

DEVELOPING A TRANSPORTATION MANAGEMENT ORGANIZATIONAL MODEL FOR LOCAL GOVERNMENT UNITS IN THE PHILIPPINES

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Abstract: With the implementation of the Local Government Code in 1992, management of transportation and other utilities were devolved to the local government units (LGUs). This results to realization of a need for LGUs to form an administrative body that will be responsible for all its transport related concerns. This study attempts to formulate functional and efficient transportation management organizational model that is generally appropriate for Philippine cities. This is in consideration of the current LGU structure, the prevailing policies, governing laws and common transport issues and concerns. The study includes the conduct of an interview survey involving local government units and a review of relevant laws and institutional setup of related transport agencies. Based on survey results and review findings, organizational models designed for different state of transport administration and urban development was formulated. In particular, the study highlights the potentials of multi-sectoral participatory transportation management by geographic clusters.

Key Words: traffic administration, devolution, local government units, capability building

1. INTRODUCTION

In the Philippines, cities serve as a general-purpose government for the coordination and delivery of basic, regular, and direct services and effective governance of the inhabitants within its territorial jurisdiction. Like most developing countries, traffic congestion is a growing problem among these urban centers. Prior to the implementation of the Local Government Code in 1992, the management of transportation as well as with other utilities is taken cared of by concerned national government agencies. Since then, these various functions were devolved to the local government units (LGU) particularly to the City Engineer's and the City Planning and Development offices, together with the local police force. However, unprepared and ill equipped as they are, the LGUs realize the need for an integrated transportation management unit (TMU) that will be responsible over all transport related concerns. This led to the establishment of TMUs founded through different institutional setup and organizational structures. Although transport management groups among LGUs are generally instituted through a city ordinance, their organizational structure varies to a wide degree. For instance, some cities organized a TMU under the office of the city mayor while some created a special committee on transportation, chaired by a city councilor. Others created a special section under either the office of the city engineer or the city planner while some LGUs formed a traffic team under the local police force.

Meanwhile, triggered by the complexity of the transportation problem, bigger cities formed an independent TMU comprised of several offices, which in some cases include non-government interest groups like public transport operators and drivers, motorists and other concerned organizations. In Metro Manila, a metropolitan-wide central planning, management, operation and administrative body, know as the Metro-Manila Development Authority (MMDA), was instituted through a Presidential Executive Order to manage the covered cities and municipalities. For the past years, LGUs had been trying to establish an efficient transport unit that will address its need by creating, adding and restructuring different forms of TMUs.

Local government units tend to go through a tough learning experience, at times ending up with multiple overlapping agencies that render inefficient operation. These result to unnecessary loss of resources had there been a suitable transport management organizational model for LGUs to start with. In this light, this study is among the initiatory efforts geared towards developing an institutionalized organizational structure of local TMU in Philippines.

2. THE STUDY

The study is geared towards formulating a functional and efficient TMU organizational model that is generally appropriate for a Philippine city. The formulation of the model basically considers the current LGU structure, the governing laws and policies, and the traffic concerns, which are observed to be fairly similar among the urban centers in the country. In particular, the study aims to define and formulate general concepts on the institutional setup, organizational framework, jurisdiction, as well as mandated roles and functions of an appropriate model unit. The study further identifies the institutional prerequisites; personnel expertise, training and facilities; as well as venues for public participation and inter-agency coordination, necessary in setting up an ideal TMU.

The Local Government Code classifies cities as either component or highly urbanized. Component cities have a minimum average annual income of 20 million pesos based on 1991 constant prices and either a contiguous territory of at least 100 square kilometers or a population of not less than 150,000 inhabitants. A city on the other hand must have a minimum population of 200,000 inhabitants and an annual income of at least 50 million pesos to be classified through a plebiscite as highly urbanized. Highly urbanized cities are generally independent while component cities are under the territorial jurisdiction of the provincial government. With all the LGUs in Metro Manila meeting the definition of a city, all the LGUs in the metropolis regardless of being a city or a municipality were included in this study. Meanwhile, LGUs outside Metro Manila are limited to key cities, most of which are designated as provincial capitals.

This study involves the conduct of interview survey involving key personnel of all the 17 LGUs in Metro-Manila together with 17 other key cities all throughout the Philippines. The survey is designed to assess the condition as well as the capabilities of the existing local TMUs. The survey also aims to understand the perceptions and practices of the local TMUs in dealing with their respective traffic problems and concerns. The survey questionnaire includes items which pertain to the condition of the transportation system; the structure, role and jurisdiction of the TMUs; its available manpower and resources; and the previous, on-going and proposed traffic management plans and programs in their respective localities. Also included in the survey are items pertaining on the work relations of the local TMU with other government agencies, private groups and other stakeholders in dealing with the transportation problem. Further, the questionnaire inquires on how the TMUs assess their performance, particularly on their mandated roles.

The capacity and performance of the TMUs are evaluated based on the different transport administration components such as planning, policy-making, traffic engineering, data management and enforcement. The strengths, weaknesses and needs of the TMUs are also identified by analyzing pertinent information regarding their capability based on their proposed and implemented programs relative to their transport concerns and their own performance assessment. Based on results, mechanisms geared towards improving the technical capability and performance of local TMUs are formulated. Finally, an initiatory transportation management organizational model is proposed together with the necessary measures to support its realization.

3. CITIES AND TRANSPORTATION CONCERNS IN THE PHILIPPINES

3.1 The City Government

The organizational structure of a typical Philippine city is presented in Figure 1. The city government is comprised of elected officials namely: the mayor, the vice-mayor and the city councilors. The mayor serves as the chief executive, the vice-mayor chairs the city council,

and the city councilors primarily comprise the legislative body. Other members of the city council include the representatives of the political district heads referred to as the Barangay Captain, the youth and the non-government sectors. Running the operation of the city government are key offices comprised that of the city treasurer, the city planning and development coordinator, the city engineer, the city administrator, and the city general services officer, among others. Meanwhile, the head of the local police, though technically under the Department of Interior and Local Government (DILG), is serving as the law enforcement arm of the LGU and is reporting under the city mayor.

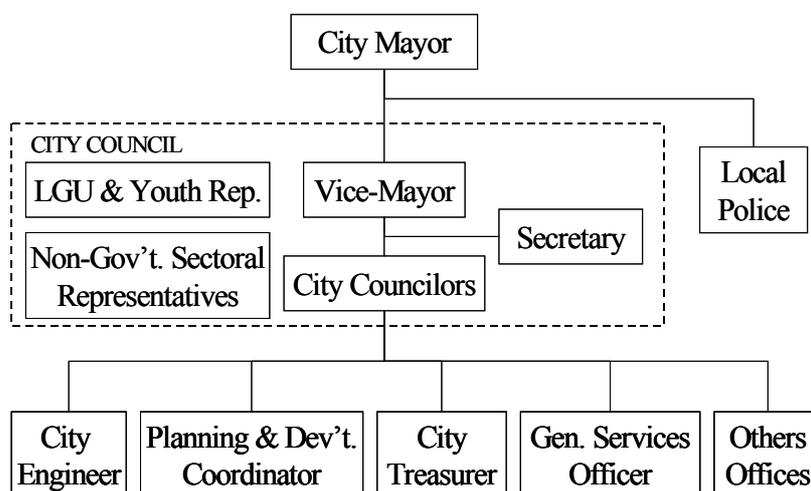


Figure 1. Organizational structure of the Philippine City Government.

3.2 Transport Related Agencies

Several government institutions are involved in the formulation, implementation and enforcement of transportation related regulatory programs and policies. Among these include the Department of Transportation and Communications (DOTC), the Department of Public Work and Highways (DPWH), the Department of Trade and Industry (DTI) and the DILG at the national level; the Metro Manila Development Authority (MMDA) in metropolitan Manila; and the Housing and Land Use Regulatory Board (HLURB) for highly urbanized cities and provinces.

The DOTC is mandated to formulate and recommend national policies and guidelines for an integrated and comprehensive transportation systems. Key transport agencies under the DOTC with regional and local offices are the Land Transportation Franchising and Regulatory Board (LTFRB) and the Land Transportation Office (LTO). LTFRB is mandated to regulate and supervise motorized land-based public transportation services, and fare control; and LTO is primarily responsible for driver licensing and registration of all motorized land-based transportation vehicles (Villoria et al, 1997). The DPWH is mandated to conduct planning, design and construction supervision of infrastructure projects. The DTI through its line agencies is involved in regulating importation public transport vehicles such as buses, while the role of the DILG is through the LGU and the Philippine National Police (PNP).

Meanwhile, the MMDA performs planning, monitoring, and coordinating functions for urban services within Metropolitan Manila. It is responsible for coordinating and regulating the implementation of all transport and traffic management programs in the metropolis. It may deputize members of the PNP, the local government traffic enforcers and other groups in traffic enforcement (Congress of the Philippines, 1994). The HLURB on the other hand, is the government's principal agency for land and housing development. Under the Local Government Code, the approval of the City Comprehensive Land Use Plan (CLUP) are now devolved to the provincial government while the HLURB is left with the approval of the plans of highly urbanized cities and provinces. The CLUP identifies suitable areas for urban development such as growth centers, new settlement areas and industrial estates. It also prescribes most suitable uses for agricultural and forest land and pinpoints areas where development activities must be carefully regulated or limited (Ballesteros, 2000). A CLUP may or may not contain a transport plan.

3.3 Devolution and the Local Government Code

The implementation of the Local Government Code is a landmark in the devolution policy agenda of the Philippine government. The Local Government Code in general promotes the establishment of an accountable, efficient, and dynamic organizational structure and operating mechanism that will meet the priority needs and service requirements of every LGUs. The Code declares the state's policy of giving the local government units a genuine and meaningful local autonomy. This policy is instituted through a system of devolution provisions in the Local Government Code whereby LGUs are given more powers, authority, responsibilities, and resources. This is to enable them to attain their fullest development as self-reliant communities and to make them more effective partners in the attainment of the national goals (ESCAP, 1997).

Through the Local Government Code, the LGUs are vested the power to appoint or remove local officials and employees who are paid wholly or mainly from local funds based on merit provided that such action is compliant to civil service law, rules and regulations. The Code also provides a continuing mechanism to enhance local autonomy not only by legislative enabling acts but also by administrative and organizational reforms. In addition is the power to create and broaden their own sources of revenue and the right to a just share in national taxes and an equitable share in the proceeds of the utilization and development of national wealth within their respective areas. The Code also encourages the participation of the private sectors in local governance, particularly in the delivery of basic services to ensure the viability of local autonomy as an alternative strategy for sustainable development. Further still, Code gives LGUs the right to group themselves, consolidate or coordinate their efforts, services, and resources for purposes commonly beneficial to them (Congress of the Philippines, 1992).

With all such provisions, the LGUs are theoretically expected to fair well in performing the devolved duties and responsibilities. In the transition stage however, improved coordination of national government policies and programs, and extension of adequate technical and material assistance especially to less developed and deserving LGUs is very crucial. The problem among current TMUs is an indication of deficiency in such contingency measures.

3.4 Transportation Issues and Concerns

The phenomenal increases in population and motorization have severely contributed to the transport traffic problems among urban centers in the Philippines. The present carrying capacity of the road network in some cities could not cope with this phenomenon. In Metro Manila, this has resulted to the deterioration of the condition of the road network, which in turn resulted to the reduction in the average travel time in most of the major corridors. The rapid urbanization and development of the cities are becoming to be another concern to the LGU particularly in reconciling urban land use and transportation planning. These problems are further aggravated by scarcity of funds, lack of necessary right-of-way and institutional inefficiencies.

An initiatory study conducted by National Center for Transportation Studies (UPNCTSFI, 2000a) aimed to evaluate the traffic administration capability of the LGU notes the following institutional concerns:

- There is evidence of lack of coordination among national and local of transportation and traffic related units.
- There are overlapping functions among national and local transportation and traffic related units of the LGUs.
- The majority of the LGUs lack the capabilities and technical know-how in formulating traffic measures to alleviate their traffic problems.
- The LGUs do not have the capacity to develop, establish and maintain transportation and traffic data.

4. TRANSPORTATION MANAGEMENT EXPERIENCE

This section focuses on the condition of current TMUs based on the results of the interview survey involving a total of 34 key local government units throughout the country. In particular, assessment of the current TMUs will include review of its organizational structure,

mandate, manpower and personnel resource development programs, availability of facilities and equipment, fund sourcing, and an inventory of their previous, on-going and proposed traffic reduction schemes.

4.1 TMU Organizational Set Up

The transportation management functions in an LGU can be simply designated to key offices such as the city engineer's or city planner's office, or a transport management unit solely designated for such purpose. Results indicate that 85% of all the surveyed LGU has its own TMU indicating a wide recognition of the need of having one. Among these TMUs, nearly half of are being headed by a police officer; the other 43% by a political appointee; and the remaining 10% are being headed by a city councilor. The significant number of TMUs headed by a police officer can be traced from the old centralized system when traffic management practice was primarily confined to enforcement. This was when the National Police was still under either the Defense Department or the Office of the President sometime between 1950 and 1990 (DILG, 2003). This also explains the tendency of the current TMUs, particularly those headed by police officers to prioritize enforcement among other supposed functions. The TMUs headed by political appointees and city councilors are outcome of devolution policy in the Local Government Code. The former is an exercise of the power to appoint necessary posts and the latter an adoption of the Code's mandate to form needed sectoral committees to be headed by council members within the local development council. The surveyed TMUs are mainly created under the office of the mayor, the other 27% are created as section of the local police while the remaining 10% are interim multi-sectoral and inter-agency committees.

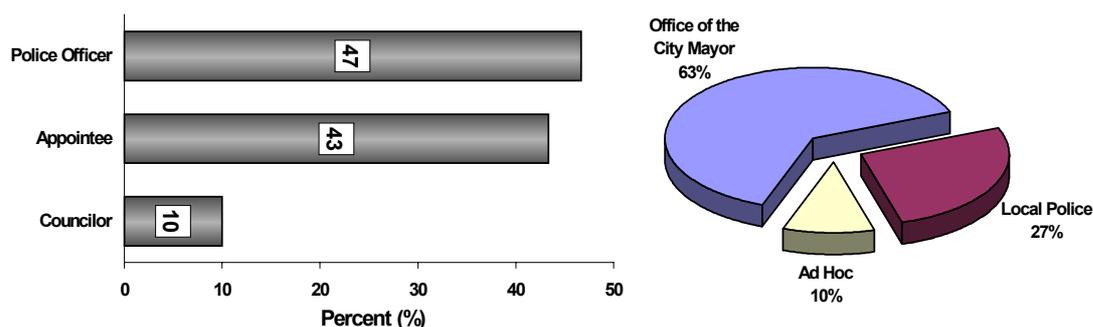


Figure 2. Percent distribution of TMU by heads. **Figure 3.** Percent distribution of TMU by office.

In addition to a local TMU in Metro Manila is the metro-wide traffic management agency through the MMDA. Several national line agencies are also relatively active in various traffic related programs and projects. The non-political boundary-based area of jurisdiction of the PNP, which has its own Traffic Management Group (TMG) and teams of traffic enforcers, further aggravate the overlapping functions. Based on the results of the interview survey for the case of Metro Manila, the MMDA and the PNP both rank as significantly involved in addressing the traffic problems of the locality. The LGU offices such as the City Engineering and Planning offices together with national line agencies fairs within the average while private and non-government sectors rank as among those rarely involved in dealing with the traffic problems.

4.2 Roles, Functions and Traffic Management Activities

The roles and functions of the TMUs include Data Management, Research, Information Dissemination, Survey, Policy Making, Planning and Enforcement. Actual functions of respective LGUs were identified by asking the respondents to rank the priority level of their TMUs based on the collective objective of the group as well as the focus of its activities. This is further clarified through questions concerning the status of implementation and the perceived effectiveness of the unit on its various transport management activities. Results of the priority ranking as shown in Figure 4 indicates that traffic enforcement tend to be the most predominant role among existing TMUs. Meanwhile, the least priority, especially for Metro-Manila LGUs, is consistently the conduct of research and data management. Comparing the

rankings among LGUs, result shows that except for enforcement, Metro-Manila transport units tend to yield a lower priority ranking for all the other transport management items as compared to the non-Metro Manila TMUs. This observation can be attributed to the existence of other transport related agencies performing a similar function as to that of the local TMU, thus resulting to laxity in the part of the LGU. For instance, the biggest difference in priority level are those of data management and research wherein for the case of Metro Manila, the Traffic Engineering Center (TEC), the DOTC and the MMDA are performing such roles.

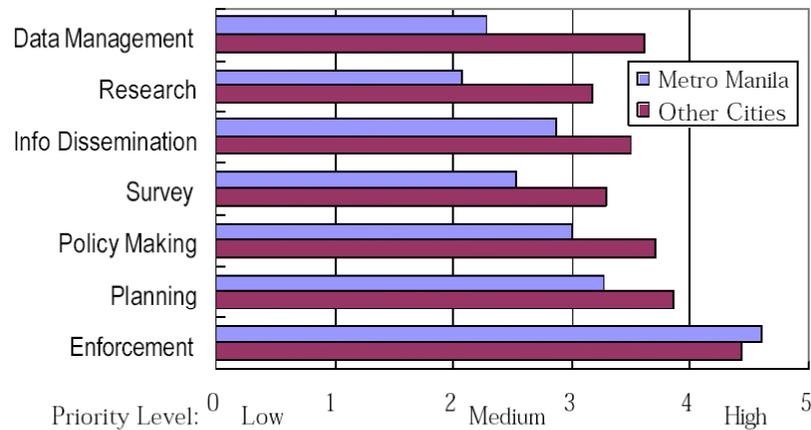


Figure 4. Priority ranking of the various roles of the TMU

On transport measures, various traffic schemes including that of traffic system and travel demand management were enumerated for respondents to rate its status of implementation together with its perceived effectiveness in solving traffic problems. Status includes choices such as the scheme was previously implemented, on-going or proposed while effectiveness assessment solicits responses such as effective, not effective or no-basis. Results indicated that most local TMUs are partial to infrastructure provision as the best means of improving traffic operation over all the other schemes. Road widening for instance was singled out as most important measure in improving traffic flow. Majority of the TMUs also views intersection traffic signal improvement as an effective means of raising the quality of traffic control in their respective localities. Very few LGUs gave any answer about land-use control and vehicle ownership restraint schemes, indicating that travel demand is not perceived as an effective option.

4.3 TMU Technical Capabilities

The technical capabilities of TMU were investigated based on its human resource or manpower, equipment and facilities. Human resource in particular evaluates the number of involved personnel together with their corresponding expertise, educational background and training. The involvement of an expert for instance can be deemed as a key factor affecting the planning, policymaking and research capabilities of a TMU. Appropriate training for rank and file personnel are equally necessary particularly in enforcement, conduct of surveys, data management and the unit's general operations. Survey results as indicated in Figure 5 shows that only 27% of the surveyed TMUs have an expert in traffic engineering, transport planning or at the least in a related field. Meanwhile, results on personnel training indicate that personnel of Metro-Manila TMUs are generally more trained than its non-Metro Manila counterpart. This can be attributed to an observation that training programs are often more accessible to LGUs in Metro-Manila than those in the provinces. Despite of this, however, a significant number of cities and municipalities in Metro Manila have still few personnel who have undergone training or formal schooling in the fields of traffic and transportation. The record of the National Center for Transportation Studies (NCTS), a transport training, academic and research arm of the University of the Philippines, however shows otherwise, as a significant number of LGU personnel in Metro Manila have already undergone under its training program. Among the likely reasons for the discrepancy includes the possibility of a fast turnover among LGU personnel, the non-involvement of Engineering and Planning offices in TMUs or the LGUs losing track on its personnel's trainings and schooling records. The distribution comprising the manpower of the studied TMUs are shown in Figure 6.

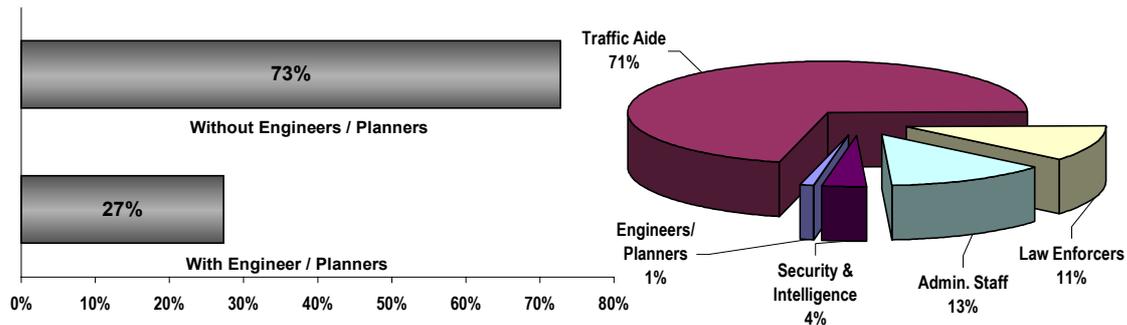


Figure 5. TMUs with and without transport expert **Figure 6.** TMU personnel composition.

The assessment of facilities includes the availability of equipment needed for basic TMU operation. This includes an office space, a service vehicle, communication facilities, survey equipment, computers and Internet connection, among others. Based on survey results, almost all of the existing TMUs have at the least their own office space regardless of whether they belong under what particular office within the LGU. The high number of TMUs having both service vehicles and mobile communication equipment is consistent with the TMUs' emphasis on enforcement functions. The low computer ownership likewise confirms a low data management performance. The low statistics on possession of traffic survey equipment reflects a poor first hand traffic data gathering practice. Meanwhile, the low number of TMUs with Internet access indicates non-preparedness on and hence low potentials of proposed Internet-based transportation data sharing system aimed to link various urban and transport related agencies in the country. Table 1 summarizes the results of facilities survey.

Table 1. Transport management unit facilities survey.

	Office Space	Service Vehicle	Computers	Comm- nication	Survey Equipment	Internet Access
Metro Manila	13	11	5	11	2	1
Other Cities	14	10	6	14	4	2
Total	27	21	11	25	6	3

4.4 TMU Funding Sources and Requirements

Information on budget of TMUs is the most difficult to secure among the items on the survey. The low response could be attributed to the interim setup of most TMUs, the dependence of the others to the host agencies, and the limitations of respondents being mostly of technical positions rather than finance. Based on the survey, only four (4) out of the seventeen (17) cities and municipalities in Metro Manila were able to provide the amount of their annual budget for traffic management. The annual budget for Metro Manila TMUs ranges from 9.4 million to as high as 120 million pesos as to the case of Taguig and the city of Makati, respectively. The Municipality of Taguig is among the smallest in Metro Manila whereas The City of Makati is the financial center and business district of Metropolitan Manila. As to sources, six (6) LGUs have stated that most of the source of their funds comes from the revenues through the violation tickets; while three (3) had indicated that it come from the receipts of parking fees. One (1) LGU indicated their funds come from private contribution and another mentioned that their funds come through other sources. Among the TMUs, only five (5) LGUs have indicated that their annual budget for traffic management operations is enough; the rest implies scarcity or inadequacy of the much-needed resources.

5. POTENTIAL TMU ORGANIZATIONAL MODELS

5.1 The Local Development Council (LDC)

The simplest among the possible TMU organizational model is through the creation of the Local Development Council (LDC) as specified in the General Provisions of the Local

Government Code. The role of an LDC, in general is to assist the City Council in setting the economic and social development directions, and coordinating development efforts within its territorial jurisdiction. Specifically, LDC initiates the formulation of a comprehensive multi-sectoral development plan for the City Council's approval. The LDC will further coordinate, monitor, and evaluate the implementation of development programs and projects. The development council is headed by the city mayor and is composed of all district heads; the chairman of the City Council appropriations committee; the congressman or his representative; and representatives of non-government organizations who shall constitute not less than one-fourth (1/4) of the members of the fully organized council.

The LDC will then create an executive committee to represent it and act on its behalf when it is not in session. The executive committee of the city development council shall be composed of the mayor as chairman; the chairman of the committee on appropriations of the city council, the president of the city league of district heads, and a representative of nongovernmental organizations that are represented in the council, as members. The LDC may form sectoral or functional committees to assist them in the performance of their functions. Likewise, the council is to create the Secretariat which shall be responsible for providing technical support, documentation of proceedings, preparation of reports and such other assistance as may be required in the discharge of its functions. The LDC may avail of the services of any nongovernmental organization or educational or research institution for this purpose. The respective city planning and development coordinator shall head the secretariat of the city development council.

The provisions stipulated on the Local Government Code pertaining to the LDC have laid down the foundation needed in the creation of an appropriate TMU. A good yet less complicated starting point for instance is to simply create a transport sector under the existing LDC. The format of the CLUP then can be modified so as to contain a detailed transport plan.

5.2 An Existing Local City TMU

A relatively efficient set up among the surveyed LGUs that can be the basis of formulating an appropriate TMU organizational model is that of Davao City, the largest city center in Southern Philippines. As presented in the Final Report of the Davao City Comprehensive Transport and Traffic Management Plan (NCTSFI, 2000b) three units of the City Government are basically responsible for the formulation, further development and/or implementation of the various transportation projects. These are the City Engineer's Office, the City Planning and Development Office (CPDO), and the Traffic Management and Control Board (TMCB). The City Engineer's Office is responsible for the road component, including coordination with the DPWH for classes of road under the latter's jurisdiction. The CPDO handles the periodic updating of the transportation plan, particularly the incorporation of the study's proposals in the formulation of Davao City's Comprehensive Land Use Plan. It is also mainly responsible for development control to ensure that the relationship of land use and transportation is taken into account in the issuance of locational clearance and zoning variances (NCTSFI, 2000b). The traffic management responsibilities lie with the TMCB, an inter-departmental and inter-agency body headed by the City Mayor himself.

Based on the existing TMCB, a recommended TMU for Davao City (NCTSFI, 2000b) features the addition of Transport Management and Operations Section as shown in Figure 7. The creation of new section is primarily aimed at equipping the TMCB of personnel that could be responsible for all possible transportation functions. Composed of five sections, the added Transport Management and Operations Section will serve as the implementation and monitoring arm of the TMCB. It new section will likewise collect and store statistical data on traffic conditions and will disseminate information to the public in form of traffic updates. The Transport Planning and Management Section meanwhile will be the transport planning and policy making arm of the center. It will prepare plans and programs on traffic-related activities, as well as formulate schemes and coordinate with the City council on ordinances pertaining to transportation. The Law Enforcement Section will enforce traffic laws and ordinances, as well as perform manual traffic control and direction. Comprised of police officers and traffic aides, the section is likewise mandated to apprehend traffic violators. The Engineering Section on the other hand will be responsible for installation and maintenance of traffic signals, road markings and traffic signs and other equipment of the center while the Administrative Section will provide administrative support to all activities of the TMCB.

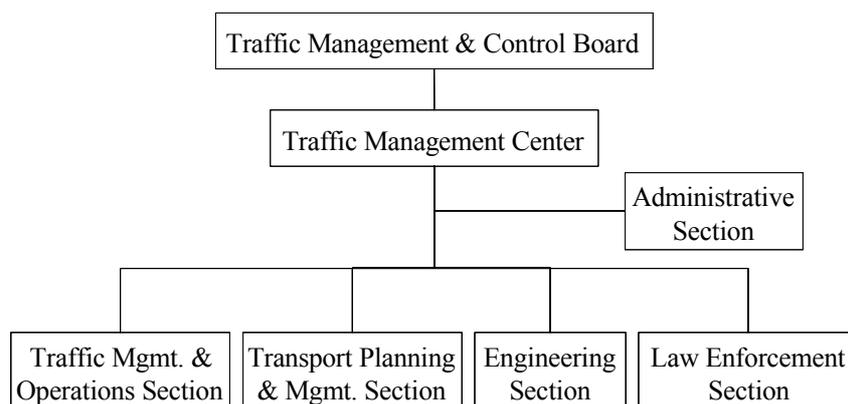


Figure 7. Proposed organizational structure of TMU for Davao City. (NCTSFI, 2000b).

Given the slight reorganization and modification on the functions of each section, further restructuring so as to: (a) centralize all traffic function to the TMCB; (b) smoothen coordination with the City Engineering and City Planning Offices; and (c) establish venues for public involvement and grass root level participation, will make the proposed TMCB a potential model for an appropriate local city TMU.

5.3 A TMU by Geographic Clusters: Case of MMDA

A more sophisticated possible TMU model is that which comprises several LGUs referred as geographic clusters - such is the case of MMDA. The MMDA performs planning, monitoring and coordinative functions, and in the process exercises regulatory and supervisory authority over the delivery of services within Metro Manila. Services under the jurisdiction of the MMDA are those, which have metro-wide impact and transcend legal political boundaries or entail huge expenditures such that it would not be viable to be provided by the individual local government units (LGUs). Transport related services include: Development planning; Transport and traffic management; and Urban renewal, zoning and land use planning, and shelter services; among others.

The Metro Manila Council composed of the mayors of the 17 LGUs in Metro Manila acts as governing board and policy-making body of the MMDA. Together with the mayors; the president of the Metro Manila Vice Mayors League and the president of the Metro Manila Councilors League comprises the voting members. Meanwhile, the heads of the DOTC, DPWH, Department of Tourism (DOT), Department of Budget and Management (DBM) Office, Housing Urban and Development Coordinating Committee (HUDCC) and the PNP or their duly authorized representatives, are likewise attending the meetings of the Council as non-voting members. The MMDA organizational structure is shown in Figure 8.

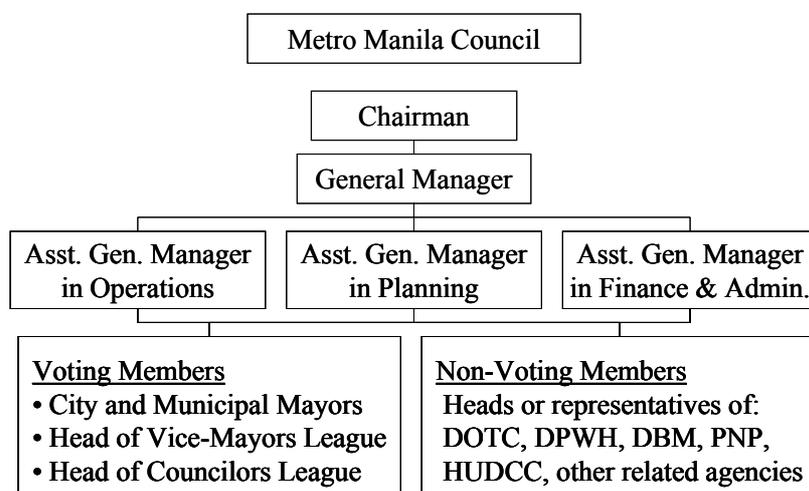


Figure 8. The MMDA organizational structure.

The MMDA is headed by a Chairman, vested with the rank of a Cabinet member and assisted by a General Manager and three Assistant General Managers. All posts are appointed by the President with the consent and concurrence of the majority of the Council, subject to civil service laws and regulations. The Assistant General Manager for Planning must have at least five (5) years of extensive experience in development and planning or must hold a master's degree in urban planning or similar discipline.

The advantage of the MMDA model is its coordinated conurbation-wide jurisdiction, which is very much appropriate for big interrelated development areas, particularly in the aspect of transportation planning, engineering and policy formulation. However, burdened by the gargantuan task of traffic enforcement, MMDA's current operation as a transport body have the tendency to be sidetracked from its intended planning, monitoring and coordinative work as well as from its supposed regulatory and supervisory functions. This may lead to duplication of enforcement work and worst, an uncoordinated transport management and operations. Nevertheless, this study recognizes the potential usefulness of the MMDA structure and thus recommends the adoption of the concept a metro-wide coordinating body through a TMU for a geographic cluster.

6. THE PROPOSED TRANSPORT MANAGEMENT UNIT

An ideal TMU must have the needed manpower; the basic equipment; the adequate and realistic budgetary resources; and the necessary personnel skills and training that is commensurate to the current needs of the local government unit. It must have a viable and least complicated institutional and organizational structure so as to fit to the greater LGU institutional framework. The establishment of TMU must be implemented by stages, with each stage suited for a particular level of urban development and flexible enough to evolve to the next level when the need arises. The TMU must also offer a coordinated operation and free from overlapping functions relative to other traffic and transport related agencies at various political or territorial levels. Further, the TMU must adhere to the general decentralization policy, espousing the principles of public involvement and private sector participation in governance.

Based on the interview survey and the review of existing laws and institutional and organizational setup of similar agencies, this study proposes a three-stage institutionalization and organizational scheme. The first stage presents the formation of a basic transport coordinating committee institutionalized through the local development council as stipulated in the local government code. The second stage focuses on the formation of a functional TMU to be institutionalized through a local ordinance. The final stage is the creation of a coordinating body in conurbation level as the need to create one arises. This can be institutionalized through an Executive order like that of the MMDA or through a provincial ordinance. The three stages are briefly presented below.

Stage 1: Transportation Coordination Committee

The transport coordination body can be formed as a Transport Committee (TC) of the Local Development Council (LDC). The composition of the LDC as described in Section 5.1 plus the inclusion of representatives of related national agencies is a well-represented council ideal for interdisciplinary and multi-sectoral concern such as transport. The role of the LDC in the formulation and implementation of the comprehensive land use plan (CLUP) further establishes the role of the TC as a transportation plan can be incorporated as a component of the CLUP. The proposed TC which will be comprised of the heads or representatives of the City Engineer and the City Planning offices, the local police, the existing traffic body (if there's any), the transport related national agencies and NGOs; can be a grand venue in coordinating all the respective transport related plans, programs and operations of each group that is being represented.

Stage 2: Locally Institutionalized Transportation Management Unit

The second stage will comprise the expansion of TC into a regular interdepartmental agency to be known as the local TMU. The proposed organizational setup will be similar to Figure 7

with the control board as the coordinating body comprised of the TC members. For the TMU to be a separate interdepartmental agency, the sections will be headed and mainly composed of personnel specializing in transportation coming from the respective department counterparts. These personnel can be unilaterally detailed to serve under the TMU. Depending on the need, hiring of new personnel to beef up the traffic management body might be necessary. Needed equipment will likewise be secured; appropriate training programs be made available to personnel; and adequate fund sourcing be established in order to run and sustain a fully functional TMU. The TMU can be lead by the city mayor or an appointed expert directly reporting under the mayor's office.

Stage 3: Transportation Management by Geographic Clusters

As stipulated in the Local Government Code, LGUs may, through appropriate ordinances, group themselves, consolidate, or coordinate their efforts, services, and resources for purposes commonly beneficial to them. If deemed necessary, the final stage will be the creation of a conurbation level coordinating body. The group will be comprised of the political, technical and non-government sectoral representatives for each covered area within the conurbation. In addition to its coordinating functions, the group will likewise include policy making and formulation of conurbation wide transportation management schemes. The resulting operations, enforcement and implementation functions however will be assigned to the corresponding responsible TMUs unless otherwise. Necessary budget to operate the conurbation level coordinating body is through local government contribution. Another potential source is an allocation from the national budget as to the case of MMDA.

7. SUPPORT MEASURES AND OTHER IMPLEMENTATION MECHANISMS

7.1 Institutionalization Schemes

In addition to identified TMU organizational framework and their corresponding institutionalization schemes, the study further identifies measures to ease up the realization of creation of TMUs at various stages among Philippine LGUs. For an ultimate institutionalization approach, this study recommends initiatives geared towards the issuance of an executive or administrative order requiring LGUs to form their respective TMUs. Depending on the level of development of LGUs, an appropriate stage of TMU will be created. However, like most efforts towards the creation of laws, this will take a long-term campaign to materialize. While working on the long-term institutionalization, a worthwhile interim endeavor is the promotion of transportation and traffic management planning practice among LGUs. This will make them aware of and consequently invoke the powers vested by the Local Government Code to create their respective TMUs through a local ordinance.

In order to achieve this objective, the study proposes a Capability Building Program that is primarily geared towards the promotion of good transportation and traffic management planning practice among LGUs in the Philippines. The Program will be comprised of training and institutionalization components designed to develop technical expertise and consequently establish transportation and traffic management in existing Philippine planning systems. Training activities will include both the development of training materials and the conduct of pertinent training workshops and seminars. Institutionalization initiatives on the other hand will include inter-agency collaboration aimed at incorporating Transportation and Traffic Management Plan (TrafPlan) in the CLUP and similar planning undertakings. Both program components will include the conduct of necessary researches to further develop and institutionalize transportation and traffic management planning in Philippine.

7.2 Human Resource Development

Key personnel of the TMU, together with selected staff of the City Engineer's Office and the CPDO, should be required to undergo training in various areas of transportation planning, and traffic engineering and management. Suitable courses are offered in the University of the Philippines, Diliman. These include the School of Urban and Regional Planning (SURP) diploma and master's degree programs in Transportation Planning; and the College of

Engineering (COE) master's degree program in civil engineering with specialization in transportation engineering. These offerings are being coordinated by the NCTS, which also grants scholarship to deserving students. However, these formal Programs, which require one or two years at the least, are deemed too long for busy City Planners and Engineers.

Meanwhile, the NCTS also conducts 2-month training programs on transportation planning, traffic engineering and management and traffic law enforcement. Weeklong Regional Short Term Seminars were likewise formulated so as to hold short-term training programs close to the non-Metro Manila LGUs. Such programs are deemed enough to introduce the participants to the basic concepts, tools and techniques in the field of transportation, though may not address all the possible functions unique in the operation of an encompassing TMU.

The study therefore proposes for NCTS together with the Department of Civil Engineering of COE and the SURP to formulate shorter diploma programs, say 5 months, to provide a practicable alternatives to the longer formal courses and the shorter basic training programs. The formulation of in-house training package suited for an LGU setting will likewise cover and involve all the different roles and key players in a complete TMU. Deployment of NCTS technical staffs as short-term experts to an LGU can likewise be worthwhile national government program.

7.3 Facilities, Funding and Other Resources

The conduct of transportation data gathering through traffic surveys and facilities inventory, as well as data management, will require basic traffic survey instruments such as manual counters, stop watches, and service vehicle; indoor survey data processing instruments such as video camera, player, and an output monitor. As to the conduct of data management, computer and worksheet-base software are among the basic necessity. Internet access, which is at present rarely available among LGU transport groups is also necessary particularly with the proposed establishment of an internet-based transport data base and technical support system. A potential solution to the lack of funding such as in the periodic formulation of a CLUPs and TrafPlans can be dealt with by availing various grants for in-house capability building programs. This is expected to break the cycle of LGUs spending money as payment to private consultants hired to formulate their respective development plans. With the improved capability and in-house preparation of development plans, the LGUs can run a more effective and sustainable TMU operation. LGUs are likewise recommended to explore traffic measures that could at raise funds at the same time. An example of common LGU practice to be considered is the collection of parking fees.

7.4 Umbrella Organizations

Creation of an umbrella organization of local government transportation personnel will provide a venue for exchange of ideas and experiences in tackling transportation problems. Group such as Mayors' League of the Philippines, Vice-Mayors' League and several other nationwide institutional local government-based organizations had been successful in promoting working relationship among counterparts throughout the country. Such successful precedents might as well serve as basis of the creation of a similar League among local government transportation personnel. Holding of joint activities with existing transportation society such as the Transportation Society of the Philippines (TSSP) and other professional societies will further enrich the sharing of expertise in transportation practice.

8. CONCLUSION

The results of the interview survey have basically provided a good grasp of the current state, as well as the needs and the issues and concerns being faced by the local transportation administrative units in Philippine cities. The review of different institutional and organizational structures, particularly those of the local development council, the local transportation administrative unit of a city, and the Metropolitan Development Authority, on the other hand, have provided the basis of instituting different organizational alternatives.

Based on the results of the survey and the findings on the reviews, the study presents some alternative institutional setup and organizational structure for different levels and extent of transportation administration. The conceptual organizational models were designed to be suitable to the existing local government framework and consistent to the general policy on decentralization and private sector participation in governance. Other major considerations in the formulation of the organizational models include coordination and non-duplication of functions among related agencies. The non-requirement of drastic organizational changes and supporting legislation in the establishment of TMUs make the proposed setup practically workable. The different levels being proposed will also meet a wider range of status of existing transport management setup and LGU level of development.

Details on support measures geared towards the realization of formation of TMUs among Philippine LGUs are likewise discussed. These include some long term and interim institutionalization measures as well as recommendations particularly on human resource development, facilities and funding acquisition as well as creation of support organizations. The study, though initiatory has nevertheless, provided the foundation for further research on institutionalizing transportation management units in Philippine LGUs.

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