrating different modes

Framework for Economic Analysis

Appreciation of the feasibility and viability of each project, its costs, benefits and impacts need to be ascertained in comparison with a scenario if the project were not undertaken. The benefits may be assessed on the following lines:

- Savings in vehicle operating cost and maintenance cost due to a more efficient transport

network that would result because of the project. The projects impact on facilitating a modal shift may also be measured.

- Savings in travel time due to less congestion and better speeds.
- Environmental benefits realised due to reduced traffic congestion and fuel consumption.
- Reduction in pollution levels due to less use of personal motor vehicles, resulting from enhanced public transport services
- Increase in transport safety, as measured by reduction in the number of accidents

Once the benefits have been assessed, the project costs for construction of transport corridors, etc. shall be computed. These costs shall include both capital and maintenance costs. For example, for road-based infrastructure, maintenance cost can be computed as a percentage of construction cost per year for both routine and periodic maintenance. Once costs and benefits have been computed, indicators such as Economic Internal Rate of Return, Net Present Value, and Benefits to Costs Ratio can be estimated, and projects may be compared across these measures.

Sensitivity Analysis

Post analysing projects for testing their economic viability; a sensitivity analysis can be carried out for deciding upon the preferred option. A sensitivity analysis subjects the investment in question to various risks, which culminate into either an increase in project costs, or a reduction in benefits, or both. The following sensitivity scenarios may be considered:

- Increase in project cost by x %
- Reduction in project benefits by x %
- Increase in project cost by x % and reduction in project benefits by x %
- Lower than expected travel demand and traffic growth rates
- Loss of road capacity and fall in travel speeds due to poor traffic enforcement

Framework for Project Prioritization

Prioritisation of projects for improvement of transport scenario in the city region is one of the most important aspects in successful project implementation. The project prioritization process as part of CMP shall help in greater planning efficiency. Project prioritization may be done by applying weightages to various parameters as decided by the UMTA Governing Board[21]. Prioritising transport projects may be a difficult task since many sustainable transport projects may have equal priority and hence, their planning may be phased out based on short, medium and long term planning. The framework for project prioritisation is provided in Exhibit 27.

Some guiding parameters that may go into project prioritization are highlighted below:

- Utilization of the corridors in terms of passenger km, which specifies the need for developing a particular facility.
- Estimated cost of the project. Low investment projects may be preferred due to limited fund

Exhibit 27 Framework for project prioritisation

Framework for project prioritization

1. Measure viability of each transport corridor under consideration (by computing ridership or utilization to cost ratio) to gauge project utilization per unit investment. Higher the utilization, higher the requirement of the project on priority.
2. In order to gauge the implementation probability of the project, undertake an environmental and social impact assessment. In case a corridor is seen as having issues related to resettlement or forest clearances, it is likely that its implementation will be postponed. The priority given to such projects should incorporate such adjustments.

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[21] Refer to Preparing a Comprehensive Mobility Plan – A Toolkit, MoUD, 2014 for guidelines to setting criteria to project prioritization.

availability over those projects that have a high investment cost.

- The extent up to which the project utilizes existing infrastructure, facilities, and services.
- The requirements and costs of maintaining the infrastructure envisaged by the project in a state of good repair.
- Environmental and social impact of the project.

Prioritisation of projects may be categorised over different time frames based on the following criteria (refer Exhibit 28):

- The short-term projects shall be based on area level traffic circulation plans, improving the safety and accessibility of pedestrians, cyclists, and public transport users, implementing traffic signals, etc.
- The medium-term projects may involve implementation of corridor level cycle tracks, mass transit corridor, public transport fleet improvement, parking policy development. The medium term measures may largely aim at improving public transport and NMT shares.
- The long-term projects include implementing city level networks for walking and cycling, mass transit networks, parking regulation measures, pricing strategies and other such measures aimed at improving the overall road network to provide adequate accessibility for existing developed areas and to meet the overall vision of CMP for the city region.
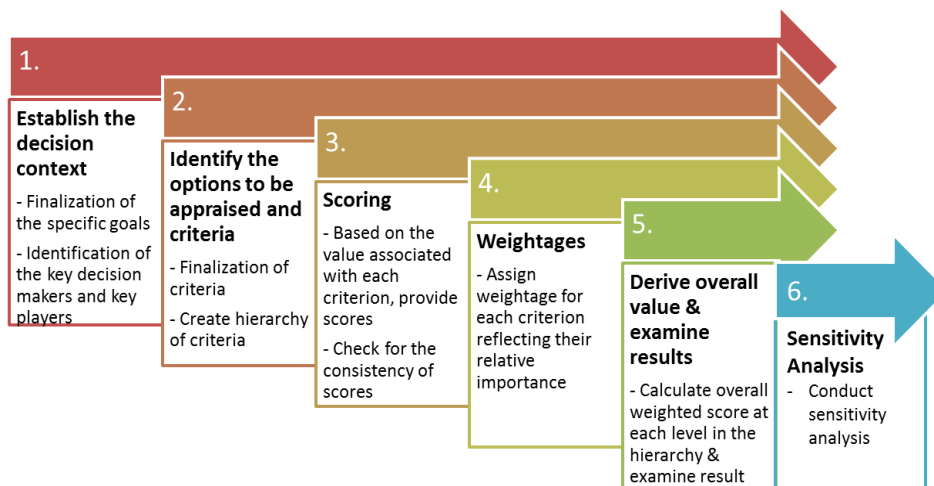
Exhibit 28 Prioritisation guidelines: long, medium and short term
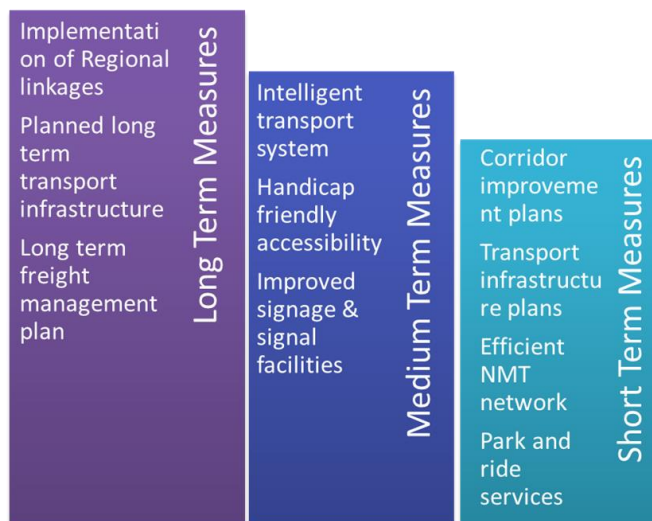
A tentative project prioritisation plan along with CMP shall be proposed to be discussed with all key stakeholders for their feedback and suggestions. The project prioritisation plan following MCDA technique is highlighted in Exhibit 29.

Exhibit 29 Project Prioritization Plan following MCDA

A multi criteria decision analysis[22] (MCDA) technique may be used to evaluate alternative options using stakeholder feedback. Following due consideration of the stakeholder feedback and decision by the UMTA Governing Board, the project prioritisation is finalised. The steps involved in MCDA technique are demonstrated in the exhibit.

1. Establish the decision context
- Finalization of the specific goals
- Identification of the key decision makers and key players

2. Identify the options to be appraised and criteria
- Finalization of criteria
- Create hierarchy of criteria

3. Scoring
- Based on the value associated with each criterion, provide scores
- Check for the consistency of scores

4. Weightages
- Assign weightage for each criterion reflecting their relative importance

5. Derive overall value & examine results
- Calculate overall weighted score at each level in the hierarchy & examine result

6. Sensitivity Analysis
- Conduct sensitivity analysis

The final output of CMP shall be a list of prioritized strategies pertaining to various aspects of urban transport. Some of the strategies suggested in the CMP, particularly those related to corridor identification and development would need to undergo alternative or options analysis in order to finalize what type of mass rapid transit system is best suited. This has been explained in the following section.

6.4 ALTERNATIVE ANALYSIS

Following the planning for sustainable mobility options for an Urban Mobility Area, the next major process is Alternative Analysis (AA). Among various strategies proposed, the CMP of a city is expected to identify priority corridor(s) that need transportation improvements. Once a corridor has been identified, the next step would be to assess different transportation options for that corridor – MRTS, corridor alignment options or different land-use scenario options for a corridor. CMP will also spell out all transport alternatives for the proposed corridor(s). The AA shall evaluate the alternatives for the identified corridor and suggest the option best suited to the city. As an example, suppose the CMP proposes a particular corridor to be developed as a long term strategy and advocates alternatives like an improved bus system, BRTS, a metro or mono-rail. AA would evaluate all these alternatives based on defined criteria and select the alternative best suited for the corridor. Therefore, during AA, the priority corridor identified in the comprehensive planning is studied in detail, focussing on the effects of alternative solutions on the corridor's transportation problems. The alternatives shall be analysed in detail based on the following basic criteria:

- Overall benefits and public well-being achieved due to the project
- Effective cost involved in project implementation
- Impact caused by each alternative and its expanse
- Comprehensive technical basis available for the selected technical alternatives
- Economic impact
- Environmental sustainability
- Financial sustainability
- Promotion of multi-modality

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[22] eprints.lse.ac.uk

The responsibility of preparation of the Alternative Analysis report based on the CMP document rests with UMTA which may either use in-house technical staff or appoint a consultant for its preparation. The alternative analysis report shall be prepared in close coordination with key stakeholders, UMTA and implementing agencies. The report shall be cleared only after the approval of the final alternatives by the UMTA Board.

Based on the AA Report, the Transport Investment Programme shall be finalised by UMTA and sent across to the implementing agencies. For a step-by-step guide on preparation of AA, please refer to Toolkit for Alternative Analysis prepared by MoUD. Exhibit 30 gives a brief gist of various steps involved in the process of AA:

Exhibit 30 Checklist for conducting Alternative Analysis

Process	Checklist	Action
Step 1 – Set goals and objectives	Have the problems with the corridor been identified? E.g. congestion, low capacity, safety	UMTA
	Goals and objectives identified? E.g. mobility (connects houses to offices, easy inter-modal transfer), Safety (minimise accidents across all modes, conformation with engineering design and safety standards), capacity (provide sufficient capacity, minimise delay)	UMTA
	What is the "big decision" that has to be made? E.g. transit system or highway alignment? What type of bus transit is suitable along the corridor?	UMTA
Step 2 – Set up a committee within UMTA	Have decision makers been identified?	UMTA
	Have all decision makers been contacted?	UMTA
	Does UMTA have technical expertise to conduct the AA or will it have to hire a consultant?	UMTA
Step 3 – Review technical issues, data, and models	Have the problems been identified? E.g. Current transit travel times during the peak period 45-75 minutes, as against 20-30 minutes by car, corridor contains a significant percentage of transit dependents, etc.	UMTA
	Causes for performance deficiencies? E.g. For congestion, possible causes may be rapid	UMTA

	residential and employment growth, inadequate transit system, demand exceeds capacity, poor past land-use planning, etc.	
Step 4 – Define scope of services	Terms of reference	UMTA
	Time frame/ work plan for the study	UMTA
	Budget	UMTA
Step 5 – Framing the analysis	Have the terms of reference been refined? (Revisit/ refine problem statements, causes of the problems identified in the terms of reference, assess need to update travel demand model)	Consultant[23]
	Evaluation criteria to be established at various levels (effectiveness and comprehensiveness in measuring goal attainment, conformity with NUTP)	Consultant
	Link performance measures to goals and objectives	Consultant
	Decide rating scale	Consultant
	Existing and future needs analysis	Consultant
	Analysis of strengths, weakness, opportunity, and threats	Consultant
Step 6 – Identification of alternatives	Plan and design Standards. E.g. Indian Roads Congress Design Standards, Guidelines, and Codes, etc.	Consultant
	Operational plans for each alternative, all having same parameters (Fare assumptions, parking assumptions, approximate alignment, route network- feeder and trunk, etc.)	Consultant
	Is there any screening needed?	Consultant
	What are the criteria, depending on screening levels?	Consultant

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[23] The final responsibilities of any task assigned to the consultant remains with UMTA.

Step 7 – Final definition of alternatives	Conceptual engineering (plans, drawings)	Consultant
	Travel demand forecasting (base year model, forecast model)	Consultant
	Operational planning (transportation impacts, land-use impacts, environmental and social impacts, economic impacts, project development costs/ capital costs, operation and maintenance costs, financial plans)	Consultant
Step 8 - Public review process	Identify relevant stakeholders	Consultant
	Decide on mode of contact, meeting date	Consultant
	Decide on public meeting dates	Consultant
	Inform public about the feedback process time-frame, format, etc.	Consultant
Step 9 – Evaluation	Rating scale	Consultant
	Performance measures to be evaluated	Consultant
	Grouping of performance measures	Consultant
	Composite score of each evaluation category by alternative	Consultant
	Final score – sum of score of all evaluation categories by alternative	Consultant
Step 10 - Selection of preferred alternative	Present evaluation matrix in previous step with all supporting documents	Consultant
	Public feedback	Consultant
	Decision on preferred alternative	Consultant
	Public meeting notification	Consultant

Post preparation of the AA report, UMTA would finalize corridor strategies, and identify the project to be undertaken in the short to medium term (up to 15 years). This will set the way for subsequent studies like the Detailed Project Report, by the concerned implementing agency, which would lead the selected project to the project sanction stage.

Exhibit 31 Process flow chart for alternative analysis
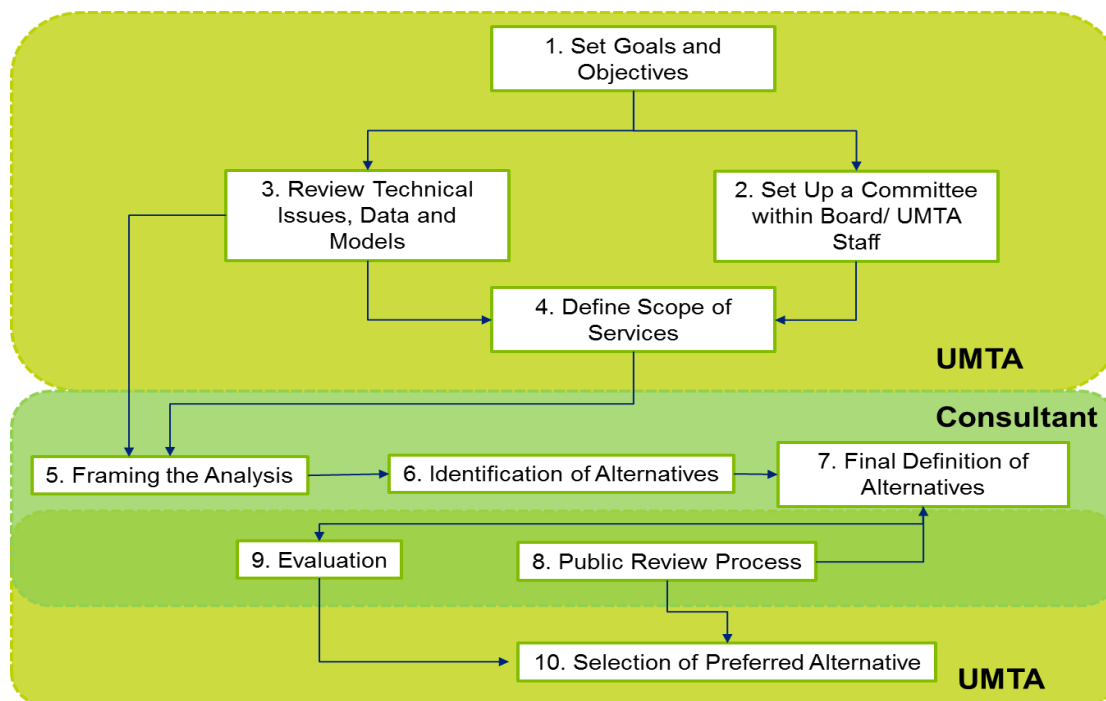

Exhibit 31 presents a process flow chart alternative analysis. A case study on the alternative analysis of transportation models in Tulsa, Oklahoma is briefly discussed in Exhibit 32.

Exhibit 32 Case study- Tulsa, Oklahoma

CASE STUDY: Alternative Analysis (AA) of transportation models by INCOG – Tulsa Metropolitan Area, Oklahoma

With the increase in population and the flow of traffic in Tulsa, the problems of congestion and traffic accidents amplified. The INCOG (Indian National Council of Governments), which is a voluntary association of local and tribal governments in the Tulsa metropolitan area in northeast Oklahoma, conducted a study in the year 2000, to identify and analyse the various alternative transportation modes and select the one that meets the requirement. The existing and future conditions of the city were also examined to set a base for the analysis of alternatives.

Key Concepts: In the first step, the factors that may affect the selection of the alternatives were identified and then the various options were identified. These factors included travel time, costs, frequency, comfort, environmental consequences, etc. The various alternatives in the case of Tulsa were identified as buses, BRTS, light rail, commuter rail and pedestrian lanes. The selection process began with demand estimation, identifying modes that are apt considering the demand and the assessment of the pros and cons of each mode selected. Following this, the cost - benefit, mobility and land-use benefit analysis were required to make the final selection of the alternative.

Relevance to Indian context: Several Indian metropolitan areas face similar problems and alternative analysis of various modes of transportation can provide a foundation of sound congestion management and several economic incentives. Using AA, different options can be suggested on the selected routes. It is important to note that the suggested alternative might not be a single mode of transportation, but a group of such modes and steps that can be implemented over an appropriate period.

6.5 TRANSPORT INVESTMENT PROGRAMME

It is imperative that strategic planning undertaken during preparation of CMP and Alternative Analysis is closely integrated with budgeting. In view of this, it is envisaged that UMTA would prepare a Transport Investment Programme for the Urban Mobility Area, to achieve the goals of the CMP and plan financing of projects proposed in the CMP. Prior to this, implementing agencies in the Urban Mobility Area would draw Multi-Year Programmes (MYPs), which would be tactical in nature, and closely integrated with the strategies proposed in the CMP. The MYPs shall present activities that an implementing agency would pursue over a short to medium term planning horizon towards achieving the strategies proposed in the CMP, based on reasonable expectations of the project budget. MYPs submitted by implementing agencies would enable UMTA to prepare a consolidated Transport Investment Programme. The Transport Investment Programme shall be a detailed five – year programme for financing the projects proposed in the CMP, based on inputs from MYPs.

UMTA would review and approve MYPs drawn by implementing agencies, in order to ensure that the programmes meet the guidelines set by CMP, are in line with the state and national level priorities and within the limits of the available resources. Therefore, through the process of approving MYPs, UMTA would play an indirect role in overseeing the planning process of implementing agencies.

MYP would primarily make use of technical costing and planning tools to generate a budget request for a transport sector investment, in line with the projects proposed within CMP. It is suggested that MPY should include yearly expenditure estimates and the intended sources of funding. Post approval of MYP, UMTA would issue a Certificate of Approval (CoA) to the implementing agency, for a particular project proposed in its MYP. The CoA could be shared with the finance department/concerned central ministry/funding agency for making a request for funds for that particular project.

MYP shall be prepared for a period of five years or more and broken into short term (1 to 3 years), and medium term (3 to 5 years) for monitoring and implementation. This shall be developed in consonance with CMP. It is recommended to be updated every 2 years.

The approved MYP can be detailed in the form of annual action plans by implementing agencies.

6.5.1 Guidelines and procedure for preparation of Transport Investment Programme

The suggestive process for preparation and approval of MYP is presented in the exhibit below. Steps involved in development and finalisation of MYP are provided below (refer Exhibit 33 and Exhibit 34).

Step 1: Reference to CMP, Alternative Analysis, and other guidelines

UMTA shall circulate the finalised CMP and other guidelines to all concerned agencies. The concerned agencies shall refer to these documents and make themselves aware of the objectives and strategies envisaged for development of urban transport over the planning period.

Step 2: Development of draft Multi-Year Programme by each implementing agency

Each of the concerned agencies shall prepare a draft MYP in line with the CMP and submit the same to UMTA for ensuring compliance. Implementing agencies shall draw MYPs to include the following:

- Determination of the activities to be undertaken by the implementing agency, to achieve the objectives and strategies of the CMP. An example of MYP drawn by a metro railway corporation is exhibited as follows.

Exhibit 33 Process flow chart for preparing Transport Investment Programme
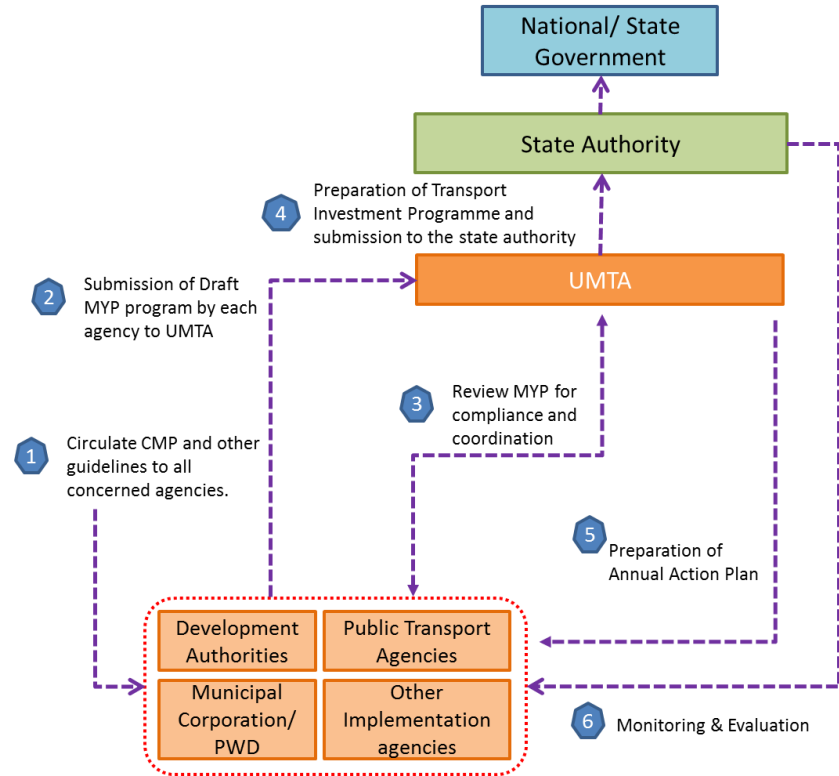
Exhibit 34 Multi-Year Programme

Transportation Service	CMP Objective	CMP strategy	AA Outcome	Main Activity by SPV	Timelines	Costs
Public Transport	To increase public transport ridership by 20% in the planning period	To develop 100 km of corridor around the city	BRTS is the best option suited for the corridor	Build 25 km of BRTS corridor in 4 phases	2016 - Completion of 25km	
					2017 - Completion of 50km	
					2018 - Completion of 75km	
					2019 - Completion of 100km	
…						
…						

- Determination of the year(s) in which each proposed activity would be undertaken by the implementing agency, in order of priority. All augmentation of transport network and infrastructure provisions may be envisaged for the short and medium term while policy level implementation may be envisaged in the medium term.
- Estimation of current and future costs and financing of major activities proposed, and identification of strategies that will improve the financial sustainability of the MYP. It is crucial that MYP clearly spells out the amount of funds being spent on each activity and their source, and identify funding gaps and future fund requirements. The costs can be determined by:
    - Estimating current project costs
    - Predicting future resource requirements
    - Estimate current project financing

- Predicting future financing levels and patterns over the MYP's time horizon
- Estimate financing gaps by comparing resource needs with available financing

- MYP would be accompanied by an Implementation Schedule (refer Annexure IX). This Implementation Schedule would include the projected benefits, time frame and manner of implementation of the projects included in the MYP.

Step 3: Review of MYPs for compliance

The primary function of UMTA is to ensure coordinated development of overall urban transport. In this regard, UMTA shall review MYPs submitted by all implementing agencies to ensure that:

a. The planned developments envisaged as per CMP and other guidelines have been covered by the MYPs;
b. There is no overlap or gap in achieving the envisaged development;
c. The projects finalised under the MYP are within the time and budget frames that have been predicted by CMP

UMTA would provide its comments and suggestions to the concerned agencies for revision of the draft programmes. Once these suggestions have been incorporated, MYPs can be forwarded for finalization and approval by the UMTA Board.[24]

Step 4: Consolidating MYPs into a Transport Investment Programme

Once MYPs have been revised, UMTA would prepare a Transport Investment Programme, consolidating MYPs of various implementing agencies and submit it to the State Government via its nodal department, for approval of programme and associated budget.

Step 5: Preparation of annual action plan

Once the Transport Investment Programme has been approved by the State Government, UMTA would break down the Programme into implementing agency-specific programmes, and shall circulate them to all concerned implementing agencies. The agencies shall then decompose their respective MYPs into annual action plans for the following year. This process of annual action plan formulation shall be repeated every year for the time horizon of the MYP.

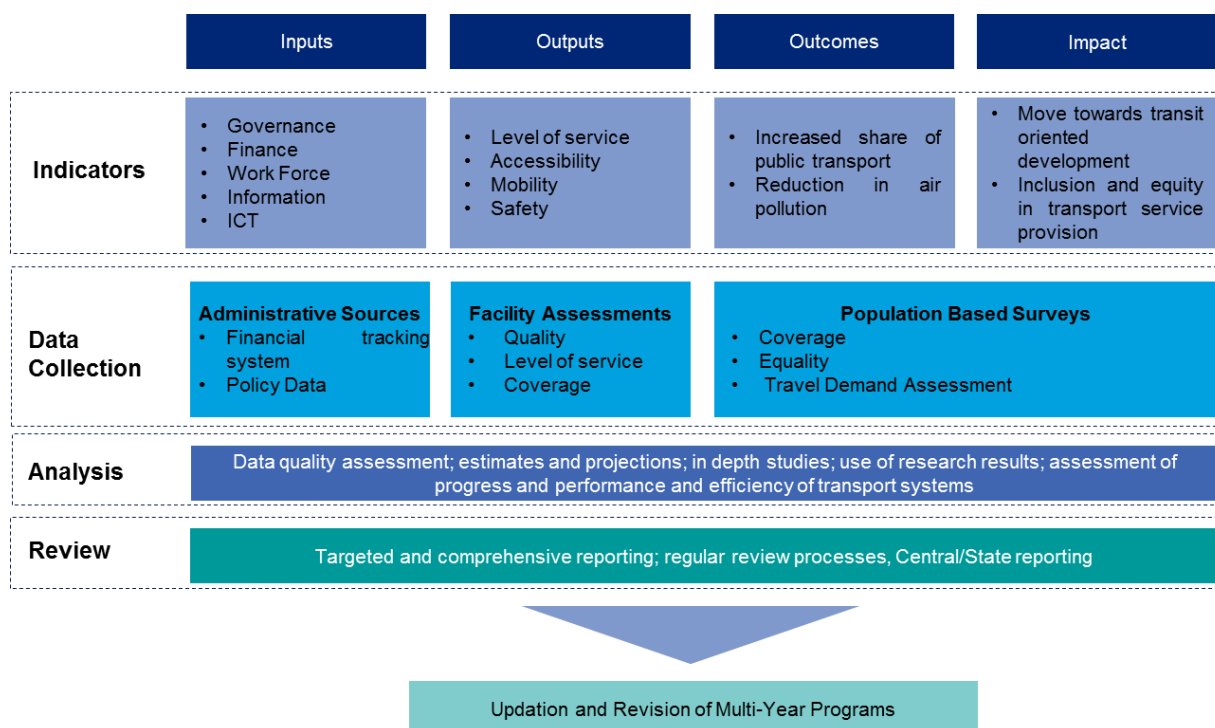### Step 6: Monitoring and evaluation of MYPs

UMTA shall establish a monitoring and evaluation framework to track the progress of implementing agencies in performing activities set out in their MYPs. This process would enable UMTA to propose annual and mid-term corrections to MYP strategies. The principles of establishing an effective monitoring and evaluation framework are:

- Ensure selection of specific, measurable, achievable, relevant and time-bound indicators to track performance.
- Plan in advance the data sources for measuring the indicators, and the means by which data will be verified.
- Describe accurate baselines that will enable tracking of progress.
- Define targets that are realistic and achievable in relation to the baseline data.

Exhibit 35 gives an illustrative monitoring and evaluation framework which UMTA could adopt.

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[24] All projects with issues pertaining to land requirement shall be referred to the land owning Authority for clearance on land requirement/ acquisition. Hence, the implementing agencies will be responsible for getting clearance on any change in land-use for the projects approved under the Transport Investment Programme. UMTA shall be responsible for monitoring the process of land-use change undertaken by the implementation agencies and may time to time facilitate the same as deemed necessary by the UMTA Board.

Exhibit 35 Illustration of monitoring and evaluation framework of UMTA

	Inputs	Outputs	Outcomes	Impact
Indicators	• Governance • Finance • Work Force • Information • ICT	• Level of service • Accessibility • Mobility • Safety	• Increased share of public transport • Reduction in air pollution	• Move towards transit oriented development • Inclusion and equity in transport service provision
Data Collection	**Administrative Sources** • Financial tracking system • Policy Data	**Facility Assessments** • Quality • Level of service • Coverage	**Population Based Surveys** • Coverage • Equality • Travel Demand Assessment	
Analysis	Data quality assessment; estimates and projections; in depth studies; use of research results; assessment of progress and performance and efficiency of transport systems			
Review	Targeted and comprehensive reporting; regular review processes, Central/State reporting			

Updation and Revision of Multi-Year Programs

The Authority may also engage consultants as deemed necessary for the purpose of monitoring and auditing processes.

6.6 INTEGRATED FACILITIES

An integrated transport system enables cross-city and cross-region travel through seamless interchange. Planning for integrated facilities aims to ensure that there exists suitable and interconnected transport infrastructure for all transport modes, such as private vehicles, freight, public transport, walking and cycling. To ensure smooth connectivity of people and goods across the Urban Mobility Area, it is vital that all transport modes (by way of infrastructure and services) are connected and work together to supplement one another. Integrated service provision results in a seamless journey that is as door-to-door as possible.

Today, most commuters in Indian cities face barriers and discontinuities in seamless travel across an urban area. These discontinuities are sharper for pedestrians, cyclists and public transport users than for car drivers, who can usually find a way around such impediments.

- For pedestrians, barriers include roads that are difficult to cross, lack of footpaths, hostile walking environment, etc.
- For cyclists, barriers may include dangerous intersections leading to safety concerns, high traffic roads without provision of cyclist tracks, etc.
- For public transport users, barriers include services, routes and schedules that do not connect, less frequency of service, absence of end-to-end connectivity, etc.

In planning and development of integrated facilities, UMTA shall keep in view certain measures:

- Integrated transport network means integration among modes as well as within each individual mode. Is this inter and intra-modal integration being achieved?
- How good is the last mile connectivity? Are the services of autos, rickshaws, etc. utilized efficiently, so as to complement other public transport modes, instead of all modes operating independent of one another?
- How is the walking access to bus/train stations? How can the walking environment be improved?
- How secure are the facilities for cycling to bus and train stations?

- How well do buses connect with each other and with trains in terms of schedules and physical access?
- How does one ensure seamless travel of commuters in buses or trains and from buses to trains and vice-versa? What procedures (of security frisking, ticketing, etc.) can be streamlined so as to cause minimum discontinuity for commuters?
- Is the public transport system barrier-free to serve passengers with disabilities and is it gender-sensitive?

6.6.1 Guiding Principles for Integrated Transport Planning

The guiding principles for integrated transport service planning have been demonstrated in Exhibit 36 below.

Exhibit 36 Guiding principles for integrated transport planning

Principle	Considerations for UMTA interventions	Potential Outcomes
Providing a satisfied commuting experience	• Identify ticketing and fare requirements for commuters to introduce integrated ticketing across public transport modes and operators[25] • Offer clear and accessible information to commuters for public transport across modes, operators, routes and schedules • Encourage good pedestrian access to public transport services • Consider the needs of all users of the network	• Increased patronage towards public transport services and facilities
Development of an integrated, seamless public transport network	• Plan for a hierarchy of mass, intermediate and local transit services in a network through terminal and interchange point development • Follow consistent timetables and stopping patterns for services • Coordinate convenient transfers across services • Increase network connectivity	• The public transport network is effective and easy to understand and navigate • The public transport network considers the needs of different user groups • Changing between public transport modes is as convenient as possible
Plan for rehabilitation of existing assets and infrastructure	• Provide services making the best use of existing assets and infrastructure • Plan for future asset and infrastructure procurement and development	• Appropriate distribution of public transport services across the network • Service provision increases network productivity • Public transport services are integrated with future asset and infrastructure improvements
Foster continuous improvement	• Undertake periodic reviews to ensure that services continue to reflect demand expectations	• Service planning continues to be efficient and effective
Ensure safety of commuters and	• Establish a unified and centralized command and control center for the Urban	• Reduction in fatalities caused during accidents

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[25] Refer to 'Draft Guidelines – Smart Ticketing', Expert Group on Urban ITS. Access - http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=5783&no=3

Principle	Considerations for UMTA interventions	Potential Outcomes
prompt accident mitigation	Mobility Area enabling quick incident response[26] • Plan for high quality facilities to ensure commuter safety, comfort and ease of use	
Ensure integrated traffic management	A command and control center shall be operated by the implementing agencies in coordination with UMTA. This center may be responsible for the following activities: • Using intelligent transport system to streamline traffic signal control enabling prioritization of public transport and traffic optimization • Satellite tracking of vehicles to give real time passenger information • Automatic number plate recognition systems and vehicle detection systems • Enabling visual view of transport system through closed circuit television surveillance[27]	• Reduced congestion • Reduced energy consumption and traffic emissions • Increased efficiency of the transport system • Improved freight delivery and servicing • Enhanced road safety • Reduction in parking pressure

In terms of development of integrated facilities, UMTA's role is envisaged to include planning these services so as to facilitate their development, and overseeing their operations. UMTA is not envisaged to directly manage the construction and implementation of these facilities and systems, but to ensure that they are developed and implemented as necessary by appropriate operators to support integrated public transport services for the metropolitan area. Hence, the core operation and management function would be continued by the respective public or private agencies, service providers, and facility owners. UMTA shall be responsible for coordinating with the facility providers and providing integrated solutions for operation and management time to time. The case study of London is presented in Exhibit 37.

Exhibit 37 Case study-London

London Oyster Card – Integrated ticketing system

Nearly two- thirds of the total rail journeys in United Kingdom either start or end in London. Public transportation in United Kingdom is administered by TfL (Transport for London). TfL introduced a smart card – known as the Oyster card - which could be used in various modes such as London Bus, DLR, Tramlink, London Underground, etc. This project was a public-private partnership operated by TranSys consortium. The system is similar to the smart card system of Delhi Metro Rail Corporation where passengers need to touch the card on a sensor at the beginning and end of the journey.

The Oyster card was set up under a Private Finance Initiative contract between TfL and TranSys and a consortium of suppliers. The £100 million contract was signed in 1998 for a term of 17 years until 2015 at a total cost of £1.1 billion. There is documented evidence that introduction of Oyster cards has increased the number of users of public transport in London. This has positively affected traffic congestion and therefore, journey times, which in turn has reduced CO_2 emissions and pollution levels.

Key outcomes – As of 2012, 7 million cards were regularly used, and a total of 57 million journeys are made using Oyster card every week. Around 80% of the total bus and tube travel in London has

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[26] Refer to 'Simplified Guide to Incident Command System for Transport Professionals', U.S. DOT. Access - http://www.ops.fhwa.dot.gov/publications/ics_guide/ics_guide.pdf

[27] Refer to 'Guidelines for ITS Deployment in Urban Areas', Urban ITS Expert Group, 2013. Access - http://ec.europa.eu/transport/themes/its/road/action_plan/doc/2013-urban-its-expert_group-guidelines-on-traffic-management.pdf

been estimated to be made through Oyster. In a survey conducted by DoT in 2009, 98% of responses were favourable when it came to the implementation of Oyster system.

Relevance to Indian context – TfL is an authority quite similar to the proposed UMTA, and the integration of ticketing as adopted by TfL can be established in Indian context too. Lessons can be taken from other integrated ticketing systems such as Hong Kong, Montreal, etc.

6.7 REGULATION

It has been suggested earlier that, UMTA may have a potentially recommendatory role to play in licensing and fare fixation functions for public transport vehicles operating within its jurisdiction as well as in regulating fees and charges for other urban transport facilities and services.

In this regard, the suggested functions of UMTA shall include:

- Contract public transport services so as to provide an integrated public transport system;
- Assist the licensing authority in issuing licences (or permits) for public transport vehicles;
- Monitor and advise on fees/charges for public transport facilities and services
- Enforce regulations for which UMTA is responsible

Guidelines for carrying out these functions are provided in following sub-sections.

6.7.1 Options for licensing function for public transport services

UMTA is proposed to provide inputs on issuing of licenses for the provision to the public transport vehicles. For achieving this, the licensing authority may issue licenses/ permits only in consultation with UMTA. This function is crucial since UMTA should exercise some degree of decision making power in regulating the number, routes and frequency of public transport vehicles operating within the Urban Mobility Area. This would also include providing recommendations on licensing activities for the existing routes and giving propositions relevant to new routes. However, these functions can also be allocated to UMTA, if the State Government decides to do so.

6.7.2 Options for monitoring and regulating fees and charges

Fares influence patronage of public transport services, and therefore, adjustment of public transport fares can be used to encourage or discourage use of a particular mode of travel. Setting of fares can, therefore, be part of a wider, multi-modal travel demand management strategy for the metropolitan area. Such a strategy would operate best with a single agency in control of fixing all relevant fares, fees, and charges. Since it would be difficult for UMTA to establish complete control over fees and charges of public transport services, its role shall be to make recommendations to fare-setting agencies. These recommendations shall fit within the overall travel demand management strategy.

UMTA shall be responsible for following functions within the ambit of monitoring, fixing and regulating fees/charges in the Urban Mobility Area:

- **Suggest on fixing fares, fees/charges pertinent to public transport within urban area** – UMTA could play a role in fare fixation for public transport services in the urban area, so that it becomes part of a wider reform of public transport planning, contracting and funding. This would facilitate a move towards regulation and planning of all aspects of public transport in the Urban Mobility Area, under a single agency.
- **Suggestions in fare structure for sub-urban rail services** – This shall include advising the Indian Railways for fixing sub-urban railway charges within the overall travel demand management strategy.
- **Provide advice on matters related to the amount of subsidy required for public transport services** –UMTA shall provide such advice on the basis of the level of revenue it has been able to recover from various sources of resource mobilization as discussed in the UTF operations document. In the event, the resources of UMTA fall short of meeting the subsidy expenditure, it shall provide advice to/consult the Central/State Government of the subsidy shortfalls, and means of meeting them.

UMTA's role would essentially be effective fare fixation and regulating its implementation through conveying the same to the relevant implementing agencies. UMTA will interact with all the relevant agencies such as public transport operators, regulatory agencies such as Transport Department for ensuring that monitoring and regulatory functions are undertaken properly.

6.8 RESEARCH STUDIES AND AWARENESS

One of the main functions of UMTA is to conduct research and study activities and spread awareness on urban transport initiatives. Research and development is core to a successful, well-strategized and updated transportation network. Hence, various types of transport policies, guidelines and studies need to be worked out by UMTA.

These functions shall be carried out by the Policy and Research Division of UMTA which shall be majorly responsible for research and study innovative solutions for establishing an effective transportation system within the Urban Mobility Area.

In this regard, UMTA's functions have been suggested to include following:

1. **Maintain records relating to urban transport, including details of projects, services, funding, and public transport safety:** To manage its affairs, UMTA will need to maintain a common database of information on activities for which it is responsible. Depending on the functions assigned to UMTA, the database shall contain details of projects, funding, public transport routes and services, licences, etc.

UMTA shall maintain database with information on activities for which it is responsible. Depending on the functions assigned to it, such database shall contain the following:

- Details of projects;
- Details of existing urban transport infrastructure;
- Planned development by different agencies in consonance with MYP;
- Fare structures;
- Funding;
- Public transport routes and services;
- Licences;
- System performance including safety

The maintenance of transport database will help in the following:

- Facilitate sharing of data across various agencies
- Facilitate coordination of information/ reports across agencies
- Minimise duplication of data collection
- Mapping of all transport developments for planning purpose
- Facilitate selected access of information/reports to the general public

Exhibit 38 Research function within UMTA

UMTA Research Functions		
Maintenance of Database	Public Transport safety guidelines	Performance Indicators
• Transport projects • Existing urban transport infrastructure • Public transport routes and services • Fare Structures and Licenses	• Quality of infrastructure • Driver training, testing and licensing • Registration, testing/certification of vehicles • Road accidents • Enforcement of traffic rules	• Develop measures and publish performance indicators • Conduct workshops for awareness about best practices

The broad outline of data which is recommended to be collected would, inter-alia, includes the following:

- Demand for urban transport:
    - o Traffic operations
    - o Performance of major route areas
    - o Passenger and freight data
    - o Vehicle population for public, private as well as para-transit system
- Supply of urban transport:
    - o Capacity trends
    - o Fleet data
    - o Road and traffic infrastructure facilities and provisions
- Safety statistics and financial results,
- Data on fuel consumed by public, private and para-transit system
- Information on road infrastructure, road conditions; Updated information on all public transport modes, routes, frequency, and timings;
- Non-motorised transport facilities;
- Mobility indicators;
- Modal share/ split of transport vehicles;
- Incidents of accidents, fatalities;
- Service level benchmarks; and
- Other benchmarking data

The research function within UMTA is presented in Exhibit 38.

2. **Develop and manage local performance indicators for urban transport:** UMTA needs to develop, measure and publish performance indicators for urban transport within its jurisdiction. These indicators shall be in line with service level benchmarks published by MoUD, but will also be a measure of UMTA's outputs.

3. **Conduct research studies, education and awareness about good practices in urban transport for overall improvement:** For UMTA to be successful, it needs to conduct research and studies to inform its decisions. These could be carried out by consultants or undertaken by in-house experts within the Policy and Technical Support division. There is also a role for UMTA in raising awareness about good practices in various aspects of urban transport. The latter could include providing training opportunities and support to new professionals from other agencies.

Exhibit 39 Common database for UMTA

4. **Develop and maintain transport analysis tools such as demand and network models, GIS, etc.:** UMTA shall maintain network datasets that model transportation networks and perform route, closest facility, service area, origin-destination cost matrix, vehicle routing problem, and location-allocation network analyses on transportation networks.
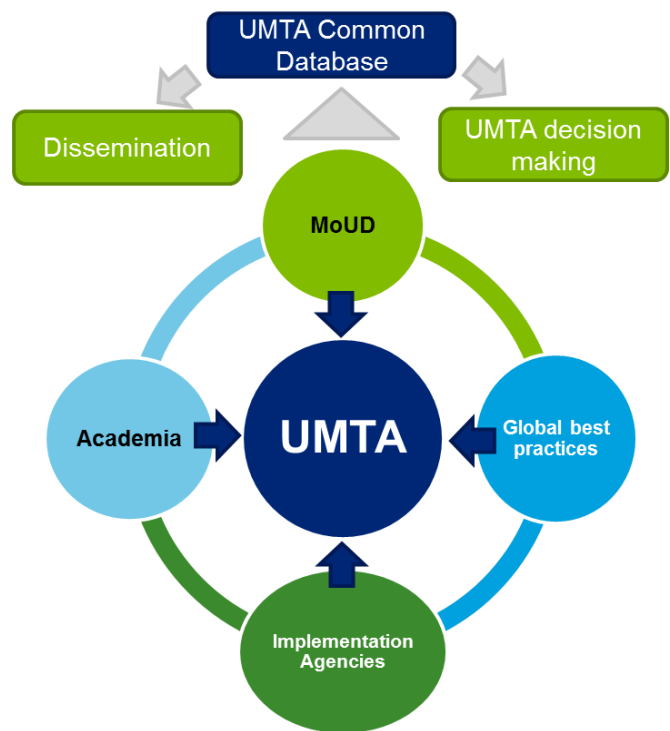
The common database for UMTA is highlighted in Exhibit 39.

6.9 CONCLUSION

This chapter outlined guidelines for carrying out various functions of UMTA, including providing input in policy, standards and guidelines, preparation of CMP and alternative analysis, MYP preparation, regulation, and research studies and awareness. The next chapter discusses broad procedures and guidelines to be followed to carry out day-to-day activities of the UMTA Board and Secretariat.

7. ADMINISTRATIVE AND RECRUITMENT PROCEDURES

7.1 INTRODUCTION

This chapter describes broad procedures and guidelines to be followed to carry out day-to-day activities of the UMTA Board and Secretariat. The policies and procedures relating to administration and human resource matters of UMTA shall comply with all the legislative provisions of the UMTA Act (refer to Annexure I). The procedures relating to procurement outline the steps to be followed for procurement of services, works, and goods. The procedures relating to financial management are provided in the UTF operations document, and these include funding mechanisms, accounting procedures and audit arrangements, etc. The procedures provided in this chapter are only for the purpose of providing broad guidelines. It is suggested that UMTA adopts prevailing policies and procedures as laid down by the respective State Governments.

7.2 ADMINISTRATIVE AND OFFICE MANAGEMENT PROCEDURES

The procedures relating to administration and office management to be followed for preforming day-to-day activities of the UMTA Board and Secretariat are provided in this section. The policies and procedures on these matters shall comply with the legislative provisions of the UMTA Act.

7.2.1 Transparency Policy

A high level of transparency shall be the key policy of the Authority. The Authority shall maintain exemplary standards in all areas of work and shall strive to be transparent in its procedures and policies. The Authority shall, therefore, abide by the following principles and detailed procedures while taking all decisions and performing all activities:

- **Clarity of roles, responsibilities, and objectives:**

  - The ultimate objective and institutional framework of the Authority shall be clearly defined in the UMTA Act or the regulations framed under it
  - The institutional relationships between the Authority and other agencies shall be clearly defined in performance agreements between these bodies
  - The role and responsibilities of the Authority with regard to performance of each of its functions shall be made clear in published documents

- **Open process for formulating policies and reporting policy decisions:**

  - The framework, instruments and any targets that are used to pursue the objectives of the Authority's policies shall be publicly disclosed and explained
  - Information on the composition, structure, and functions of the Authority shall be published
  - Changes to the Authority's policies shall be publicly announced and explained in a timely manner
  - The Authority shall issue periodic public statements on progress towards achieving its objectives

- **Transparent and fair procurement:**

  - The procedures used to publicise tenders shall be published by the Authority, together with any standard forms to be used, and details of the evaluation criteria that will be used to identify the successful tenderer
  - Contract award notices shall, as a minimum, include the description of the nature of the goods or services, the name and address of the successful tenderer, the total value of the contract, the values of the highest and lowest offers received and the term of the contract where appropriate
  - Contract award notices shall be posted on the Authority's website within seven days of the contract award and be retained on the website for a period of at least six months

- The Authority shall be prepared to debrief unsuccessful tenderers in relation to a contract award

▪ **Public availability of information:**

- Presentations and releases from the Authority shall meet the standards related to coverage, periodicity, timeliness, and access, set out in the Authority's communications strategy

- The Authority shall publish its plan and annual operating accounts at the earliest opportunity each year

- The Authority shall establish and maintain public information disclosure services, including a website, the Authority's annual report, and other media set out in its communications strategy

▪ **Accountability and assurances of integrity:**

- Senior officials and members of the Authority shall be available to appear before a designated public authority to report on the conduct of the Board's policies, explain the Authority's objectives and describe the Authority's progress

- Information on expenses and revenues in operating the Authority shall be published annually

- Standards for the conduct of personal financial affairs of officials and members of the Authority and rules to prevent exploitation of conflicts of interest, including any general fiduciary obligation, shall be publicly disclosed.

7.2.2 Board Procedures

This section specifies procedures relating to appointment and terms of service of Board members, responsibilities and meetings of the Board members and the Authority's committees, etc. All Secretariat staff are required to comply with the information concerning Board procedures and the same shall be maintained up to date at all times.

General provisions in the Act:

Members of the Board shall be nominated by names and /or designations. The names and/or designations of all members of the Board as first constituted and every change in membership thereafter shall be published in the Official Gazette.

A member of the Board, other than an ex-officio member, shall hold office for a period of three years from the date of his or her appointment and shall be eligible for re-appointment at the expiration of that period.

In the case of any vacancy arising in the Board on account of death, resignation or otherwise, the same shall be filled in as soon as possible in accordance with criteria set out in the UMTA Act. No act or proceedings of the Board shall be illegal, nor can any question relating thereto be raised, merely on the ground of existence of a vacancy in the Board.

Resignation, removal, or suspension of Chairperson or other members

The Chairperson or any other member may, by a written notice addressed to the State Government, resign his/her office, provided that the Chairperson or the member shall, unless he/she is permitted by the State Government to relinquish his/her office sooner, continue to hold office until the expiry of three months from the date of receipt of such notice or until a person duly appointed as his/her successor enters upon his/her office or until the expiry of his/her term of office, whichever is the earliest. The State Government may, by order, remove the Chairperson or any other member appointed or nominated by the State Government from his/her office if such Chairperson:

▪ is, or at any time has been, adjudged as an insolvent; or
▪ has been convicted of an offence which, in the opinion of the State Government, involves moral turpitude; or
▪ has acquired such financial or other interest as is likely to affect prejudicially his/her functions as a member; or

- has so abused his position as to render his/her continuance in office prejudicial to the public interest; or
- has become physically or mentally incapable of acting as a member.

The Central Government may, by order, remove the member appointed or nominated by it from his/her office if such member:

- is, or at any time has been, adjudged as an insolvent; or
- has been convicted of an offence which, in the opinion of the Central Government, involves moral turpitude; or
- has acquired such financial or other interest as is likely to affect prejudicially his functions as a member; or
- has so abused his position as to render his continuance in office prejudicial to the public interest; or
- has become physically or mentally incapable of acting as a member.

If a casual vacancy occurs in the office of a nominated member, either by reason of death, resignation, removal or otherwise, such vacancy shall be filled up, as soon as may be, by the Government and such nominated member will hold office only for the remainder of the term for which the person whose place he/she fills would have been a nominated member.

7.2.3 Committees constituted by the Authority (for specific subject matters)

It is suggested that UMTA shall time to time appoint committees consisting of such members or experts whose assistance or advice may be required for any subject relating to the purposes of the Authority.

Such appointed members/experts shall be entitled to receive allowances or fees as may be determined by the Authority. The committee members shall conform to any instructions given by the Authority and the Authority may at any time alter the constitution of any committee so appointed or rescind any such appointment. The Authority shall nominate any one of the members as the Chairperson of every such committee. The procedure to be followed by the committees and all other matters relating to the committees shall be specified by regulations framed under the UMTA Act.

7.2.4 Meetings Procedures

Board Meetings:

1. The Authority shall meet at such times and places and shall observe such procedure in regard to the transaction of business at its meetings (including the quorum at its meetings) as it deems appropriate.
2. The Chairperson shall preside over the meetings of the Authority.
3. If for any reason the Chairperson is unable to attend any meeting of the Authority, the senior most member as prescribed by the regulations framed under the UMTA Act, present at the meeting, shall preside over the meeting.
4. All issues which come before any meeting of the Authority shall be resolved through consensus, and in case no consensus is reached, the decisions would be taken by a majority of votes of the members present and voting and only in the event of equality of votes, the Chairperson or, in his/her absence, the person presiding, shall have the right to caste his/her vote.
5. Every member who in any way, whether directly, indirectly or personally, has a conflict of interest relating to a matter to be decided at the meeting, shall disclose the nature of his/her interest and after such disclosure, the concerned member shall not attend the part of the meeting that relates to that subject.
6. The quorum required for transacting any business by the Authority at its meeting shall be at least half of the Board members who shall be present in all the meetings of the Authority. The presence of UMTA representatives shall be mandatory for approval of the CMP and MYPs. If required, any other experts may be requested to attend such meetings.
7. All orders and decisions of the Authority shall be authenticated by the CEO or any other officer of the Authority duly authorized by the Chairperson.

General Principles of Meetings:

The general principles of meetings held amongst the staff members of the Authority and also with people outside the Authority shall be followed. Few such guidelines are:

1. The meetings of the Authority shall, after consent of the Board / CEO, be convened by the CEO / Director by written invitation to each of the members at least seven days before the date of the meeting along with the agenda of the meeting.
2. The chairperson shall preside such meetings.
3. If for any reason the Chairperson is unable to attend any meeting of the Authority, the senior most member as prescribed by the regulations framed under the UMTA Act, present at the meeting, shall preside over the meeting.
4. The meetings of the UMTA Board shall be held at least once in three months at such place and time as may be determined by the CEO.
5. The meetings of the Authority shall be regulated in accordance with the provisions of the UMTA Act and rules framed under it, and the operational policies and procedures.
6. Meetings of the Authority shall be suspended or terminated if the number of members present becomes less than the quorum.
7. No act or proceeding of the Authority or any of its committees shall be invalid merely by reason of:
   - Any vacancy therein or any defect in the constitution thereof, or
   - Any irregularity in its procedure not affecting the merit of the case.
8. The members of the Authority shall, on an honorary basis, discharge their obligations as specified under the UMTA Act and the rules made under it, and the expenses incurred in connection with such discharge of obligations and conduct of meetings shall form part of the administrative expenses of the Authority.
9. The CEO shall, at the written request of not less than four members of the Authority, convene a special meeting of the Authority to transact any extraordinary business on a date specified in the request. A written notice shall be sent to the members at least three days prior to the date of the meeting.

Frequency of meetings:

The Authority shall ordinarily meet for the conduct of business at such times and places as the CEO may time to time decide, but not less than once every three months. The CEO shall preside over all meetings of the Authority. In the absence of the CEO, Director - Planning or Director – Finance shall preside and in the absence of both, any of the other Directors may preside. Where none of them is present, a meeting of the Authority shall not be held.

Annual General Meetings:

The CEO shall, in each financial year, call an Annual General Meeting (AGM) of the Authority, for the consideration of, amongst other matters, the Annual Report. The AGM shall be held within six months after the closure of each financial year. It shall be open to the public who shall be given adequate notice of the meeting and of the salient points from the Annual Report through the media. Specific invitations of the AGM shall be sent to the organisations and agencies listed below (as applicable):

- Urban Development Department
- Transport Department
- Public transport operators (City Bus Transport, Metro Rail, Mono Rail, etc.)
- Urban Development Authorities
- Municipal Corporations
- Traffic Police
- Any other agency as considered suitable by the Authority

The AGM shall be chaired by the Chairperson of the Authority. Conduct of the AGM with regard to any standing orders, procedures, etc. shall be as the Authority may determine time to time except that such orders, procedures, etc. which are incompatible with the purpose and intent of the AGM shall be null and void.

Minutes of meetings:

Minutes of all meetings of the Authority will be documented and distributed, within five working days of the relevant meeting. It is the responsibility of the Corporate Services Division to ensure that such minutes are produced in a timely manner.

Minutes shall be distributed for approval to all members who attended the meeting, or in the case of Board meetings, all members of the Board, regardless of attendance.

Official minutes of every meeting shall include:

- The agenda of meeting;
- The name of the meeting, date and location;
- A list of those present, with their designations;
- A list of those for whom written communication of absence had been received;
- In the case of a special meeting of the Board, the official reasons for calling the meeting;
- Details of all decisions taken, together with a record of the results of any votes taken during the meeting;
- A record of all actions agreed upon, together with the name of the individual or organisation tasked.

Meetings, or items of meetings, dealing with the remuneration and performance of the staff members, shall be noted separately and such minutes shall be made available only to the members present at the meeting.

Finalised minutes of a meeting shall be formally adopted at the next meeting of the subject committee or the Authority and duly signed as a true and accurate record of the meeting, by the person who chaired the meeting. All minutes of the Authority and committee meetings shall be retained in the central filing system of the Authority for a minimum period of five years.

7.3 RECRUITMENT PROCEDURES AND SERVICE CONDITIONS

This section records the broad policies and procedures for appointments, conditions of service, and training, development and performance assessment for the Secretariat staff. The process for recruitment, appointments and the conditions of service needs to be transparent, and the expectations from staff, and the process for performance assessment need to be clearly defined.

7.3.1 Recruitment Responsibilities

The UMTA Board will be responsible for approval of recruitment policies and procedures, conditions of service, and policies for staff training, development and performance assessment, etc. The CEO, with the help of the consultant appointed for handholding support, will be responsible for appointment of all the staff proposed for each of the divisions. For any future recruitment, the responsibility can be assigned as follows:

- Governing Board – approval of recruitment policies and procedures, conditions of service, and policies for staff training, development and performance assessment
- CEO – appointment of all staff and overview of performance assessment
- Director - Corporate Services Division– management of recruitment, staff training, development and performance assessment processes
- General Manager - Administration – maintenance of position descriptions and staff records.

7.3.2 Recruitment Policy

The process for recruitment, appointments and the conditions of service needs to be transparent. Some of the key policies to be followed during the recruitment process may be as follows:

- Select the most qualified candidate for each position based on job-related criteria. The qualification criteria for each of the position are provided in Annexure VII.

- Encourage the promotion and development of current employees - Internal candidates shall receive priority when their appropriate qualifications, skills, and experience are equal to external candidates.
- Use recruitment and selection practices that reflect and support the requirements set out in the UMTA Act.
- Use a standardised selection process - The selection process already followed in the state or in similar institutions can be referred to.
- Use employment terms and conditions compatible with the prevalent employment law.
- Avoid employment in the same division for employees who are related - the final discretionary power will be with the CEO, and Director - Corporate Service Division.
- Employ temporary/contractual staff to cover seasonal demand, if required.

7.3.3 Position Descriptions and Person Specifications

Before the start of the recruitment process for each division, the CEO shall ensure that a detailed position description has been prepared. Position descriptions shall include details of the main tasks assigned to a position, the responsibilities of the position, management structure relative to the position, and the staff grade for the position. Person specifications will set out the minimum level of education, technical skills, and experience that will be expected of the successful candidate.

The description of positions provided in Annexure VII can be used as reference. For future recruitment, the CEO shall review and revise the position description for all positions at least every three years. Any proposed changes shall be discussed with the incumbent position holder, before they are implemented.

7.3.4 Recruitment process

Recruitment of the Secretariat staff shall be undertaken on the basis of a transparent public competition. The CEO shall ensure that all vacant positions are advertised in the print media in local language, English, and Hindi at the beginning of the recruitment period. Recruitment shall, as far as possible, follow the following timescales:

      Week 1 – finalise job and person descriptions

      Week 2 – place advertisements

      Week 6 – deadline for receiving applications

      Week 8 – invitations for interviews

      Week 10 – interviews and selection of preferred candidate

      Week 14 – preferred candidate starts work.

Screening of applicants:

The CEO, in consultation with the consultant providing handholding support, shall determine which applications shall be considered for further processing. Applicants may be contacted for clarification of details. Selection of the shortlisted applicants shall be based on compatibility with the position description and person specification for the position. Current knowledge, skills, experience and competence as well as the potential to be developed, shall be taken into consideration.

Applicant Assessment:

Formal applicant assessments shall be held for all recruitment. The location of all assessments shall be the office of UMTA. The cost of transportation and subsistence for an applicant to attend an assessment is to be met by the applicant.

For senior positions such as Director, the assessment panel shall include the CEO and at least 3 Board members (a selection committee of the Board can also be established). For other positions, the assessment panel shall include the CEO, the division head, and any one Board member.

Applicant assessments shall comply with the following:

- Minimum requirements and selection standards shall be based on the position description and person specification for the position.
- Current knowledge, skills, experience and competencies as well as the potential to be developed, shall be taken into consideration.
- The applicant's performance to date, personality, interpersonal style and motivation shall also be considered in selecting the most suitable candidate.
- Applicants for management positions may be required to undergo psychometric testing for the purpose of determining suitability for the position.
- The privacy of candidates will be protected, and no information of a personal nature will be required or made known for reasons other than are necessary for the selection process.

Once the preferred applicant has been selected, the referrals as provided by the applicant on the application for employment shall be contacted to confirm the details supplied by the applicant, including the applicant's performance, personality, interpersonal style and motivation.

The results of all applicant assessments, together with a recommendation of appointment, shall be reported to the CEO for approval. For senior positions, the applicant assessment results and the recommendation of appointment shall be reported to the committee of the Board responsible for staffing issues.

Appointment:

The following steps shall be completed before an announcement is made about the successful applicant:

- All short-listed applicants should have been interviewed.
- All unsuccessful shortlisted applicants should have been informed that they were unsuccessful.
- All the necessary documentation and authorisation should have been obtained by the CEO, including:
  - Application for employment
  - Health questionnaire
  - Identity document or passport
  - Highest educational certificate
  - Record of previous employment – service book
  - Personal data
  - Marriage certificate, if applicable
  - If the candidate was unemployed at times, an affidavit regarding his/her whereabouts during the relevant period shall be produced.

The consultant providing handholding support shall assist the CEO in preparing all the necessary documents such as the letter of appointment and the employment contract, etc.

The CEO shall sign the letter of appointment in all cases. The offer of employment is subject to the applicant complying with the appointment requirements and the submission of satisfactory certificates in respect of previous employment and qualifications.

7.3.5   Orientation and Induction

The purpose of orientation and induction is to introduce a new employee to all aspects of his/her job functions and other functions that are related and to provide knowledge and understanding of the organisation as a whole. It also ensures that new employees are introduced to their colleagues and superiors. This enables them to obtain the necessary support and resources to perform their jobs effectively. The induction process shall cover all aspects necessary to assist new employees in becoming productive as soon as possible.

All new staff members will be required to attend a one-day Orientation and Induction Course within the first two months of joining the Authority. The consultant appointed for handholding assistance will be responsible for providing support in organising induction programmes for the newly recruited UMTA staff members. The induction programme shall cover objectives and rationale, functions, powers of

UMTA. The consultant shall also assist in providing trainings on procedures for procedures for day-to-day functioning of UMTA.he day-to-day functioning of UMTA.

7.3.6   Training and Development

At the beginning of employment and every year thereafter, the relevant member of the management team, the staff member and his/her direct manager will complete an agreed upon detailed training and professional development programme for the staff member.

Progress with respect to completing the agreed upon training and development programme will be part of the performance review and monitoring for all staff. The training and development programme shall be reviewed and updated as part of every performance review.

7.3.7   Performance Monitoring and Review

At the commencement of employment and every year thereafter, the staff member and his/her direct manager will complete the standard performance planning and review form with an agreed set of performance targets*.* This form will be the basis of performance monitoring and review.

The performance and training and development of all staff shall be continuously monitored by the relevant member of the management team and the staff member's direct manager.

At least once every year, the relevant member of the management team and the staff member's direct manager shall hold a formal performance review with each staff member to discuss progress and performance during the period since the previous review.

Within ten working days following each review, the assessment shall be completed and signed by both the staff member and direct manager. The CEO shall consider and sign all assessment forms before they are lodged by the Administration and Human Resource teams on the staff member's personnel file.

7.3.8   Performance Reward

The staff's performance may also be the basis of a performance reward for the achievement of specific pre-determined objectives that support the achievement of key objectives of the Authority. Any performance reward scheme, including the particular objectives to be achieved, is subject to approval by the CEO and the Board of Directors.

7.4 PROCUREMENT PROCEDURES

This section highlights the essential information and brief step-by-step procedures for procurement of goods, works, and services by UMTA to be used for procurement of its various activities. The procurement methods, tender documents and contracts to be used by the UMTA Secretariat shall be agreed upon with the Board. Procurement of goods, services and works in the Urban Mobility Area will typically be guided by the procurement rules prevailing in the state. The purpose of this section is to provide guidance about procurement procedures that may be applicable to UMTA. The objective is to establish an open, transparent and competitive procurement system to bring out efficiency, economy and a fair opportunity for participation by all potential contractors, suppliers, and consultants.

This section is intended to guide UMTA in its procurement activities. It also intends to help in understanding the procurement processes and to achieve uniformity in procurement processes followed. The rights and obligations of the purchaser and the contractor of goods/works/services will be governed by the tender documents and by the contracts signed by the purchaser with the contractor and not by the guidelines stated in this section.

7.4.1   Procurement Policy

The procurement policy of UMTA shall ensure:

▪   **Transparency, fairness and fraud prevention** – This is important to ensure accountability and proper utilization of funds
▪   **Equal opportunity –** This ensures that the suppliers/sellers have equal opportunity to compete

- **Economy and Efficiency** – This means that goods, works, and services are to be procured at their true worth
- **Effectiveness** – This means that goods, works, and services procured will help to achieve project goals and objectives

7.4.2 Procurement Planning

Effective procurement planning is one of the first crucial steps required for the procurement process. Each division of UMTA shall prepare a procurement plan for 5 years, for undertaking procurement of different types of goods, works, and services. There shall also be a provision for annual review of the plan for making modifications, if any.

- The procurement plan covering equipment, goods, vehicles and consultancy services and resource support shall be prepared for each division of UMTA for first year and on a tentative basis for the subsequent years.
- Method of purchase shall primarily be based on the value of the contract (or as applicable). Other relevant factors are urgency of the demand, type of goods/works/services and availability of different sources of supply, etc.
- Limit of value per contract (or tender as applicable) applicable to the particular procurement procedure shall be strictly adhered to.
- It shall be ensured that the procurement is based strictly on actual need.

A team of technical experts is recommended to be formed to carry out the Procurement Process. UMTA may also appoint an independent monitoring consultant to ensure quality and process oversight.

7.4.3 Procurement of Services/Hiring of Consultant

Some aspects of UMTA's activities, such as UTF management, accounting, information technology, and communications, can be out-sourced to service providers. Consultants shall be employed for distinct activities such as preparation of the CMP, development of standards and guidelines, review of proposals and audit of implementation, preparation of contracts, preparation, and delivery of awareness campaigns, and research. These types of services may be procured using prevailing procurement guidelines in the state. The essential information and brief step-by-step procedures for procurement of services are given below:

- Establish the need for the assignment and outsourcing the services
- Preparation of the Terms of Reference (TOR)
- Preparation of cost estimates and the budget
- Deciding the contracting strategy
- Advertising (for shortlisting of the firms when the purchaser has no knowledge about the firms who shall take up the assignment)
- Preparation of the shortlist of consultants
- Preparation and issue of RFP to shortlisted consultants containing
  - Letter of Invitation (LOI)
  - Information to Consultants Standard form of Technical and Financial proposals.
  - Terms of Reference(TOR)
  - Standard Form of contract
- Receipt of proposals
- Opening and evaluation of technical proposals
- Opening and evaluation of financial proposals, and combined evaluation of both technical and financial proposals.
- Negotiations and award of the contract to the selected firm

Preparation of the Terms of Reference (TOR):

The Terms of Reference shall include:

- A precise statement of objectives
- An outline of the tasks to be carried out
- A schedule for completion of tasks

- The support/inputs provided by the client
- The final outputs that will be required of the Consultant
- Composition of Review Committee to monitor the Consultant's works
- Review of the progress reports required from Consultant
- Review of the draft report

Preparation of cost estimates and the budget:

The cost estimates or budget shall be based on the assessment of the resources needed to carry out the assignment, staff time, logistical support, and physical inputs (for example, vehicles, office space, and equipment). Costs shall be divided into three broad categories;

- Fee or remuneration;
- Reimbursable costs; and
- Miscellaneous expenses.

Deciding contracting strategy:

Before starting the tendering exercise, it is essential to agree on contract strategy viz. going for lump-sum or time based contract, individual vs. firm, advertising vs. internal shortlisting, terms of payment, etc.

Advertising:

In case a shortlist of 6 consultants cannot be drawn by the purchaser based on its own knowledge or from similar empanelment done by the Government of India, advertising through newspapers is the right way to compile the shortlist. The advertising may be considered in regional as well as national newspapers.

Shortlisting of consultants:

The Expression of Interest received shall be evaluated to arrive at a shortlist of the consultants. In preparation of the shortlist, first consideration shall be given to those firms which possess the relevant qualifications. The shortlist may comprise six firms.

Contract and RFP:

(A) Various types of contracts are as under:
- **Lump Sum** – These contracts are used for assignments in which the content and the duration of the work is clearly defined. Payment is made upon delivery of outputs.
- **Time Based** - These contracts are used for assignments in which it is difficult to define the scope and the duration of the work to be performed. Payment is based on agreed hourly, daily, weekly or monthly rate, plus reimbursable expenses using actual expenses or agreed-upon unit prices. This type of contract provides for a maximum total payable amount that includes a contingency for unforeseen work and duration, price adjustments, etc.
- **Percent contracts** relate to the fee paid to the consultant based upon the estimated or actual project cost or the cost of the goods to be procured or inspected. The percentage is established based upon market norm or standard practice in the industry.

(B) The RFP shall include:
- A Letter of Invitation (LOI), which will include evaluation criteria
- Information to Consultants – Standard Form of Technical and Financial Proposals.
- Terms of Reference
- Standard Form of contract

Opening and Evaluation of Proposals:

The technical proposals are to be opened publicly and evaluated based on the evaluation criteria given in the RFP document. The financial proposals of only those bidders who secure minimum qualifying marks shall be opened.

Negotiations and Signing of Contract:

The firm obtaining the highest total score (only based on quality in case of QBS and based on cost and quality in case of QCBS) shall be invited for negotiations and discussions held with them in accordance with State Government guidelines. No penalties are imposed on the consultants, be it a firm or individual, for unsatisfactory performance or delay in completion of the assignment/ services in the agreed time frame. It is hence suggested to do the performance evaluation of the consultant on completion of each assignment and keep the same in view while short-listing them for any future assignment.

Single Source Selection:

The firm for single source may be appropriate only if it presents a clear advantage over competition and on account of the following reasons:

- For tasks that represent a natural continuation of previous work carried out by the firm.
- Where a rapid selection is essential (emergency operation).
- For very small assignments (as per the agreed threshold); or
- When only one firm is qualified or has experience of exceptional worth for the assignment.

Individual Consultants:

Each contract for individual consultants is expected to cost below a certain limit. The limit shall be decided in consultation with UMTA Board or prevailing guidelines of the State Government. For hiring of individuals, it is necessary to finalise the job description, qualifications and experience required and terms of engagement. Thereafter an advertisement (if the assignment is complex) may be published in national/ regional newspapers indicating the above details.

The applications received shall be scrutinized and ranking shall be prepared. Thereafter the top-ranked individual shall be invited for interview/ discussions and would be offered the assignment.

Least Cost Selection:

This method is more appropriate for selecting consultants for assignments of a standard or routine nature (audits, engineering design of non-complex works, and so forth) where well-established practices and standards exist. Under this method, "minimum" qualifying marks for the "quality" are established. Proposals, to be submitted in two envelopes, are invited from a shortlist. Technical proposals are opened first and evaluated. Those securing less than the minimum qualifying marks are rejected, and the financial proposals of the rest are opened in public. The firm with the lowest price shall then be selected. Under this method, the minimum qualifying marks shall be established, understanding that all proposals above the minimum compete only on "cost". The minimum qualifying marks shall be stated in the RFP.

7.4.4   Procurement of Works

Preparation of Tender Documents

After preparation of the detailed project report, the tender documents may be prepared by the respective division based on the PWD manual and tendering process approved by the Board.

Call of Tenders and Award of Work

The methods of calling tenders may be either through the Single Bid System or through the Two Bid System. The various methods for calling tender documents are:

- **Single Bid System**: The single bid system shall be adopted where it is feasible to work out the schedule of quantities and to formulate detailed specifications for works
- **Two Bid System:** Two bid system shall be adopted in case it is not feasible to formulate detailed specifications for works and in order to obtain the most satisfactory solution to its procurement needs.
- **Tenders with Pre-qualification**: Criteria for pre-qualification along with evaluation system shall be clearly spelt out in detail.

- **Tenders with Post-Qualification**: The procuring entity may also resort to post qualification verification. It may call financial offers and eligibility related documents in separate envelopes simultaneously.
- **Open or Limited call of tenders**: Open tenders will be called in all cases of works costing Rs. 5 lakhs and above. Limited tendering of works shall be adopted if only a limited number of tenderers are known to possess requisite skills, technology and resources, by reason of their highly complex or specialized nature, or for works of a secret nature.
- **Single Source Procurement**: Single source procurement shall be adopted in case the construction technology is available only with a particular contractor, or a particular contractor has exclusive rights in respect of the construction, and no reasonable alternative or substitute exists.
- **Award of work without call of tenders**: Use of quotations shall be adopted for procurement of works that are not specially executed to the particular specifications. Also, it shall be ensured that the procurement entity shall not divide its procurement into separate contracts to bring the amount less than the amount set forth for such purpose.

Publicity of tenders

Wide publicity shall be given to the Notice Inviting Tender. Tenders shall be invited in the most open and public manner possible, by advertisement in daily newspapers circulated in the Urban Mobility Area, of which one shall be in the regional language.

Issue of tender documents

The tender document shall contain all the essential information as prescribed in the State Government Regulations or regulations as approved by the Board.

Pre-bid Conference

A pre bid conference may be held for clarifications on the tender document. At any time prior to the deadline for submission of tenders, the procuring entity may for any reason, whether on its own initiative or as a result of a request for clarification by a contractor, modify the tender documents by issuing an addendum.

Submission and opening of bids

The procuring entity shall fix a place and a specific date and time as the deadline for the submission of tenders. If the procuring entity issues a modification of the tender documents or if a meeting of contractors is held; it shall extend the deadline if necessary, to allow contractors reasonable time to take the modification into account in their tender; after adequately publicizing such modifications.

Evaluation of Bids

The procuring entity may ask contractors for clarifications of their tenders in order to assist in the examination, evaluation, and comparison of tenders. No change in a matter of substance in the tender, including changes in price and changes aimed at making an unresponsive tender as responsive shall be sought, offered or permitted. The procuring entity shall correct purely arithmetical errors that are discovered during the scrutiny of tender.

Acceptance of bids and Award of Work

The tender that has been ascertained to be the successful tender shall be accepted. Notice of award of work shall be given promptly to the supplier or contractor submitting the tender.

Measurement and Payment

Measurements of all items having financial value shall be recorded in measurement books and/or level field books so that a complete record is obtained of all works performed under the contract.

7.4.5 Procurement of Goods

This section provides guidelines for procurement of goods required for use by the Authority. This section covers the essential information and brief step-by-step procedures for procurement of goods. The guidelines are intended to provide assistance to the officials involved in procurement activities. It also intends to help develop an understanding of the procurement processes and to achieve uniformity in procurement activities to be undertaken by UMTA.

All officials may refer to the guidelines given in this section. However, the procurement of all goods, works, and services by UMTA may be carried out in accordance with the provisions of the procurement / finance rules prevailing in the state.

Guidelines for procurement of goods[28]:

The procurement of goods may fall into following categories:

1. **Purchase of goods of small value (say up to INR 15,000):** Procurement of goods of small value (say up to Rs. 15,000/-) could be made without taking approval of Director. There is no need to invite quotations or bids for such purchase. The purchase can be made on the basis of a certificate issued by the General Manager.

2. **Purchase of goods of medium value (say from INR 15,000 to 1 Lakh):** Purchase of goods of medium value (say above Rs. 15,000 to Rs. 1,00,000) can be made by taking approval of Director of the respective division. Such purchase could be made through market survey without inviting quotations or bids.

3. **Purchase of goods of large value (say more than 1 Lakh to 25 Lakh):** Purchase of goods of large value (say above Rs.100,000/-) could be made through obtaining bids. Three standard methods of obtaining bids can be followed i.e. Advertised Tender Enquiry, Limited Tender Enquiry, and Single Tender Enquiry.

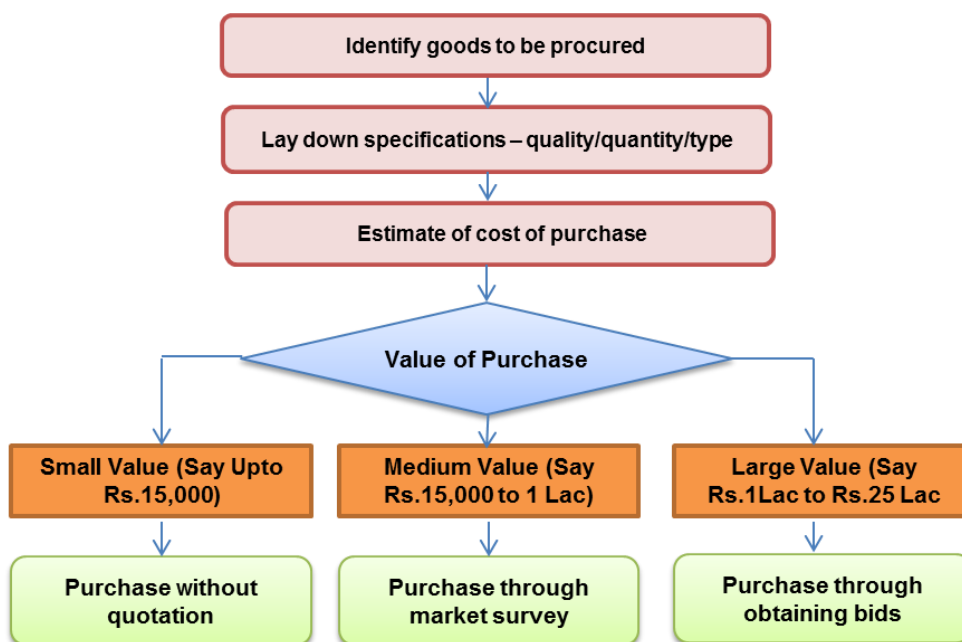**Exhibit 40 Process flow chart for procurement of goods**

Exhibit 40 presents a process flow chart regarding the procurement of goods.

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[28] All amounts given in this section are indicative in nature and may be updated by the discretion of Governing Board by cities.

7.5 CONCLUSION

The chapter discussed the broad procedures and guidelines to be followed to carry out day-to-day activities of the UMTA Board and Secretariat. It described administrative and office management procedures, recruitment procedures and service conditions, and procurement procedures.