1. INTRODUCTION

1.1 Background: Establishing a Primary Municipal Planning Process

South Africa's peaceful political transition to democracy in 1994 heralded a dispensation of fundamental changes. The new democratically elected government, under-girded by the socio-economic policy framework of the *Reconstruction and Development Programme (RDP* of 1994), sought to dismantle the *apartheid legacy*. The apartheid burden consisted, in the main, of extreme income disparity, the disintegration of broad segments of the population, mass unemployment and poverty. Separation and disintegration at local government level were intrinsic to the apartheid system. Against this background, *integration* became a major challenge for the new South Africa.

A first attempt to overcome that system of disintegration emerged from "The Local Government Negotiating Forum," which negotiated amongst other things the *Local Government Transition Act 9* (Act No.209 of 1993) *(LGTA)*. It created the basis for the democratically elected and racially integrated local councils. Following the LGTA the *Development Facilitation Act* (Act No. 67 of 1995) (*DFA*) represented the first attempt to establish a legal framework for development planning (in line with the principles of the RDP philosophy) for the newly established local authorities. It was launched by the Department of Land Affairs (DLA) and had a strong focus on land development and land use planning. Consequently all local authorities, under the guidance of the provincial MEC (Member of the Executive Committee), were expected to set up *Land Development Objectives* (LDOs), which were supposed to include, not only objectives relating to land development, public service and economic growth, but also strategies (institutional, financial, etc.), target-setting and assessment of expected environmental impacts.

While the new municipalities were completing their LDOs, another piece of legislation was issued under the then Department of Constitutional Development (now the Department of Provincial and Local Government – DPLG). As the national authority in charge of local government issues, the Department issued a second amendment to the LGTA (November, Act No. 97 of 1996), in terms of which all local authorities were required to elaborate ***Integrated Development Plans (IDP)***. It referred - and still refers - to the principles of the DFA. In contrast to the LDOs, less attention is focused on land development, and budget planning and planning of activities (management plans) play a more important role. Problems of linking the IDP and LDO did engender, as Oranje and Harrison (2000:21) observed:

> "This close relationship between the IDP and LDOs not only resulted in much confusion as to what the difference between the two plans was, but also raised concerns of duplication and lack of co-ordination between departments in the national sphere."

The DPLG and the DLA clarified the position of the two plans *vis-à-vis* each other and entrenched this relationship, particularly in the formulation of the IDP Manual (CSIR: 1998). The IDP and LDO therefore formed one planning process (Figure 1). Essentially, there is no conflict between LDOs and IDPs, either in the type of planning process required (strategic and informed by the involvement of communities and all stakeholders) or with regard to the outcome. (IDPs are more comprehensive, but include all aspects of LDOs.)

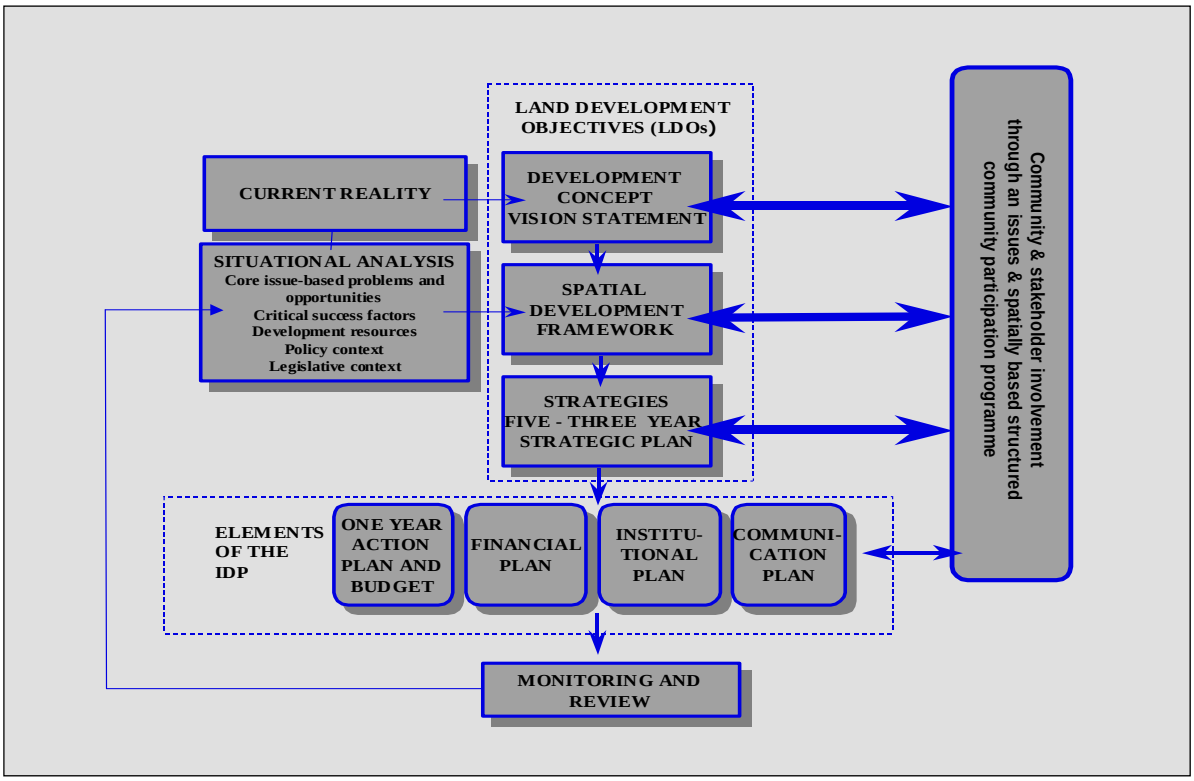


Figure 1: IDP / LDO Relationship

Source: DCD-DLA "User-friendly Guide," August 1997 & DCD-GTZ-CSIR IDP Process Manual, September 1998"

In this process, local government is regarded as an actor of major importance. Unlike the former centralised system, local government now constitutes an independent sphere of government embedded in a context of "co-operative governance" of national, provincial and local administrations. In this capacity, the new Constitution of South Africa (Act No. 108 of 1996) assigns a clear developmental role to local government. Article 153 of the Constitution stipulates these *developmental duties* as:

"A municipality must -

> (a) structure and manage its administration and budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community;" (ch. 7).

The notion of "bringing government to the people" is further elaborated in the *White Paper on Local Government (WPLG* – issued in March 1998), in which the concept of developmental local government was introduced and described as:

> "Local government that is committed to working with citizens and groups within the community to find sustainable ways to meet their social, economic and material needs and improve the quality of their lives …" (WPLG, 1998, p.17).

The White Paper goes on to describe IDPs as "planning and strategic frameworks to help municipalities fulfil their *developmental* mandate," (1998, 27). Furthermore, the WPLG heralded a suite of local government 'transformation' legislation. The Municipal Demarcation Act (Act No. 27 of 1998) was the first to follow, outlining the key criteria and process for municipal (re)demarcation. It was followed in the same year by the Municipal Structures Act (Act No.117 of 1998). It described, *inter alia,* the categories and types of municipalities and their concomitant functions and powers. The last in the suite was the *Municipal Systems Act* (November, Act No.32 of 2000), which regulates core municipal systems, a central one being Integrated Development Planning (covered in Chapter 5 of the Act).

In sharp contrast to the planning procedures of the Apartheid era (top-down, sector-orientated, ad hoc and non-participatory), the integrated development planning approach centres on co-operative, co-ordinated, strategic and participatory planning. Local government is therefore obliged by law to draw up a

five-year Integrated Development Plan (IDP[1]) that envisages integration at three different levels:

- The different sector planning procedures are to be integrated in one planning process.
- The three spheres of government, namely national, provincial and local, are to co-operate with one another according to the constitutional principle of "co-operative governance".
- The various representatives of the local citizenry are to be integrated in a participatory planning process.

South Africa clearly regards integrated development planning as crucially important, to such an extent that, in his State of the Nation Address on 9 February 2001, President Thabo Mbeki mentioned that:

> "The requirements on the municipal councils to elaborate and adopt ***integrated development plans*** and to establish ward committees to facilitate regular communication between the councillors and the people are important instruments towards the realisation of the objective that the people shall govern".[2] (author's emphasis).

He points out furthermore that:

> "More work remains to be done to ensure the ***effective functioning*** of our new municipal councils. This will include the creation of ***effective management*** and *administrative machineries* in every municipality, the ***proper integration*** of

[1] IDP stands for "Integrated Development Plan" and "Integrated Development Planning".

[2] Note: It is not conventional for a presidential state of the nation address to highlight one particular planning methodology. The pivotal importance of the IDP in the transformation process of the country is underscored by the President's recognition.

> the formerly different and the ***implementation*** of development programmes, including those focused on ***poverty alleviation***," (author's emphasis).

The President notably singled out Integrated Development Planning (IDP) as critical to the ongoing democratisation and transformation processes in the country. The IDP is therefore the principal municipal plan. All other sector plans, including transport plans must be linked to the IDP. The *National Land Transport Transitional Act 9* (Act No. 22 of 2000) stipulates, in this regard, that:

> "18. (1) ***Land transport planning*** must be integrated with the land development process, and the transport plans required for that purpose by this Act are designed to give structure to the function of 'municipal planning' mentioned in Part B of Schedule 4 of the Constitution, and ***must be accommodated in and form an essential part of integrated development plans*** …" (Government Gazette, August 2000, p.20; author's emphasis).

What is the nature of the transport sector's link to the IDP? Should local transport plans[3] (LTPs) form an essential part of IDPs or not? Are these LTPs a sufficient transport sector input to the IDP? How does and/or how should IDPs accommodate sector plans in the "single" development process? What issues pertain to the effective alignment of LTPs to IDPs? These questions represent the core concerns that this research project addresses. As such, President Mbeki's insightful recognition of the critical challenges to realise the desired outcomes of the IDP are germane to this report. The challenges or issues that he identified pertained particularly to the issues of effective management, proper

integration and to an action-orientated programme focused upon poverty alleviation. These issues, especially the first two, are important prerequisites for proper implementation and are central to this project.

1.2 Scope and Purpose of Study

Against this background, the study therefore narrowly focuses on the "proper integration" of the transport sector with the IDP. The goal of this study is therefore to analyse the relationship of transport planning to integrated development planning. Substantively in terms of corridor development and procedurally in terms of formulations of a single integrated planning methodology. In this respect, the critical alignment issues in linking the two municipal planning processes are highlighted in terms of development strategies and in terms of procedural matters.

In addition to an examination of the policy and the legal framework for integrated development planning and transport planning (of which integrated transport planning [ITP] is one of five local transport plans), a brief theoretical discussion on the relationship between land use modelling and transport modelling is included. Since the spatial structuring role and accessibility features of transport impinge to the greatest extent on local development planning, the nature of the unfolding relationship between transportation planning and modelling and land use planning and modelling is analysed. As such, the alignment and linkage issues that pertain to IDPs and ITPs (or LTPs) are considered in terms of modelling matters (proper integration), substantive/strategy matters (poverty alleviation focused programmes and projects) and procedural matters (effective management and administration).

[3] Local transport plans refer to the five plans identified in the NLTTA which the local sphere of government are required to complete (in terms of provincial MEC directives), these included – a) current public transport records; b) operating licences strategies; c) rationalisation plans; d) public transport plans and e) integrated transport plans.

In view of the fact that the IDP is embedded within the country's co-operative governance system, the study touches on all three spheres of government. In order to cope with the complexity of the issues and to structure the investigative research, attention is focused particularly on the local sphere and on the alignment of the transport sector planning procedures to the IDP. This includes questions of vertical alignment between the different spheres of government and horizontal alignment of the two planning procedures at the local sphere.

As can be seen from the focus on planning procedures, the study is largely process-orientated. The methodological approaches of both planning processes are also addressed in term of the ensuing discussions.

1.3 The Procedure

The study is mainly based on desktop research as well as on interviews. A wide range of policy documents and recent legislative Acts of Parliament has been reviewed and ten strategic interviews were conducted. Representatives of the following groups were interviewed:

- The National Department of Provincial Affairs and Local Government (DPLG) – responsible for managing IDPs nationally and key contributors to the IDP chapter of the **Municipal Systems Act (Nov., 2000)** - Mr Elroy Africa[4] (Deputy Director-General: Governance and Development) and Dr Theo Rauch (GTZ);
- The National Department of Transport (NDoT) – responsible for managing transport planning nationally and key planning contributors to the **National**

[4] Mr Africa was interviewed telephonically.

Transport Transition Act (NTTA, August, 2000) – Mr Andrew Shaw[5] (Former General Manager: Transportation Policy), Mr Phakamani Buthelezi[6] (Manager Public Passenger Transport: Senior Policy Advisor) and Mr Bob Stanway (Consultant to the NDoT in the NLTTA legislative process);

- The **Fundamental Restructuring in the Durban Metropolitan Area** project team – Mr Andrew Aucamp (Project Manager, DMA) and Mr Emil Schnackenberg (Project Coordinator, CSIR);

- A key representative from the Directorate: Land use and Planning of the **City of Tshwane Metropolitan Municipality**[7] (CTMM), Mr Mike Krynauw, was telephonically interviewed, and

- Lastly, **Professor Romano del Mistro** (Traffic and Transportation, Department of Civil Engineering, University of Pretoria) was interviewed, on account of his long-standing work in the area of transportation and land use planning; as was **Mr Andries Naudé** (senior researcher and technical leader, CSIR Stellenbosh).

Most of those interviewed made unpublished working documents available for this report. The author again wishes to thank them for their time and availability.

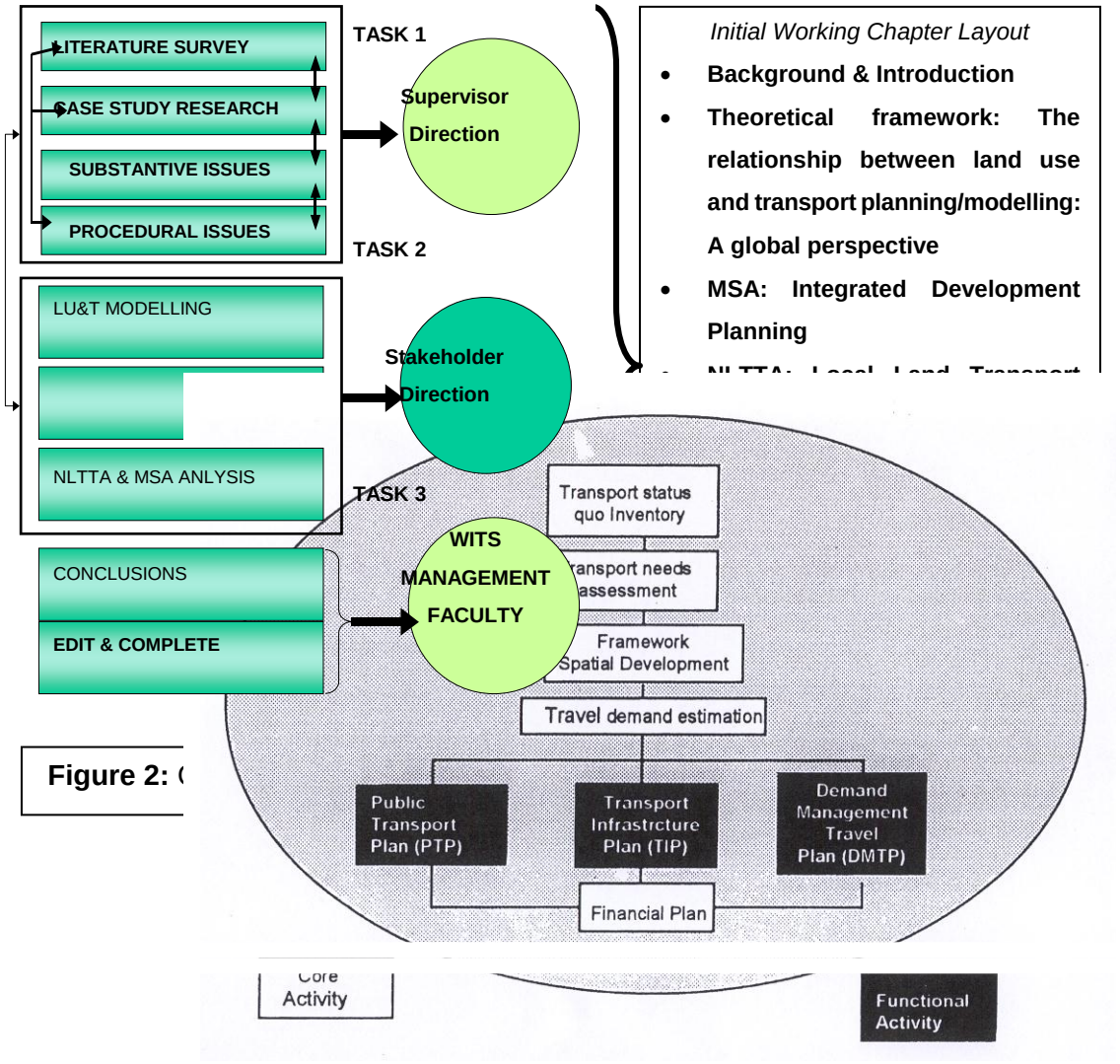
[5] Mr Shaw held this position from the end of 1998 to January 2001.
[6] Mr Buthelezi and the author had various interactions (in terms of the NDoT/CSIR JV), but no direct interview.
[7] Formerly known as the 'Greater Pretoria Metropolitan Council' (GPMC).

1.4 Structure of this Research Report

The report is divided into seven chapters (see Figure 2). Chapter 1 and deals with the introductory issues, objectives and procedural aspects of this research report. Chapters 2, 3 and 4 set the theoretical framework for the study. Chapter 2 describes the broad/(historical) relationship between land-use and transport planning/modelling. Chapter 3 deals more directly with integrated development planning, examining it as a planning tool, analysing its approach and describing its envisaged future framework. Chapter 4 describes the types of local sphere land transport planning in terms of an overview of the legislation affecting transport planning, it also analysis more specifically the integrated transport planning approach.

Chapter 5 provides insights into the application of the two planning procedures and their substantive objectives under investigation by considering two case study areas. It investigates the experiences of the Durban Metropolitan Area (DMA) in terms of substantive issues, and the City of Tshwane Metropolitan Municipality (CTMM) in terms of metropolitan development realities of South Africa and procedural issues.

Chapter 6 synthesises both the theoretical framework of chapters 2, 3 and 4 with the case study findings of chapter 5, in terms of the alignment issues of linking LTPs to IDPs, and includes not just deductive conclusions but inductive arguments as well. Chapter 7 is the concluding chapter, and confirms the central role of the IDP in municipal planning and intergovernmental co-ordination.



Initial Working Chapter Layout

- **Background & Introduction**
- **Theoretical framework: The relationship between land use and transport planning/modelling: A global perspective**
- **MSA: Integrated Development Planning**

Figure 2: (

2. THE RELATIONSHIP BETWEEN LAND USE AND TRANSPORT PLANNING / MODELLING

2.1 Overview

There is an ongoing debate amongst land use and transport planners over which comes first, the development of land or the provision of transport. Does development follow the availability of road infrastructure and/or rail, bus or taxi transport (as undeniably takes place around freeway interchanges) or does intensified land use and development occur, which results in the demand for improved transport (structured planning and development)[8]? The answer is not simple. In fact, the relationship between transportation and land use planning is highly complex, particularly integrated management of land use and of the transportation system. Roads are more than channels of movement for vehicles, and land use is more than just zoning and development control: both are interwoven with the social, political, economic and physical environments. Various relationships exist and they operate at different spheres (national, provincial and local). Integrated management is caught up in a complex web of stakeholders with different agendas and inter-linked organisations with different objectives and is influenced by community values and political perceptions.

In an effort to present the core issues analytically, discussions in this chapter will firstly revolve briefly around land use and development planning in South Africa. Attention is then given to transport planning. Thereafter the challenges and dynamics of practically using a truly integrated system of land use transportation models are explored.

[8] After Sampson, J. D.; Jaffares and Green (1998), p 219. CODATU VIII, Cape Town.

2.2 Land Use Planning

Drawing on the work of Kevin Lynch[9] (1984, p.1), one can safely define land use planning as:

> "… the art of arranging structures on the land and shaping the spaces between, an art linked to architecture, engineering, landscape architecture, and city planning. … Its aim is moral and aesthetic: to make places which enhance everyday life – which liberate their inhabitants and give them a sense of the world they live in. … They are shaped by someone's decision, however limited or careless."

The process of land use planning thus embraces a wide range of activities aimed at facilitating long-term optimal allocation of land to competing land uses, given certain objectives and constraints. Particularly important to transport planners are future scenarios of population and employment distributions, which are major factors in determining transport demand, (Crous, *et al.*, 1993). Transport planning therefore cannot be divorced from land use planning.

Prior to 1994, local governments, particularly metropolitan authorities, were mainly concerned with service provision (especially to former "white" areas) and the implementation of (*apartheid*) regulations. Statutorily required Guide Plans and existing town planning schemes were also increasingly being informed by various land use planning strategies, ranging from simple allocation projections to more sophisticated land use modelling studies.

The most widely used techniques were the Project Land Use Model (PLUM) and

[9] Kevin Lynch was Professor Emeritus of City Planning at MIT, and an author of many seminal Planning books.

the locally developed LUTSPLAN[10] modelling procedure. Both were restricted mainly to land use forecasting. (Crous, *ibid.*).

2.2.1 Development Planning

With the advent of the new democratic political dispensation in South Africa, the requirement of adopting a developmental approach has forced municipalities to adopt a strategic *modus operandi* to their land use planning and management. Via the IDP process, municipalities are now required to take a broad, strategic view of their development requirements and to address all the key issues in a holistic, integrated development plan.

The focus, however, is not just on integration, but also on *development*, which concerns the processes involved with improving people's quality of life. "Development is successful when people have greater choice and opportunities…[it] should result in, among other things, improved health, education, employment, quality and freedom. Development is not the same as economic growth. The economy of a country can grow, or improve, but this does not guarantee that everyone will benefit from this growth," (Planact, 1997, p.36).

A developmental concept indicative of the ideals of *development* and congruent to the IDP in terms of 'intentionality[11]' is the *Sustainable Livelihoods* approach popularised by the UK Department for International Development (DFID). The approach is underpinned by a commitment to poverty eradication (Ashley & Carney, 1999, p.7). The core principles of the sustainable livelihoods approach encapsulate the essence of current global thinking on the issue of realising 'real development'. Ashley and Carney (1999) of the DFID summarise these principles as follows:

[10] For an overview of land use and transport, models applied in South Africa see Appendix A.

- People-centred: sustainable poverty elimination will be achieved only if external support focuses on what matters to people, understands the differences between groups of people and works with them in a way that is congruent with their current livelihood strategies, social environment and ability to adapt.
- Responsive and participatory: poor people themselves must be key actors in identifying and addressing livelihood priorities. Outsiders need processes that enable them to listen and respond to the poor.
- Multi-level: poverty elimination is an enormous challenge that will only be overcome by working at multiple levels, ensuring that micro-level activity informs the development of policy and an effective enabling environment, and that macro-level structures and processes support people to build on their own strengths.
- Conducted in partnership: with both the public and the private sector.
- Sustainable: there are four key dimensions to sustainability – economic, institutional, social and environmental sustainability. All are important, and a balanced must be found between them.
- Dynamic: external support must recognise the dynamic nature of livelihood strategies, respond flexibly to changes in people's situations, and develop longer-term commitments.

2.3 Transport Planning and Modelling

Drawing from Lynch (1984, p.193) we are reminded that:

> "Acess is the prerequisite to using any space. Without the ability to enter or to move within it, to receive and transmit

[11] "Intentionality" in terms of the ethical field of planning refers to a phenomenological enquiry into the *raison d'etre* of modern town planning (Baum, 1983; Beatley, 1987; Muller, 1992).

> information or goods, space is of no value, however vast or rich in resources. A city is a communication net, made of roads, paths, rail, pipes, and wires. The economic and cultural level of a city is in some proportion to the capacity of its circulation. The cost of that circulation system is the most significant element in site cost."

Transportation, circulation and communication are fundamental or normative to any city or regional planning process. The relationship that land use planning and transportation planning share is undoubtedly a symbiotic one. However, transport has remained a quantitative, technically orientated discipline, whereas land use planning has become essentially more open to the qualitative and sociological concerns of development[12]. Consequently, transport modelling in South Africa remains closely associated with the analytical approach of the traditional 4-step modelling procedure that incorporates the following well-known elements: trip generation (to make a trip?); trip distribution (where to?); modal split (which mode?); and network assignment (which route?) – (Crous, *ibid.*). This methodology corresponds to a rational and sequential conceptualisation of the trip-making process. Both the demand and supply sides of transport are involved.

The four-step modelling procedure (or its individual components) has been used in some form or another in the majority of transportation studies, both locally and internationally. Its modular form, rational logic, ease of use and availability has given the four-step methodology considerable flexibility to adapt to transport planning and modelling problems. Consistent improvements over the years have further enhanced its popularity.

[12] The interview with Mr Schnackenberg led to this orientation. He also gave direction to the study of the four-step transport modelling methodology.

Transportation model applications in South Africa typically vary between the levels of strategic metropolitan-wide demand forecasting and detailed traffic management analyses in localised areas. These two key processes - demand forecasting and detailed assignment - are discussed in the context of describing the dominant transport modelling system operative in South Africa (EMME/2), following which a more customer orientated discussion on transport planning/modelling is undertaken.

2.3.1 The EMME/2 Transportation Modelling System

Demand forecasting models rely on given land use scenarios as inputs to the 4-step analytical procedure. Perhaps the best-known metropolitan application is the PWV Transport Study and its updates, in which the UTPS (Urban transportation Planning System) suite of programmes was used extensively in combination with the PLUM (referred to above and see Appendix A). Some of the more popular and widely applied systems include DELTRAN[13] (used mainly in Durban Metropolitan Area) and MINITRAMP[14].

In terms of detailed assignments models (which provide the required estimation of detailed traffic movements on transportation networks), some of the popular sophisticated models still in use (although geared mainly to private transport) include CONSTRAM[15], SATURN[16] and JAM[17]. All these suites are capable of addressing factors such as traffic control, signal timing, turning penalties, etc.; they are extensive included in or absorbed into EMME/2 processes.

Almost all of the above mentioned programs have been replaced in some form

[13] See Appendix A.
[14] *Ibid.*
[15] *Ibid.*
[16] *Ibid.*
[17] *Ibid.*

or another by the EMME/2 system. While the 4-step philosophy still dominates, the EMME/2 transport modelling system represents a move away from a rigid sequential procedure to a more open modular framework for transportation analysis, (Shaw and Naude, 1996). The EMME/2 system was developed by Michael Florian and co-workers (Babin, *et al.* 1982, in Crouse & Price 1993) at the University of Montreal in Canada. Some of the impressive features of EMME/2 include –a well developed data management structure; interactive graphics; model flexibility (by allowing user-defined functions); state-of-the-art modelling approaches with regard to integrated and private transport assignment); it is a computer based system; and it facilitates increased productivity, (Fisk and Dunn, 1988, in Crous and Price, 1993)[18].

2.3.2 Customer-Orientated Transportation Planning

The Moving South Africa Action Agenda (MSAAA, 1999, p.9) project of the NDoT outlines a 20-year strategic framework for the transport sector, in the format of an Action Agenda. In this groundbreaking work, transport planning is directed to "reach out to other local government functions as well as to local decision-makers and the public via a *data-driven*, consultative process," (author's emphasis). With due, regard for the historical influences on the transport system, MSAAA advocates that a new "transport platform" be built. Three broad phases underpin this new transport platform, i.e. unravel the legacy, build the basic platform and create advantage through differentiation. Central and foundational to the phases of establishing the new transport platform, is customer (the user of the transport system). Accordingly, MSAAA analytically segments the customer base into six specific groups, namely:

- Strider customers: those who prefer to or possibly those who can only

[18] Shaw and Naude (1996) provide a more recent critique on the EMME/2 model, summarised on a comparative

afford to walk or cycle (in 1996 this group comprised 25% of South Africa's urban population).

- Stranded customers: those with no affordable transport available (in 1996 this group comprised 13% of South Africa's urban population).

- Survival customers: those captive to the cheapest mode of public transport (in 1996 this group comprised 19% of South Africa's urban population).

- Sensitive customers: those captive to the best option of public transport (in 1996 this group comprised 10% of South Africa's urban population).

- Selective customers: those that can afford a car, but are willing to use public transport (in 1996 this group comprised 19% of South Africa's urban population).

- Stubborn customers: those that will only use a car (in 1996 this group comprised 14% of South Africa's urban population).[19]

Just as development land use planning is more *people-centred,* in a similar manner transport planning has become more *'customer'* focused. Accordingly, the 'new' set of actions required from transport planning entails "customer-based transport planning, corridor supportive infrastructure investment and tough road-space management" (*ibid*.). Figures 3, depicts an example of the way in which customer needs are linked to the service and delivery of transportation.

table see Appendix B.

[19] After the MSA Action Agenda, 1999, p.26. It is necessary to recognise that the Action Agenda has no formal status, since cabinet has not approved it. It therefore can merely be regarded as the proposed Department of Transport strategy.

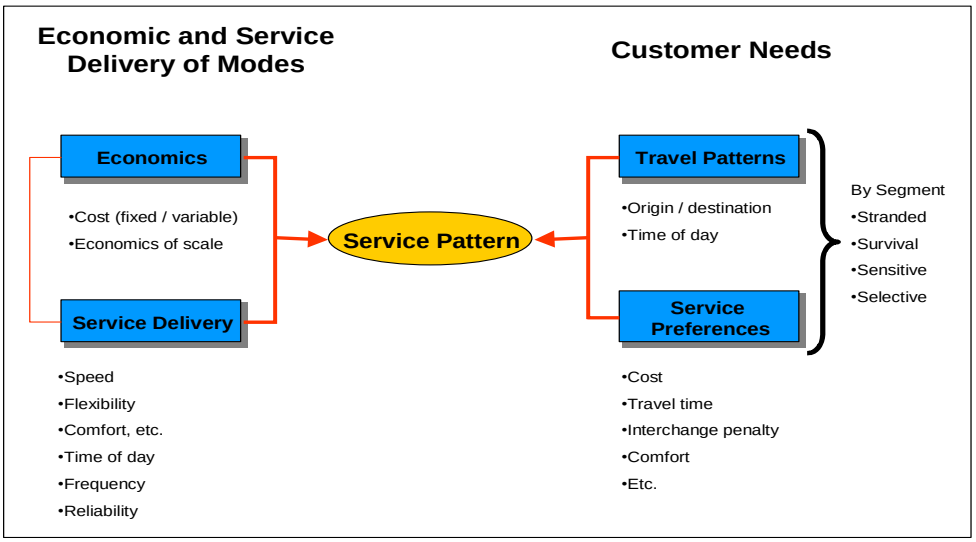


Figure 3: Matching modal economics & customer needs

Source: MSAAA, 1999, p.29

2.4 Towards an Integrated System of Land Use and Transportation

At the ninth international CODATU conference on "Urban Transportation and Environment" held in Mexico City during April 2000, Miyamoto and Vichiensan of Tohoko University, Japan, presented a well researched paper on *Integrated land use and transportation models.* Their analysis and findings are germane to the discussion of this research report.

They describe three general configurations of emerging relationships between urban land use and transportation (Figure 3).

- A-type model: is the sequential system of independent land use **models** and transportation **models**. Land use models represent land use only (e.g. the LUTSPLAN of South Africa and the Lowry-type elsewhere), and transportation models deal with transportation only (usually based on the

conventional four-step model). The interactions between land use and transportation are modelled by external interfaces of the two models. Land use model output is the input to the transportation model, and *vice versa*. They refer to the relationship between the UrbanSim[20] land use model and the EMME/2 (discussed above) transportation model, and the DELTA[21] land use model and the START[22] transportation model as examples of this configuration.

- B-type model: represents the interaction/composite system comprising the land use **module** and the transportation **module** interconnected to each other. The land use module determines land use and sometimes implies transportation, and output to the transportation module. The interactions between land use and transportation can be considered as more integrated compared to the A-type model. They cite MEPLAN[23] or TRANUS[24] as examples of this configuration.

- C-type model: is the **unified/integrated** system of land use and transportation. Land use and transportation are highly integrated and are modelled in a single framework. The model determines land use and transportation simultaneously, rather than a sequential determination of land use and transportation separately as the A-type or B-type models. They identify the RURBAN[25] and MUSSA[26] integrated systems as examples of this configuration.

[20] See Appendix C, for a brief outline of the models.
[21] *Ibid.*
[22] *Ibid.*
[23] *Ibid.*
[24] *Ibid.*
[25] *Ibid.*
[26] *Ibid.*

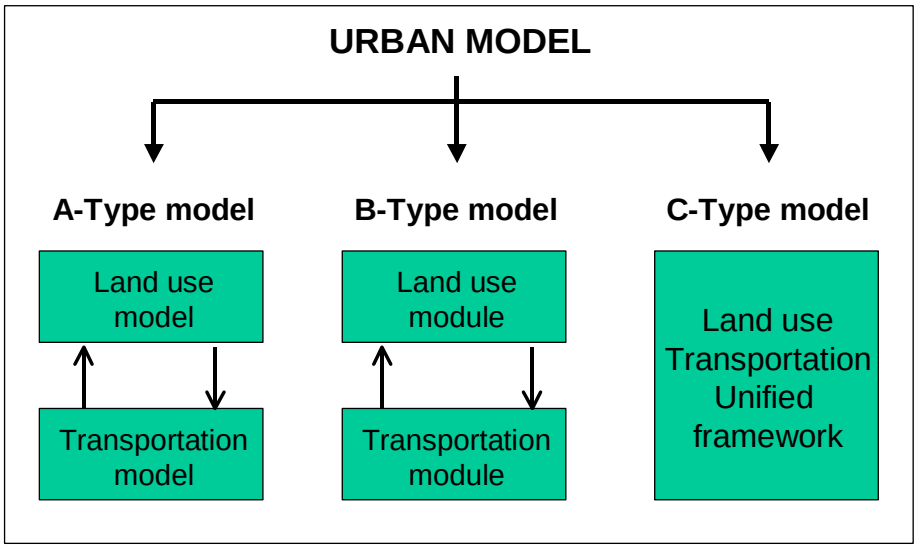


Figure 4: The land use transportation model configurations.
Source: Miyamota *et* al, in Diaz, Palomas & Jamet (2000), p.450

The interactions between land use and transportation are observed to move in two directions: land use to transportation and in the reverse direction. In terms of the land use to transportation direction, in both A-type and B-type models, the land use effect on transportation is mainly represented by the variable land use attributes such as population, settlement density, employment, income, etc. These are input to the conventional four-step transportation model or module either, in the trip generation, trip distribution, mode choice or route choice parts, (Figure 4). The effect on either land use from transportation or transportation from land use is in the next time interval. This time lag might lead to inconsistencies between origin-destination choice in the transportation model/module and location destination choice in the land use model/module. There are no guarantees that the travel conditions, which the land use model uses, is consistent with those of the transportation model outputs (note that the more to the left a configuration is on the continuum in Figure 5, the greater the potential for inconsistencies).

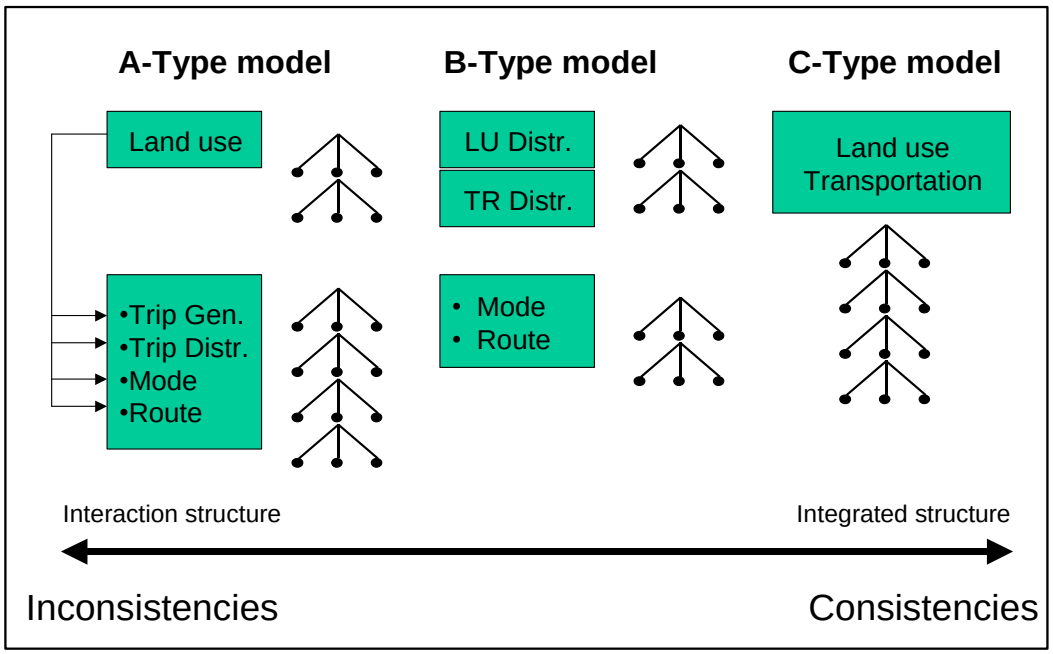


Figure 5: The different interactions of land use transportation configurations with an axis representing the extent of the integration

Source: Miyamota *et al*, in Diaz, Palomas & Jamet (2000), p.451

In the C-type models, the land use and transportation patterns are the outcome of the same choice process; in the same choice hierarchy, location is a higher choice level and travel behaviour is a lower choice level. Both land use and transportation patterns are therefore determined simultaneously as one lump solution. Hence, the effect of land use on transportation is then part of the overall choice process. Such unified/integrated models approach the right end of the continuum in Figure 4. When land use and transportation interactions are so tightly integrated that they do not lead to any inconsistencies, they will be mostly to the right of the continuum; and if they are so loosely interacted that inconsistencies explicitly exist, they will be mostly to the left of the continuum.

Miyamoto and Vichiensan (2000) deduct, after examining four major internationally recognised land use and transportation models (San Diego,

LASER, Oregon State-wide and Trans-Pennine) [27] that:

> "[i]n practical transportation planning, still there are not many truly integrated land use transportation models (rightmost model) being widely and efficiently used" (in Diaz *et al.*, p.454).

The trick is to approximate integrated systems with greater consistencies and at the same time to maintain operational feasibility – given the importance of stakeholder participation and forging a more customer-orientated approach.

[27] See Appendix C.

3. INTEGRATED DEVELOPMENT PLANNING

3.1 Introduction

The case for IDPs has already been established in chapter 1 of this report. Discussions in this chapter will therefore hone in on the more technical issues of the IDP. Firstly, therefore, the IDP is defined and its status described. Secondly the developmental role of IDPs are more extensively outlined with reference to its underlying principles and envisaged and thus far experience benefits. Thirdly, the cores content of an IDP are described and concomitantly the relationship of the IDP to other sector plans are discussed from the perspective of the DPLG. Fourthly, the IDP process and approach is analysed. The Municipal Systems Act (MSA 32 of 2000) forms the critical reference point for discussions this chapter, because it provides for the core principles, mechanisms and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of communities and ensure universal services that are affordable to all. The MSA also provides for the preparation of Integrated Development Plans. These provide a framework for support, monitoring and standard setting by other spheres of government in order to progressively build local government into an efficient, frontline development agency capable of integrating the activities of all spheres of government for the overall social and economic empowerment of local communities.

3.2 Definition of IDP

The first formal policy reference to the IDP occurred at the *Forum for Effective Planning and Development* (FEPD), in 1995 the forum defined Integrated Development Planning as:

> *"A participatory approach to integrated economic, sectoral, spatial, social, institutional, environmental and fiscal strategies in order to support the optimal allocation of scarce resources between sectors and geographical areas accross the population in a manner that provides sustainable growth, equity and the empowerment of the poor and marginalized."* (Quoted in Harrison, *et al*., 2000:15).

Harrison *(ibid.*) point out the key themes of the definition - participation, strategic focus, integration, prioritizing those in greatest need and a delivery-orientation – have endured and "were to formalized and elaborated upon in later years". The substantive content of these some of these themes shall be further discussed in sub-section 3.3.1.

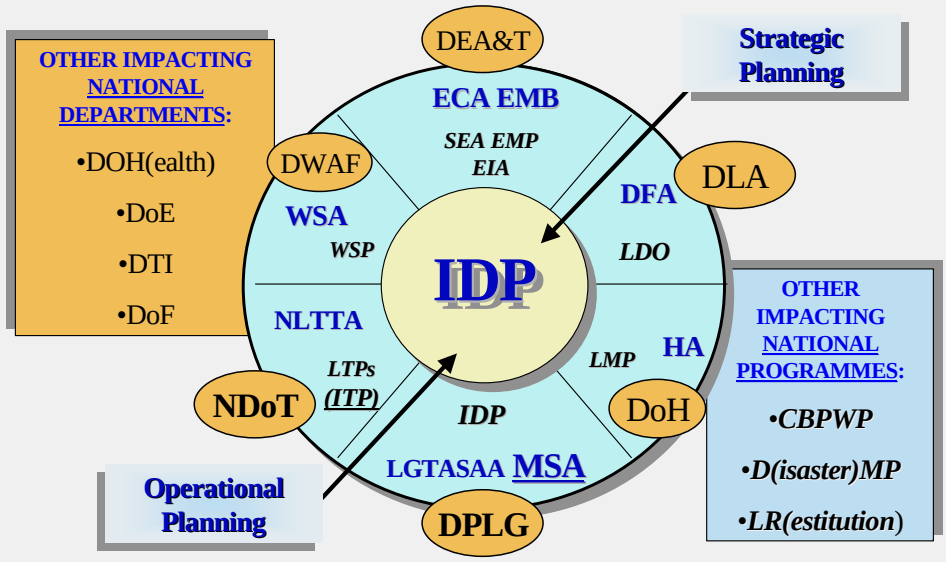
While the FEPD conceptualised and established the broad policy intent of the IDP the first legal definition of the IDP was in the *Local Government Transitional Act Second Amendment Act 97 of 1996*, which specifically stipulated with reference to the IDP that it is:

> " … a plan aimed at the integrated development and management of the area of jurisdiction of the municipality concerned in terms of its powers and duties, and which has been compiled having regard to the general principles contained in Chapter 1 of the Development Facilitation Act, 1995 (Act 67 of 1995), and, where applicable, having regard to the subject matter of a land development objective contemplated in chapter 4 of that Act." (Sections 33[1] and 10B).

As discussed in the chapter one of this report the IDP and LDO merged to form

a single planning process. The IDP soon became the central planning process for municipalities. At a time when various sector departments at the national sphere where preparing an passing planning related legislation the, the IDP emerged as a process that would satisfy the demand and requirements of the different sectors in one plan. Figure 6 aptly captures the IDP's challenging role, its perplexing burden and simultaneously the rescue it provides to local governments inundated by a host of complicated sector planning requirements. The diagram also highlights the manner in which the department of Land Affairs (DLA) and the Department of Provincial and Local Government (DPLG) went about merging the LDOs and IDPs.

Figure 6: The Case for Integrated Development Planning (Strategic Local Planning)
Source: CSIR, 1998 and Marrian, 2000



Coupling the above definitions of the IDP with the constitutional mandate for local governments to be developmental, the IDP as the White Paper on Local Government (1998) recognised is essentially a tool to assist municipalities in achieving their developmental mandates. The Municipal Systems Act (32 of 2000) in terms of the legal requirements concerning IDPs points out in Chapter 5 (ss 23-25) that:

> "(1) A municipality must undertake developmentally-oriented planning so as to ensure that it-
>
> (a) strives to achieve the objects of local government set out in section 152 of the Constitution;
>
> (b) gives effect to its developmental duties as required by section 153 of the Constitution; and
>
> (c) together with other organs of state contribute to the progressive realisation of the fundamental rights contained in sections 24, 25, 26, 27 and 29 of the Constitution."

As a tool to aid municipalities fulfil their developmental mandate, therefore, the Integrated Development Plan is a plan aimed at the integration of development and management of the area of jurisdiction of a municipality. It is a complex action plan, which requires the integration and linking of complicated sector elements and processes. It is a single, all inclusive plan that links, integrates and coordinates other plans and proposals, forms the policy framework and general basis on which annual budgets are based and aligns resources and capacity of the municipality for the implementation of the plans.

3.2.1 The Status of an IDP

The MSA establishes the status of the IDP as:

> "(1) An integrated development plan adopted by the council of a municipality-
>
> (a) is the principal strategic planning instrument which guides and informs all planning and development, and all decisions with regard to planning, management and development, in the municipality;
>
> (b) binds the municipality in the exercise of its executive authority, except to the extent of any inconsistency between a municipality's integrated development plan and national or provincial legislation, in which case such legislation prevails; and
>
> (c) binds all other persons to the extent that those parts of the integrated development plan that impose duties or affect the rights of those persons have been passed as a by-law.
>
> (2) A spatial development framework contained in an integrated development plan prevails over a plan as defined in section 1 of the Physical Planning Act, 1991 (Act 125 of 1991)." (MSA Part 4).

Moreover the Act stipulates that:

> "A municipality must give effect to its integrated development plan and conduct its affairs in a manner which is consistent with its integrated development plan." (*Ibid.,* ss 36).

3.3 The Developmental Roles of the IDP

In terms of the WPLG and the MSA, the IDP has six key roles to play, in terms of fulfilling their developmental mandate:

- They enable municipalities to **align their financial and institutional resources** behind agreed policy objectives and programmes. Oranje and Harrison, *et al* (2000, p. 22) refers to this role as "providing a strategic framework for municipal management, budgeting, delivery and implementation". In this respect Oranje and Harrison (*ibid)* recognise that:

  > "For the IDP to perform this function there is a need to for a carefully constructed planning process that will enable as much co-ordination and integration in the generation of the proposals as possible. … What ever form such processes take, it is imperative that the IDP captures the outcomes of these various planning processes at a particular point in time and also address the question of linkage and intersection between them, especially the budgetary implications of the different plans and policies."

- They are a vital tool to ensure that **integration of local government activities** with other spheres of development planning at provincial, national and international levels, by serving as a basis for communication and interaction. "For the electorate the IDP becomes an instrument to evaluate the performance of politicians, while for councillors, it becomes a way of giving effect to their political mandate," (*ibid.*). A caution is also noted by Oranje and Harrison, that in terms of maintaining continuity of long-term planning elements like the spatial framework and economic vision articulated in an IDP, "a new council [should] be required to give

strange motivation for changing from these aspects of a prior IDP," (*ibid.*).

- They serve as a basis for engagement between local government and the citizenry at the local level, and with various stakeholders and interest groups. **Participatory and accountable government** only has meaning if it is related to concrete issues, plans and resource allocations. "Facilitating interaction, engagement, communication and the building of alliances," (*ibid.*).

- The enable municipalities to weigh up their obligations and systematically **prioritise programmes and resource allocations.** In a context of great inequalities, IDPs serve as a framework for municipalities to prioritise their actions around meeting urgent needs, while maintaining the overall economic, municipal and social infrastructure already in place. IDPs promote the transformation of local government, and simultaneously represent the product of transformed institutionalised structures of local government.

- They assist municipalities to focus on the **environmental sustainability** of their delivery and development strategies. Sustainable development is development that delivers basic social and economic services to all, without threatening the viability of the ecological and community systems upon which these services depend. Socio-economic development can be fostered in terms of the IDP particularly through – a) levering-in funds from other spheres of government, donor organizations and investors through defining and packaging attractive projects and programmes; b) by facilitating a conducive environment for private sector investment and local economic development; and c) IDPs can propose direct interventions in the economy (e.g. developing economic infrastructure, buying, developing and leasing/selling land; etc. [*ibid.*]).

- They help municipalities to develop a **holistic strategy for poverty alleviation**. Poverty is not just about low household income. It includes other aspects of deprivation such as a lack of assets to help households cope with shocks and stresses, a lack of the resources or contracts necessary to secure political advantage, a lack to education, health are and emergency services, and the lack of safe, secure and adequate sized housing with basic services. (WPLG, March 1998, p. 27 & 28).

3.3.1 The Underlying Principles of an IDP

The IDP derives its underlying from the principles of the DFA. Donaldson (2000:47) argues that "[a]part from the policy documents formulated as White Papers, the most important piece of legislation to guide planning to reconstruct the legacy of apartheid cities is the DFA". The DFA thus links its aim to the RDP to formulate and guide planning legislation that would subordinate "local planning to metropolitan/district, provincial and national planning" (ANC, 1994, p 140). Emdon (1997) divides the DFA principles into five categories:

1. restructuring of the spatial environment aimed at correcting the racial settlement pattern;
2. general city-building principles that encourage the emergence of compact cities to prevent further urban sprawl and encourage mixed land use and integrated land development;
3. promoting the creation of sustainable cities;
4. promoting transparent stakeholder involvement; and
5. capacity building that would involve active public participation.

Wall (*et al.*, 1998), Pycroft (1998); Donaldson (1999); and Oranje (*et al.*, 1999) all concur to large extent with the finding of the Development Planning

Commission (DPC, 1999) with regard to the following three points:

1. it is still too early to test the outcome that these principles in terms of LDOs and IDPs;
2. that these principle through an extensive consultation process has unduly raised expectations; and
3. that the DFA principles and the LDO process has undoubted laid the groundwork for a new planning paradigm.

At this point, it would be appropriate to expand further on the finding of the DPC. The commission's **Green Paper on Development and Planning (1999)** reviewed the entire policy and legislative framework relating to land use restructuring and made recommendations for changes.

One of the most important (and obvious) conclusions was that the plethora and complexity of spatial legislation were an impediment to implementation. One of the most important recommendations was that the DFA should provide the basis for a national legislative framework but that it required some redrafting.

The amended legislation should set out the expanded principles for land development and decision-making based upon policy-led planning. It was also recommended that each province should develop its own planning law and that provincial spatial planning should inform Municipal IDPs.

3.3.2 The Benefits of an IDP

The main value of an IDP still needs to be proven in practice and in terms of outcome (Oranje & Harrison, 2000). The main benefits to a municipality, however, of a well-constructed IDP are that:

- it assists a local authority in allocating its scarce resources in a focussed and sustainable way;
- it provides a municipality with a tool and framework to access funds for development projects;
- it provides a basis for co-ordinating policies and action with the municipal area, and between other agents and spheres of government; and
- it provides a public arena for the discussion and making of trade-offs and for the building of partnerships around development.

"For the other spheres of government, and for donor agencies, the value of an IDP is that the resources they allocate to local government are used more effectively, and in line with prioritised developmental goals and objectives," (*ibid.*).

3.4 The Core Contents of an IDP

An IDP according to the MSAc must consist of the following core components:

- the **municipal council's vision** for long term development of the municipality with special emphasis on the municipality's most critical development and internal transformation needs;
- **an assessment of the existing level of development** in the municipality across all sectors, which must include an identification of communities which do not have access to basic municipal services;
- the council's **development priorities** objectives;
- the council's **development strategies** spanning across the sectors of social and community services, transport, infrastructure, housing, public safety; emergency services, environmental management, etc.;

- a **spatial development framework** which must include the provision of basic guidelines for a land use management system for the municipality;
- **operational Strategies**;
- applicable **disaster management plans** (which are a new addition to the IDP requirements and which are to be prepared in terms of the requirements as set out in the White Paper on Disaster Management and the Disaster Management Bill, 2000);
- **a financial plan**, which must include a budget for at least the next three years; and
- the core components of the municipality's **performance management system**.

3.4.1 The IDP and Sector Planning Integration:

IDP is an inter-sectoral, but priority focused planning process, which may or may not include every sector. It may also only overlap with sectoral planning responsibilities to a certain degree, depending on local priorities as the primary guiding factor.

Sector agencies within a municipality, as well as those belonging to other spheres of government, have their own planning requirements, some of which are defined by legislation (e.g. NLTTA, WSA, etc.). The IDP approach, as presented in the **proposed new IDP manual** (2000), is aligned to these sectoral planning requirements in a way that they are incorporated in the IDP process.

As a result, sectoral planning requirements will be met by IDP process as proposed in the draft new IDP manual, wherever such planning requirements relate to cross-cutting issues (like spatial planning and environmental issues)

and where a sector (or part of it) is related to priority issues resulting from the IDP process. Only such aspects of sectoral planning requirements, which have nothing to do with the priorities of a municipality, will have to be dealt with separately from the IDP process. That means that there will be varying degrees of overlap, depending on the coincidence between sectoral planning requirements and a municipality's priorities. But there will be more duplication of planning requirements. And there will be a basis for the involvement of sector agencies in the IDP planning, funding and implementation process. (After the draft 'new IDP manual, 2000).

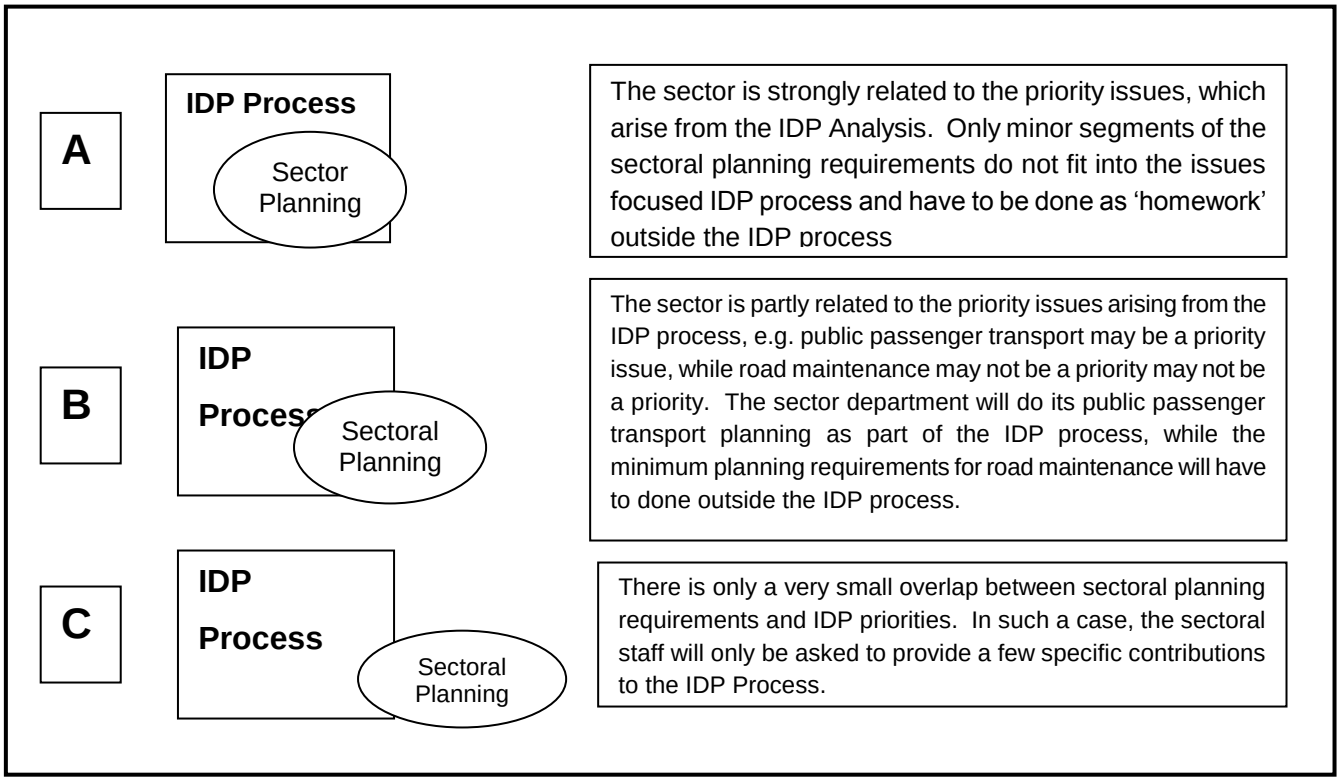


Figure 7: IDP and Sector Planning
Source: Draft new IDP manual, 2000

3.5 The IDP Process

The Municipal Systems Act (32 of 2000) requires that the IDP process must:

- be set in writing and formally adopted by the municipal council;
- only be adopted after the local community has been properly consulted;
- be in accordance with a predetermined programme specifying timeframes for the different steps in the process;
- be structured to allow for the community to be consulted on its development needs and priorities, and to participate in the drafting of the IDP;
- allow for the identification of and consultation with other role-players in drafting the IDP; and
- provide for the identification of all plans and planning requirements binding on the municipality in terms of national and provincial legislation.

While the legislation and policy does not detail procedures, the revised draft IDP Manual provides guidance on the 'typical procedures' that could be used in preparing IDPs in different types of municipalities, with out discouraging local creativity and variation. The 'new manual' articulates an event centred approach for the IDP procedure.

3.6 The IDP Approach

The **event-**centred IDP approach is supposed to be systematic (but not rigid) sequence of planning events, (Draft IDP Manual, 2000:2):

- starting from a focussed and consultative **analysis** of the existing situation (phase I – analysis);

- getting through a **strategic discussion** and decision-making phase on the objective and on the most appropriate ways and means of resolving priority issues (phase II – strategies);
- to a process of concrete and technical **project** planning (phase II – projects);
- before all project proposals are checked for compliance and consistency and integrated into a consolidated IDP, it should be screened and revised in terms of effective **integration** (phase IV – integration);
- which eventually has to go through an **assessment, alignment and approval** process (phase V – approval), (Figure 8).

"Planning events are usually meeting or workshops of the organisational structures in charge of the IDP process (Representative IDP Forum, IDP Committee, Project Formulation Task Teams) or, in exceptional cases, activities done by individuals (data compilation, surveys, etc.). Each planning event is supposed to result in certain 'outputs. Such an output can be in the form of information decisions. Some of the outputs are related to legal requirements; others are just logical requirements, which help to follow a conclusive process. For each planning event, suggestions are made on the type of organisations and actors to be involved, in order to ensure an inclusive and representative consultative process," (*ibid.*).

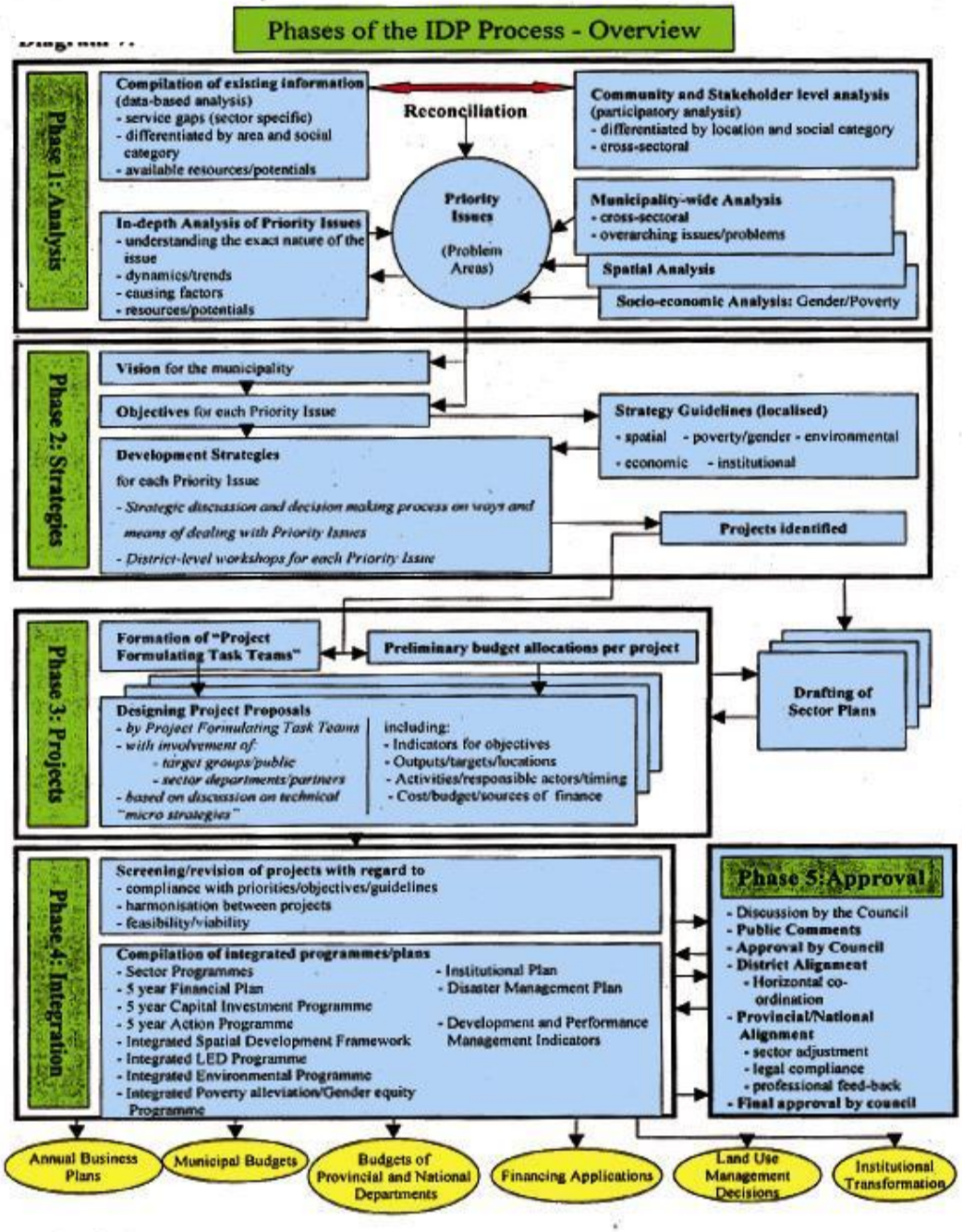


Figure 8: The New IDP Approach and Process / Source: DDP, 2000.

4. LOCAL LAND TRANSPORT PLANNING

4.1 Introduction

The discussions in this chapter are consistent with the following documents pertaining to transport planning in South Africa:

- The *White Paper on National Transport Policy* of September 1996: provides a framework to guide future actions of the NDoT and at the same time sets the policy context within which other transport institutions, including government, statutory organisations and the private sector should relate their individual policies and strategies.

- *Guidelines for the Preparation of an Integrated Transport Plan (TPG 1, COLTO,* 1997).

- The *Moving South Africa – Action Agenda*, of May 1999: represents the NDoT's 20-year strategic framework for the transport sector – one which integrates all parts of transport into a common vision and plan for action, where the transport customer is prioritised and choices are based on where to focus limited resources.

- The *National Land Transport Transition Act* of August 2000: provides for the transformation and restructuring of the land transport system. It stipulates the criteria for establishing transport authorities, which together with core cities and other municipalities, are to formulate land transport plans, including integrated transport plans.

- National Transport Planning Guidelines and Requirements for the

Implementation of the National Land Transport Transition Act – *Public Transport Plans (NDOT & Khuthele, 2000).*

Firstly, therefore, the key challenges facing the transportation sector in South Africa are highlighted in order to strategically conceptualise deliberations in this chapter. Next, the authorities responsible for completing transport plans are described, followed by identification of the type of transport plans. Their relationship with land development is explained in terms of the interrelationships of the various transport plans. Only once the broad system and suite of transport plans are understood will it be appropriate to discuss specific integrated transport plans.

4.2 Key Challenges Facing Urban Transport in South Africa

The new South African government inherited an apartheid influenced transportation system, designed to serve the needs of white urban residents, white rural farmers, tourists, black commuters and black migrants. Despite this skewed capital web, the country possesses the basic infrastructure of a transport system. This very transport system, which just in terms of roads is equivalent to the coutry's national revenue, is facing serve challenges:

> "it is characterised by serious problems which include the 10 000 road fatalities per annum, the lack of investment in maintaining the road system (see figure 7), declining rail and bus ridership, large numbers of people having to commute long distances and spend a high proportion of their income on transport, overloading by road hauliers and the lack of capacity and information to address these problems effectively …" (NDoT, 1997).

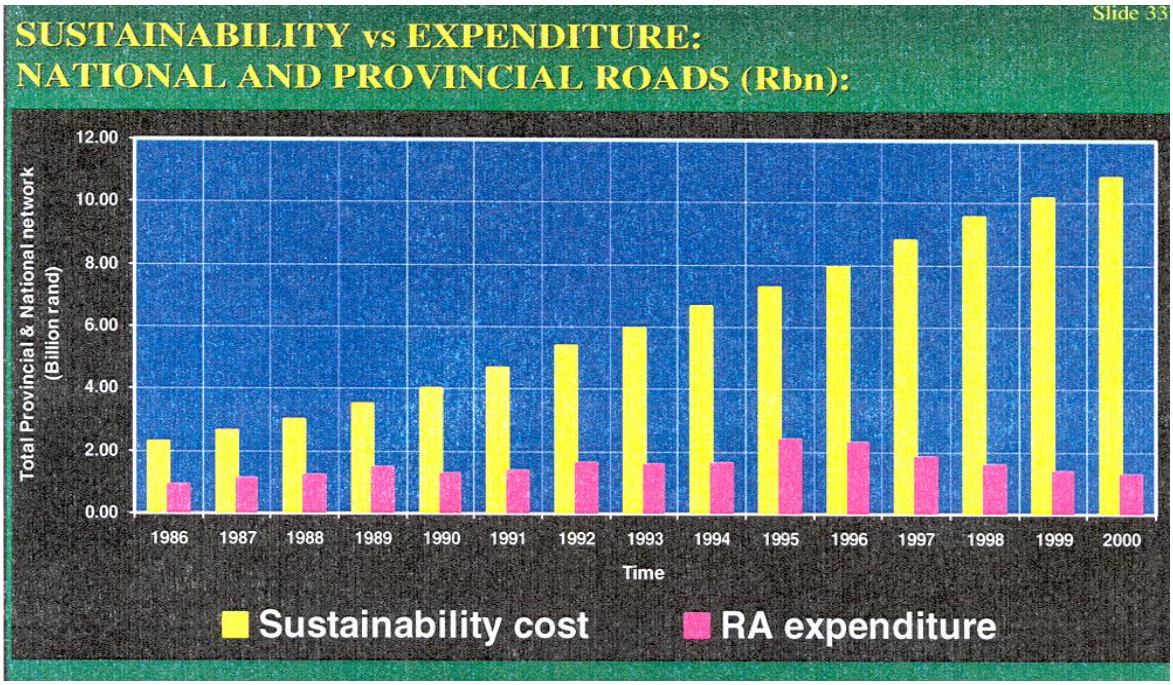


Figure 9: The Impending Crisis Facing SA Roads
Source: (unpublished analysis) De Beer, *et al*, (CSIR: 2000, p.17).

De Saint-Laurent of the DBSA (1998) made the following alarming observation:

> "Urban transport is a *time bomb*: if several issues are not treated now (for instance, adoption of denser patterns for new urbanisation, reservation of future PT [public transport] right-of-ways, comprehensive restructuring of the taxi/bus/commuter rail industries, restoring the PT image, management of private transport demand, time management, etc.), *it will be very difficult to recover control of the situation,* which will in turn seriously impact growth and efficiency," (CODATU 8, 1998, p.43).

Moreover, "[t]he massive train and bus subsidies, R1.6 billion/annum and R1.2 billion/annum respectively, continue to be a very costly burden on the present

government. The main subsidy areas are in and around the metropolitan areas, a number of secondary cities/towns, …and the port cities …" (Merrifield, Draft NSDP, 1999, p.15).

Against this background, the specific challenges that stand out for the urban transport system in the country are:

- How to develop a public urban transport system that will provide affordable basic access to all, and that can in time provide differentiated services to encourage commuters to switch from private cars to public transport.[28]

- How to reduce the high overall system costs which are borne by the consumers (in the form of high prices), the government (in the form of high subsidies) and the industry (in the form of low profits).

Whilst the above challenges are in themselves quite complex to resolve, Lipman and Managhan (1988, p 40) point out that, "the capacity of the industry to meet these challenges is limited even in the long term." In view of this, there are many obstacles to meeting the above mentioned challenges exist, some of these include:

- Unstable industry structures, characterised by either monopolistic structures (e.g. in the ports sub-sector) or else by destructive rivalry in industries with high numbers of entrants and exists (e.g. road freight and taxis).
- Low levels of investment in upgrading skills and technology.
- Customer segments are poorly aligned with operators – this is made

28 Lipman & Monaghan (1998), in CODATU 8 procedings, p.40.

manifest in subsidy structures, cross-subsidies and non-market pricing.

- Fierce competition between modes discourages co-operation between the modes where this would be beneficial.

Following from this and with regard to spatial concerns, corridor development is emerging, within the transport and development fraternity, as a very important cross-cutting development opportunity. Oranje (1999) points out the benefits of this spatial strategy as follows:

> "Public transport is more efficient and transport costs are lower with corridor development, which may be more suitable due to the present fragmented form of South Africa's cities and towns than any attempt at creating compact cities. The proposed transport corridors should help to integrate peripheral settlements through activity corridors stretching through to city centres (although not exclusively focused on the centre). It can be argued that higher densities should be located specifically along transport corridors and that more dispersed settlements could be discouraged through a reworking of the subsidy formulae and by changing the incentive and control governing urban land-use" (in the NSDP, p.16).

The Moving South Africa Action Agenda (MSAAA) outlines four strategic challenges facing the urban passenger transport system, the fourth challenge concurs directly with the above Oranje observation. It would be appropriate, therefore to briefly describe the four MSAAA (1999, p.26) challenges and then elaborate a bit more on the fourth:

- Strategic challenge 1: ***Lack of affordable basic access***. The stranded urban transport customer, that essentially walks or cycles long distances for their

primary trip purpose, is expected to grow if nothing is done to address their needs. The projections are from 2.8 million (1999, 13% of the urban population) to 3.6 million by the year 2020 (28% of the urban population)

- Strategic challenge 2: ***An ineffective public transport system.*** "The public transport system is essentially failing its customers … [it] is characterised by a 'one size fits all' service geared towards the lowest cost to the operator" (*ibid.*). Moreover rolling stock for rail are over very old (on average about 30 years) and vehicle fleets as well are old, the average age for existing taxis is about 9 years and for buses about 13 years. All three modes are near to the end of their economically useful lives.

- Strategic challenge 3: ***Increase car dependence.*** "Stubborn customers are almost 'forced' to use their cars through lack of alternative options and through indirect incentives which make the cost of car use relatively cheap. The trend is one of increasing congestion in urban areas as the car is forecast to increaser by 64% by 2020" (*ibid.*).

- Strategic challenge 4: ***Sub-optimal spatial planning.*** Current land use planning is broadly recognised (DPC, 1999; MSAAA, 1999; Donaldson, 2000; NSDP, 1999) as worsening the apartheid legacy of dormitory townships and long travel distances. The provision of new (RDP) housing on the cheapest land, which tends to be on the urban periphery, far removed from employment centres as well as from the primary road and rail network. Complicating the matter further is the "northern" decentralisation of office and retail developments out of CBDs and into suburban locations. The resultant net transportation effect of these dual urban trends is increased private car congestion and an undermining of public transport viability.

Essentially therefore the MSAAA (1999, p.27) points out that goal of providing housing for low income earners – as is being currently implemented – is clashing with the goal of improving access to opportunities for all.

The opportunity for intensifying development around public transport routes, thereby promoting corridor development, improve the mobility needs of public transport customers and enhance the efficient spatial functioning of the urban form. The concept is graphically illustrated in the following fighure:

4.3 The White Paper on National Transport Policy

In the 1996 White Paper on National Transport Policy, a policy was formulated for land use and spatial development in support of land passenger transport.

The following spatial development principles will support passenger transport policy:

- Land-use development proposals must be subject to a land-use/transport policy framework within an agreed development planning process;
- The effective functioning of cities and industrial areas must be enhanced through integrated planning of land use, transport infrastructure, transport operations and bulk services.

Policy actions necessary to provide for urban restructuring (densification) and efficient land-use/transport interaction which will be promoted by government include:

- Establishment of structures (all spheres of government) which facilitate integrated planning of infrastructure, operations and land use in a coordinated manner;

- Regulation of land-use development at local sphere so that development approval is subject to conformity with integrated land-use/transport plans;

- Land use frameworks, guidelines and policies to channel development, particularly employment activities, into public transport corridors and nodes;

- Development priority will be given to infilling, densification, mixed land use and the promotion of development corridor nodes;

- Containment of urban sprawl and sub-urbanisation beyond the limits will be addressed through provincial spatial development plans;

- Decentralisation which disperses employment activities must be discouraged, except in specific cases where it decreases total transport costs and travel times due to an integrated land-use plan; and

- Unrestrained private car usage and subsidised car parking will be contained through the application of policy instruments which could include strict parking policies, access restrictions for private cars, higher licence fees, road pricing or area licensing. Restraint on private car usage will, however, not be implemented independently of improvements in the quality of public transport.

4.4 The National Land Transport Transition Act (22 of 2000)

The main piece of legislation relating to land transport is the National Land Transport Transition Act, whereas land-use restructuring is governed by numerous pieces of legislation, e.g. the Development Facilitation Act, the Physical Planning Act, the Local Government: Municipal Systems Act, the Removal of Restrictions Act, the Less Formal Townships Establishment Act, as well as a plethora of Provincial Ordinances and legislation.

For the purposes of this discussion document, only the National Land Transport Transition Act, the Development Facilitation Act and the Local Government: Municipal Systems Act are considered.

Key legislative issues impacting on land-use restructuring are from the NLTTA:

- The national importance of the integration of land-use planning in the development process. This is borne out in clause 4(1)(j), which states that, "Land transport functions must be integrated with related functions such as land use and economic planning and development through, among others, development of corridors, and densification and infilling, and transport planning must guide land-use and development planning.

- Land-use planning as a development tool

  Clause 18(3) illustrates this by stating:
  "Transport plans must be developed so as to -
  (a) enhance the effective functioning of cities, towns and rural areas through integrated planning of transport infrastructure and facilities, transport operations including freight movement, bulk services and public transport services within the context of those integrated development

plans and the land development objectives set out in terms of section 27 of the Development Facilitation Act, 1995 (Act No. 67 of 1995), or where applicable, land development objectives of that nature set out in terms of relevant provincial laws;

(b) Direct employment opportunities and activities, mixed land uses and high-density residential development into high-utilisation public transport corridors interconnected through development nodes within the corridors, and the discouraging of urban sprawl where public transport services are inadequate;

(c) Give priority to infilling and densification along public transport corridors;

(d) Give higher priority to public transport than private transport by ensuring the provision of adequate public transport services and applying travel demand management measures to discourage private transport;

(e) Enhance accessibility to public transport services and facilities, and transport functionality in the case of persons with disabilities; and

Minimize adverse impacts on the environment."

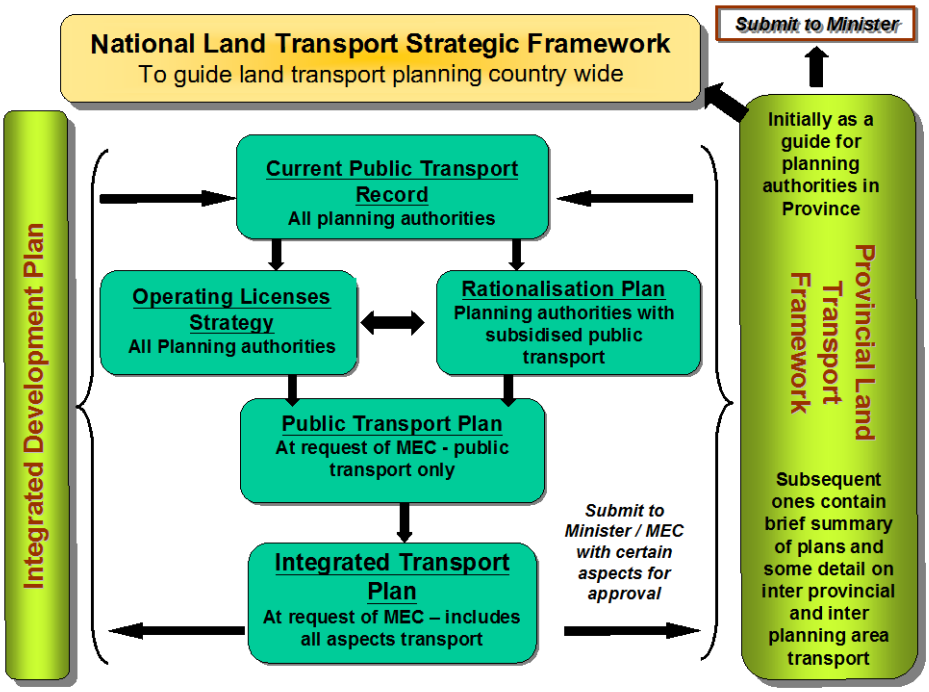


Figure 9: Suite of Transport Plans Source: NLTTA

4.5 Moving South Africa Action Agenda

Proposed strategies of MSA impacting directly on land-use restructuring are as follows:

- *Densification of transport corridors*

  Densification of transport corridors can be achieved by halting spatial dispersion. Corridor development (Spatial Development Corridors (SDIs), for example) use the conglomeration theory of "crowding in" investment. The higher density of companies in turn attracts industry and settlements enabling servicing of the area (through utility provision, e.g. public transport services) which leads to an increase in its potential for long-term sustainability.

- *Densification requires innovative local-sphere cooperative governance*

  Densification through coordinated land-use planning requires effective coordination of all stakeholders in order to be achieved. Land-use restructuring can be accelerated through the aggressive use of development controls and incentives (e.g. lower land prices in and along corridors). In order to effect this coordination it is imperative to have strong cooperation within and across the different spheres of government (local, provincial and national).

- *Local transport/land-use solutions required*

  In order to facilitate corporate governance through the empowerment of local government structures, effective land-use restructuring should ideally be driven by the local authorities themselves (i.e. a bottom-up approach). Transport planning is inextricably linked with all aspects of land-use restructuring and will need to impact on other local government functions as well as on local decision-makers and the public via a data-driven, consultative process.

- *Customer-based transport planning*

  The planning of public transport services to determine the appropriate mode and service pattern for customers. This choice must not only take into account the economic costs of the different modes, but must also factor in the service characteristics of the modes (e.g. speed, comfort, accessibility etc.). Together these characteristics must be matched to local travel patterns (e.g. origins/destinations and time of day - which often differ by customer segment), and the preference of specific customer segments (e.g. cost, reluctance to transfer, etc.). This will require local transport agencies to engage in detailed modal economic analysis as well as market research to segment local customer groups.

4.6 Integrated Transport Plans[29]:

The National Land Transport Transition Act directs that Integrated Transport Plans be developed to enhance the effective functioning of cities through integrating the planning of transport services within the context of the Integrated Development Plans. Integrated Transport Plans must also be able to direct employment opportunities and activities, direct employment opportunities and activities, mix land-uses and high-density residential development into high-demand public transport corridors interconnected through development nodes within the corridors, and discourage urban sprawl.

4.5.1 Definition

An Integrated Transport Plan is a plan aimed at the integration of the transport system by providing for the regulation, provision, use and management of transport infrastructure, operations and services by operators of public transport,

[29] ITP are part of a suite of Local Transport Plans, a summary of each of these plans is given in appendix D.

freight and private travellers.

4.5.2 Contents of Integrated Transport Plans

The Integrated Transport Plan must formulate the municipality's official vision, policy and objectives for land transport and must give due regard to the relevant Integrated Development Plan. The plan must at least:

- specify any changes to the municipality's land transport policies and strategies since the previous plan;
- include a list showing, in order to precedence, the projects to be carried out and the cost of each. This list must be prepared with due regard to the relevant Integrated Development Plan;
- include all modes of transport and infrastructure, including new or amended roads, airports, harbours (where applicable) and commercial developments having an impact on the land transport system;
- include the municipality's transport budget, including funding sources with regard to land transport for the relevant financial year;
- include the municipality's public transport plan;
- set out a general strategy for travel demand management ;
- set out a road and transport infrastructure provision, improvement and maintenance strategy, and
- set out a general strategy or plan for the movement of hazardous substances by road along designated routes.

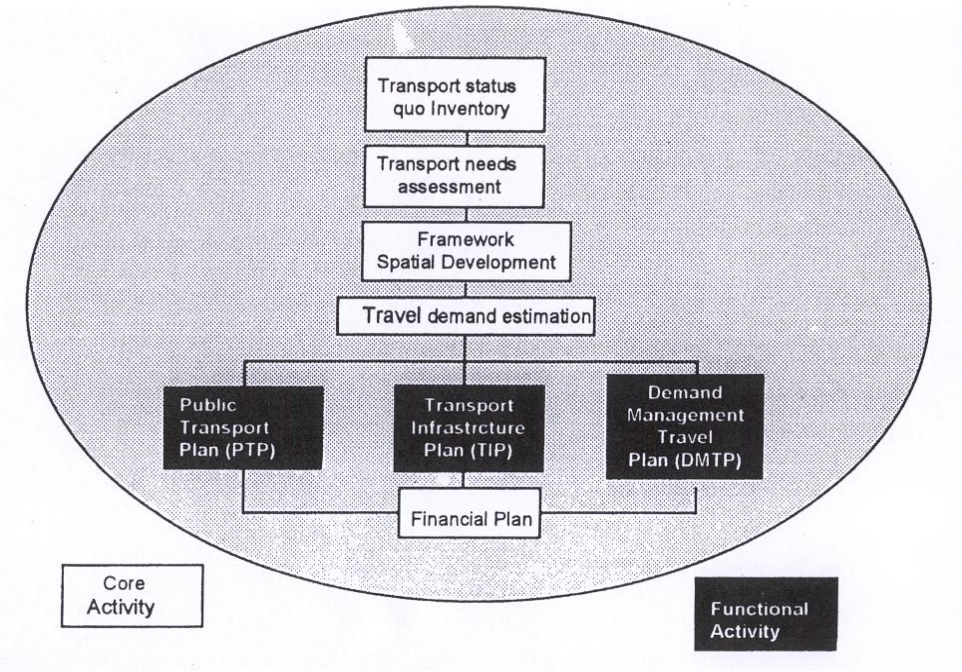


Figure 10: The ITP process
Source: COLTO 1997

It is the clear intention of government that ***land transport planning must be integrated with the land development process***. As prescribed in transport legislation the Local Transport Plans (CPTR, OL, RATP, PTP & ITP) must form the transport component of the Integrated Development Plan. The functional interrelationship of the two planning processes is shown in Figure 1.