

Examining the Effectiveness of City of Johannesburg's Policy and Legislative Frameworks in Inform Development and Operation of Integrated Public Transport Systems

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1 ABSTRACT

Since the emergence of a democratic South Africa in 1994, the national government has embarked on the notion of transforming the country's public transport systems and operations through policies and legislative frameworks. It is evident that the South African government has prioritised in improving public transport systems through mega investments and strategic policy instruments, although these policies and effectiveness of such investment leave much to be desired in terms of spatial integration and efficiency of public transportation. The provision and management of well-integrated, affordable and reliable modern public transportation systems in South African cities are critical in ensuring both smart cities and mobility within them. The Gauteng province and City of Johannesburg in particular formulated relevant policies, strategies and framework such as Gauteng 25-Year Integrated Transport Master Plan, City of Johannesburg Strategic Integrated Transport Plan, and City Of Johannesburg Strategic Public Transport Network that seek to inform the development and operation of efficient and integrated urban public transport systems. As such, this study aims to investigate the effectiveness of City of Johannesburg's policy and legislative frameworks formulated to inform planning, development and operation of efficient and integrated public transport systems in the city. Key informant interviews were used to unpack the status quo in terms of the effectiveness of the policy and legislation frameworks governing public transportation in the City of Johannesburg. Secondary data collected through desktop study also played a critical role in guiding the geography of the study and revealed the history of the Johannesburg in relation to the present, and displayed actual and potential relationship between operational public transport systems within the city. This paper presents novel data analysed into empirical results suggesting that there have been spirited efforts in Johannesburg to not only enact relevant transport policy and legislative frameworks but also facilitate the development and management of efficient and effective modern public transport systems.

Keywords: Effectiveness, management, public transport systems, policy, legislatives.

2 INTRODUCTION

Ever since the emergence of a democratic South Africa in 1994, the post-apartheid government has embarked on the notion of transforming the country's public transport systems and operations through policies and legislative frameworks. It is evident that the South African government has prioritised in improving public transport systems through mega investments and strategic policy instruments, although these policies and effectiveness of such investment leave much to be desired in terms of spatial integration and efficiency of public transportation. Prim (2016) observes that the South African urban public transport system has reached a critical stage, with major cities (supported by national and provincial governments) already geared up to the implementation of innovative urban public transport systems. South African Metropolitan cities seem to be the ones at the centre of innovative urban public transport system initiatives (mostly BRTs), while other cities and towns having been lagging. This is understandable, given the population concentration and major economic activities in metropolitan cities.

For this study, it was very critical to examine the effectiveness of the commonly followed top-down approach to post-apartheid South African policy and legislative frameworks governing public transportation. Thus, this study reviews the development in policies and legislation governing public transport systems, since the emergence of democracy in 1994 at national spheres of government. The Gauteng province and City of Johannesburg's specific policy interventions on public transport infrastructure are also discussed with a closer look at the level of collaboration between the provincial and national departments and between provincial and municipal departments. This was essential, since the provincial government is the link between national government which sets out policy directives and the municipal sphere where actual

implementation takes place. In addition, study outlines the effectiveness of government legislative frameworks and policy interventions.

3 POST-APARTHEID SOUTH AFRICAN POLICIES AND LEGISLATIVE FRAMEWORK GOVERNING PUBLIC TRANSPORT SYSTEMS

The South African approach to spatial planning is often the top-down approach, where the national government sets a framework through policy directives which provincial and municipal departments must work towards. The provincial departments are then tasked with the responsibility of regulating provincial specific matters. Though the policy directives are set at national level with provinces setting legislative frameworks and policy directives in line with provincial differentiation, the actual implementation takes place within the Municipal sphere of Government. The general expectation is that the three spheres must work together with the national and provincial spheres playing a support and monitoring role. There is no exception with the public transport infrastructure, where the national government has been at the centre of setting the tone and direction for growth and development.

It is evident that public transport policy in South Africa gives a useful synopsis of what had transpired in the policy field. Since the 1996 White Paper on National Transport Policy, several empowering policies and legislative instruments has been adopted in South Africa; to promote integrated, efficient, reliable, convenient and safe innovative urban public transport systems. These started with the 1996 National Constitution; the 1996 Green Paper on National Transport Policy. Lately, the Green Paper on the National Rail Policy was propelled in 2015; and the Gauteng's 25-year Integrated Master Plan propelled in 2013 to request perspectives and methods of facilitating the planning, development and management of enhanced railroad transport systems in the Gauteng metropolitan region and the country. The National Land Transport Act (Act 22 of 2000) was a significant milestone by the national government post the White Paper. This was followed by the introduction of the Integrated Rapid Public Transport Network (IRPTN) initiative, a more sophisticate approach which employs innovative approaches to urban public transport systems (Van Ryneveld, 2008). As part of the innovations, the Gautrain and Bus Rapid Transit (BRT) were introduced, with the BRT being the common adopted form of innovative public transport across the country.

3.1 The 1996 White Paper on National Public Transport Policy

The white paper on national public transport policy is perceived as the key building block that formed the basis of urban public transport systems transformation in the democratic era (Dawood & Mokonyama, 2015). The conception to develop the 1996 White Paper on National Transport Policy started in 1995, with an arrangement of consultation that resulted in an adoption of Green paper on National Transport Policy in March 1996 (Department of Transport, 2004a). The White Paper was reacting to the national transport policy approach developed in the 1980's. This had seen noteworthy deregulations of the taxi business, which before that time had worked under tight limitations as government endeavoured to shield the financed transport industry from rivalry.

The white paper identified the need for a pro-active approach to deal with the prevailing circumstances and ever rising challenges facing the country. It manged all features of transport and pronounced the image for transportation accordingly: ensure reliability, safety, efficiency, effective and well integrated transport set-ups and infrastructure that will best address the requirements of commuter and freight customers at improving services provision and cost in a manner which underpins government strategies for socio-economic development whilst being economically and environmentally sustainable (Department of Transport, 2003).

The White Paper set up two key thrust to realise the aims of better customer oriented transport services, such as the promotion of inter-modalism and integration. By inter-modalism the 1996 White Paper pursued to make a setting which empower utilisation of the most suitable mode of transport for a specific purpose. This was to be accomplished not through regulation, but rather by making the correct impetuses with the goal that every mode could finish based on its innate qualities (Walters, 2012). These thrusts translated into strategic objective, for instance, ensure integration in transport modes in terms of scheduling, ticketing and routes systems. Integration comprised institutional, planning, spatial and modal integration, with the policy pursuing to incorporate the private sector, state departments and consumers into the way towards creating the

private sector, government departments and customers into the practise of developing resolutions for deficiencies (Department of Transport, 1999).

3.2 Moving South Africa Project

The 1996 White Paper addressed National Transport Policy and had a period of 6 to 9 years, with a need to improve the analyses centred on abundant experimental information and to develop approach (Walters, 2012). The method of strategy needed to detect and make on key decisions, and to do as such with a 20 year tie horizon. Subsequently Department of Transport set up on an approach well-known as the Moving South Africa (MSA) project, which intended to make a common vision, clear decisions, and reliable choice standards for all members in the in the transport industry. The MSA project has set up an urban commuters Action Agenda, as way to achieve the vision as outlined above and switch from customer-based public transport to commuter-based modal transport (Meyer & Miller, 2014). The main thrusts to attain this were enunciated as being to upsurge the mass of public transport demand, to make most extreme utilisation of an ideal mode for a given distance and demand, and to enhance firm-level efficiency to meet the developing needs of customers. This involved loosening up the historic legacy, at the core of which was the prerequisite to stop further scattering of development, to adequately regulate all suppliers as far as transport designs planned by client requirements for local areas, and to start to authorise customers to request better service.

3.3 The National Land Transport Transition Act, 2000

The National Land Transport Transition Act (Act 22 of 2000) focuses mainly on the public transportation operations. The Act is a well-crafted that articulates in comprehensive legal terms, the policies settled upon in the 1996 White Paper and Moving South Africa project (Hanson, 2017). The legislation set up principles, such as (i) land transport operations have to be integrated with land use and economic planning and development through development corridors, and infilling and densification, and transport planning should guide land use and spatial planning (Letaifa, 2015); (ii) and the drives of the provision of land transport infrastructure and land transport planning should be given higher priority than private transport. The Act within the framework of the Republic of South Africa's Constitution, aims to build institutions suitable to the effective authority of public transportation. Presumably the most challenge that the Act encountered in such manner was the formation of structures situated in the local of government, which could oversee public transport in an integrated manner crosswise over what adequately operational transport locales.

Strategic plans are obligatory to create the transport constituent of Integrated Development Plans needed in terms of municipal systems Act, 2000 (Letaifa, 2015). For example, Section 18 (1) Land transportation planning should be integrated with land use and spatial development processes, and transport strategies needed for that persistence in this legislation are planned to provide organisation to the operation of municipal planning outlined in the Schedule 4, part B of the Constitution, and should be accommodated in and form an critical part of Integrated development strategies in terms of relevant sections of the Local Government (Municipal Structure Act, 1998).

The National Land Transport Transition Act, 2000 aims to form instruments for management of the transformation of public transport division into more effective and rationale system, as highlighted in public transport strategies; that are needed to be set up by public transport planning structures (Walters, 2012). These have to be located in the broader integrated public transport strategies that focuses on the entire transport division within the planning sector. The functioning licenses plans and the rationalisation strategies are needed as a source for the rationalising the events of private operatives with regards to the public transport strategies centred on the approach of manged rivalry, that comprises taking the minibus taxi industry under more productive regulation (Banister, 2005). Justification strategies are only needed if public transport services are subsidised in the area. Although these strategies and the existing public transport record the functioning licenses plans from mechanisms of the public transport strategy.

3.4 National rail policy green paper was launched in 2015

The 2015 National Rail Policy Green paper provides guidelines that are meant to move development with the main emphasis to renewal of the current rail sector to perform optimally, satisfy stakeholders' needs, complete effectively, and contribute definitely towards socio-economic development in South Africa. The apartheid administration which have marked South Africa's had significantly impacted on rail sector

development, and composed with other variety of factors have led to railway sector that currently experiences numerous major challenges (Letaifa, 2015). “Recent challenges comprise of aging, obsolete or deteriorating government of much of the rail infrastructure and rolling stock, a capital investment backlog and a need for investment funds, and a preference by logistic transport service providers to transport freight by road rather than rail. There also exists the preference by long distance passenger to travel by road rather by rail, poor rail security for both passenger and freight, inefficient rail operations and shortage of technical skills and experience within the rail sector”(National Rail Policy, 2015:26). Over the past 2 decades of under-maintaining and overloading rail infrastructure, the situation of the tradition commuter rolling stock had worsened to crisis levels, and was incapable to satisfy commuter demands. At the same time, the rail network infrastructure was unable to encounter the demands of a fast transforming society. Although, the Passenger Rail Agency of South Africa was introduced in 2009 to consolidate rail commuters of Shosholozha and Metrorail.

Lack of regulations on road freight during 1988 led to substantial capacities of high-value density freight on the main network moving to rail from road in the 1990s. In the 2000s, lack of investment and competitiveness by Transnet Freight Rail led to road haulers organising side tipper interlinks to intrude on the last mainstay of freight rail, haulage of heavy loads commodities for long distance such as grain, ore and coal (Hanson, 2017). General, railways use in South Africa had declined to a level where the necessity to adjust to rail's global revitalisation had turn into clearly obvious to majority of stakeholders (National Rail Policy, 2015). Although, from 2012 Transnet has been investing in new locomotives and rail infrastructure. Two essential optimistic steps were the setting up of the Railway Safety Regulatory and the establishment of the Gautrain Rapid Rail Links as a public private partnership with regards to a concession agreement between the Bombela Concession Company and the Gauteng Provincial Government. Gautrain launched for service in May 2010, in period for the anticipated large volumes of commuters due to the FIFA soccer World cup.

3.5 Urban public transport transformation policy interventions Post 1994

Despite various initiatives to improve the South Africa's urban public transport system, not much progress has been recorded, even after the promulgation of the National Land Transport Act (Dawood & Mokonyame, 2014). This was soon followed by attempts to recapitalize minibus taxis and restructuring of bus operations contracts under the accelerated modal upgrade programme (Martha, 2012). Dawood and Mokonyama (2015) observe that the South African public transport challenges have been persistent despite various transformation and formalization initiatives since 1996. The table below depicts public transport planning, complex issues, policy interventions and outcomes since 1994 as observed by Ahmed (2004); van Ryneveld (2008); Venter, (2013); and Dawood & Mokonyama (2015).

Problems associated with public transport systems and infrastructure	Interventions to transform of urban public transport systems and operations	Outcomes of interventions or transformation strategies and prevailing circumstances
Spatial fragmentation due to past land use planning patterns.	1995 White Paper on National Transport Policy which led to a Green Paper in March 1996.	Introduction of innovative urban Public transport systems in form of Bus Rapid Transit in major cities.
High costs and long travel hours affecting mostly the urban poor.	Public transport subsidy Scheme to target low income earners.	Gautrain connecting mainly the three Gauteng Metropolitan Cities major transport nodes
Lack of cooperation from transport operators.	The National Land Transport Transition Act (Act 22 of 2000)	Increased public transport subsidy expenditure without balanced benefits by the previously disadvantaged and the general public.
Poor ticketing system where commuters had to pay for every mode of transport they use.	The National Land Transport Transition Amendment Act (no 26 of 2006) (NLTTAA).	Mini-buses or taxis still not covered by the public subsidy.
Increased number of private transport usage.	Accelerated Modal Upgrading.	BRT and Gautrain having own subsidy requirements.
Informal and non-regulated public transport operations.	Integrated Rapid Public Transport Networks (IRPTNs).	Innovative urban public transport systems though not prioritizing the urban previously disadvantaged and
Poor subsidy targeting	Gautrain (Rapid Rail) and Bus Rapid Transit (BRT) systems.	

Table 1: Synopsis of Urban Public Transport Transformation Interventions Post 1994.

4 METHODOLOGY

The study made use of phenomenological case study survey design to investigate the effectiveness of City of Johannesburg's policy and legislative frameworks formulated to inform planning, development and operation of efficient and integrated public transport systems in the city. According to Kohlbacher (2006) the cased study research strategy involve an empirical enquiry of complex social phenomena within a real-life context which borrows some aspects of qualitative and quantitative approaches. In this study, the phenomenological case study was based on an empirical enquiry and analysis of policy directives and interventions outcomes, for instance the planning, development and operation practises within the City of Johannesburg public transportation.

Key informant interviews were used to unpack the status quo in terms of the effectiveness of the policy and legislation frameworks governing public transportation in the City of Johannesburg. The key informant interviews were semi-structured, using open-ended questions to guide the conversations, and questions were guided by the main of study. In-depth key informant interviews were held with key informant officials from Johannesburg Roads Agency (JRA), Gautrain Management Agency (GMA), Gauteng Department of Roads and Transport; and City of Johannesburg into saturation of data to attain more accurate information. The interviews were relatively formal taking on the format of face-to-face discussion at their places of work. This methodology is a useful way of getting to grips with people's constructs, mentalities, perceptions and definitions of situation and realities. As such, the interviews were seen to provide distinctive empirical data and the understanding were compared to the empirical data gathered from other sources. Interviews were recorded on a smartphone, with the permission of the interviewee.

Secondary data collected through the use of desktop study played a vital protagonist in guiding the geography of the topic and also unpack the status quo in terms of the effectiveness of the policies and legislation governing public transportation in the City of Johannesburg. Data for this study were gathered from various major sources such as existing literature, policy documents and reports of National, Provincial and Local organisations on the City of Johannesburg public transport planning and management. Various concepts (such as urban public transport, transport planning, integrated public transport systems, transport management processes, geolocation based services and policies and legislatives framework governing transportation in Johannesburg) relating to integrated urban public transport planning and management in the City of Johannesburg were used in carrying out the web search in major electronic databases (that is academic search complete) namely: Scopus database, Sage journal online, Science Direct journal online and other catalogues from the University of Johannesburg library. Secondary data collected through desktop study revealed what the study area was like in the past in relation to the present and provided the context into which the primary data fitted and provided an overlap in types of contexts. Using the secondary data in a comparative context was useful in understanding the policy frameworks and trends in public transport provision within the city.

For data analysis the study followed an inductive approach to analyse the effectiveness of City of Johannesburg's policy and legislative frameworks formulated to inform planning, development and operation of efficient and integrated public transport systems in the city. As such the analysis started by exploring findings under each theme before confirming the findings based on analytical principles, and not necessarily following a set of rules (Labaree, 2009). Accordingly, content analysis and thematic analysis were adopted as the analysis techniques to assess and analyse all the qualitative primary and secondary data collected during the study. All the above mentioned analysis techniques were purposefully chosen, as they can be used for studying the efficacy, well-integrated, reliable and convenient innovative public transport systems consistent with the inductive approach to data analysis.

5 RESULTS AND DISCUSSION:

5.1 The Gauteng province and City of Johannesburg's strategies and polices framework

5.1.1 Gauteng public transport infrastructure policy directives 25 year-Integrated Transport Master Plan (ITMP), 2013

In South Africa; national, provincial and local government all fund public transport infrastructure projects in line with the competency areas and core mandates. For Gauteng Province, central to public transport

infrastructure is the 2013 Gauteng 25 year ITMP that aims to provide policy directives and mapping out the desired future of the Gauteng public transport network that will respond to the challenges of spatial segregation and socio-economic disparities (Gauteng Government, 2013). Gauteng ITMP 25 was derived from all existing transport plans across the Gauteng Metropolitan Region with the Department of Roads and Transport being tasked with the responsibility of managing and coordinating the implementation processes of the said plan. The Gauteng Metropolitan Region as the economic node of South Africa, is facing an ever-growing demand for well integrated public transport systems.

The transportation challenge that the region is experiencing can be attributed to absence of cross municipal boundary integration of public transport amenities. Public transport affordability, accessibility, consistency, safety and efficiency is needed to provide influence to remedying apartheid spatial planning; reducing socio-economic opportunity cost for communities to access economic opportunities; and allowing economic growth (Kourtit & Nijkamp, 2012). As a results, the Gauteng province developed a Gauteng's 25 year-Integrated Transport Master Plan in 2013, which aims to enhance urban public transport systems in the province. The Integrated Master Plan pursues to attain numerous objectives through the implementation of numerous approaches and amongst other they comprise the efficient and responsive urban public transport systems that is thriving integrated to promote its ridership and reduce reliance on private transport modes (Letaifa, 2015). This has led to rise in BRT systems such as Rea Vaya in City of Johannesburg, The Are Yeng in City of Tshwane, and High- speed railway (Gautrain).

The main objective of the year ITMP is to provide a world class holistic mobility system which mainstay social, economic, environmental and cultural objectives of Gauteng province. Furthermore, the objective of the Master plan is to deliver a master plan for the establishment of a mobility system for Gauteng Province in the next 25 years that will be viable and also lead to skills development, better quality of life and sustainable job creation. The Integrated Transport Master Plan has to allow the Gauteng Province Department of Roads and Transport to plan, develop and regulate a well-integrated and efficient mobility system that improves mobility and is secure, safe and environmentally viable.

The Gauteng Integrated Transport Master Plan had to support the full-implementation policy for amendment of the mobility system in the province within the next 25 years. Conversely, the present setting of mobility in metropolitan region and the related critical challenges, urgent initiatives are needed. In a manner to be proactive and decisive in redressing the present mobility challenges, and also accelerating the mobility system development that reinforces Gauteng City Region development, the Integrated aster Plan have several figure of fundamental initiatives and projects which have to be realised for the adoption in the instant future (Kourtit & Nijkamp, 2012). "It comprises of three categories of key initiatives and projects which include Main short-term initiatives that will lessen "bottle-necks" in the short term to medium- term; key transport capital projects to be supported in the short to medium term; and lists of all approved transport capital projects on budget of government departments, agencies and entities" (Gauteng ITMP 25, 2013: 15).

Cooperatively, these crucial initiatives institute the five Year Gauteng Transport Implementation Plan that is being indorsed for contemplation by the Gauteng Department of Roads and Transport. Also these key initiatives of ITMP 25 were recognised and grounded on a survey and assessment of all present and approved mobility plans appropriate to the Gauteng City Region; and present participation and inputs of stakeholders and participants in workshops on mobility matters. Altogether these initiatives fall within the provincial government's fundamental functions, and where the province can impact the implementation of an integrated transport networks for Gauteng, as part of its mobility coordination role.

5.1.2 Strategic Integrated Transport Plan Framework for the City of Johannesburg

The City of Johannesburg developed its first Integrated Transport Plan (ITP) in August 2013. The integrated transport plan was updated three times by the Johannesburg metropolitan city council, in 2004, 2006 and 2007; as the plan was operational from 2003 to 2008. Currently, the City of Johannesburg's Integrated Transport Plan is in for 2013-2018 which started in 2012. This Integrated transport plan aims to inform how public transportation infrastructure and services will develop within the City of Johannesburg (Letaifa, 2015). Although there are components that have been developed to support the current operational City of Johannesburg Integrated Transport Plan. Strategic Integrated Transport Framework is the first component, which aims to unpack the status quo and provide an overview of some of the significant development and deficiencies over the most recent ten years, at that point draw out the City's goals and visions for its mobility

system framework and the approaches which it aims to achieve them. Outcomes, outputs and indicators which will be utilised to assess the City of Johannesburg's performance are set out, and the measures for mobility infrastructure and public transport benefits that can be anticipated by the public. Spatial network of high level has been established which demonstrates the fundamental routes and corridors for public transport, cycling, walking and freight.

The second component is the Database which is appearing as a Johannesburg Household Travel Survey, being done amid the first half of 2013 and a Mobility information register, for which information gathering occurred in 2012 and 2013. Conversely, following these components, and guided by the framework and information, the Department of Transport will organise and Integrated Transport Showing the public transport routes and corridors that the city will be investing in, and a ten years integrated transport plan for its principles initiatives to extend that public transport network. The fourth component are operational Plans or detailed strategies that will be developed as and when preparing the needs to be done, for example in connection to the specific projects or programmes. These four components developed are illustrated in figure 1

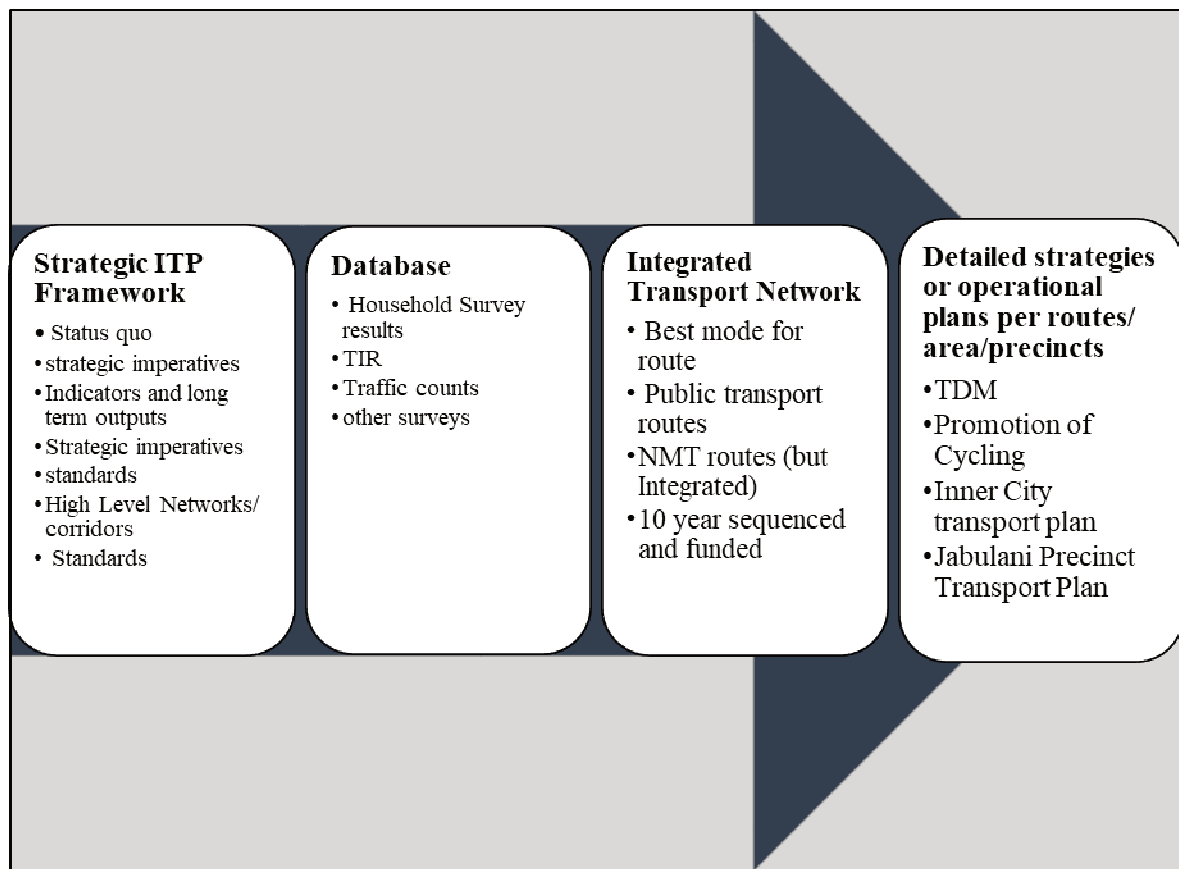


Fig. 1: City of Johannesburg Integrated Transport Plan Planning Process [Source: COJ ITP, 2013].

5.1.3 City of Johannesburg Strategic Public Transport Networks

The majority thrust of 2003-2008 City of Johannesburg's Integrated Transport Plan was to move from the historic accentuation on enhancing mobility for private automobile, towards an accentuation on enhancing accessibility and mobility for people, basically through enhancement to urban public mobility system (Letaifa, 2015). The Integrated Transport Plan mainly recommended that the city should adopt a Strategic Public Transport Network. As strongly recommended by the Integrated Transport Plan, the City of Johannesburg developed the Strategic Public Transport Network (SPTN) for both concept of operation and network. The SPTN aimed to recognise the main public transport integrations that required to be prepared. This was planned with the intention of promoting a multi-nodal city form and compact city concept, by giving a clear changeless public mobility 'grid' of intensive high-recurrence public mobility routes network integrating main high-density hubs and also high populated residential spaces. When on the grid form, every imperative destinations can be accessed through the public mobility system due to the inclusive continuity of

integrations it structure as a framework of public mobility routes, of about 325 km length total, interfacing 45 or so improvement hubs in the City of Johannesburg to each other along major mobility spines.

Operationally, dedicated lanes were anticipated on public transport intersections for the restrictive utilisation of minibus-taxis and other transports. At the routes starts and adequately smaller commuters' amenities along the routes, few terminals were proposed mainly at the points where the routes are integrated, and where commuters' can change from mode to another mode (Walters, 2012). Ride facilities and station were also proposed, focused at nodes on the SPTN in spaces of high private automobile ownership. The rationale was that Johannesburg had adopted throughout the years towards a multi-modal structure. While the Central Business District (CBD) persisted the most imperative single hub, it was by all account not the only hub. Actual 26% of commuter journeys in Johannesburg have the City centre as their final end point. Nonetheless, transport, rail and minibus-taxi routes all would in general unite on the City centre. There were likewise an excessive number of routes, scattered over the system, functioning at moderately low frequencies. The essential network of 325 km was expected to be bolstered by an auxiliary system of feeder and dispersion routes around the greater part of the 45 hubs on the framework were proposed to give further inclusion (Kourtit and Nijkamp, 2012).

The recapitalized 18-seater minibus taxi was viewed as the most cost-effective mode for this assignment by and large, and an expected 1 500 minibuses would benefit the hubs once the system was completely operational (Walters, 2012). Having a perpetual vibrant public mobility network was likewise observe as empowering Johannesburg to embrace an unmistakably more compelling and centred approach to deal with delivery of public mobility signage, measures to make public transport services and infrastructure more accessible for people with disabilities; safety and security measures, focused at the hubs, such as 24-hour retail activity, excellent lighting, and closed circuit television surveillance; law enforcement measures; commuters data shows, street furniture, shelters devoted stops and landscaping which would provide the corridors a perceptible and visible identity; measures to create public mobility infrastructure and facilities more available for people with handicaps; wellbeing and safety efforts, centred at the nodes, such an excellent lighting, 24-hour retail activity and shut circuit TV reconnaissance; law requirement measures; routing of subsidized services, which can be to the Strategic Public Transport Network; all-day services; and integrating services, for instance fare systems (Letaifa, 2015).

5.2 Legislatives frameworks and policy interventions

The provision and management of well-integrated, affordable and reliable modern public transportation systems in South African cities are critical in ensuring both smart cities and mobility within them. Notwithstanding the evident benefits of modern urban public transport systems, governments of the developing world at all levels, have been struggling to plan for, develop and manage public transport systems of acceptable standards (Musakwa & Gumbo, 2016). African government in particular, have been struggling to provide well-coordinated, efficient, effective, reliable and affordable public transport systems in their ever-growing cities spatially and demographically (Risimati & Gumbo, 2018).

Consequently, there have been spirited efforts in South Africa to not only enact relevant urban transport legislative frameworks and formulate policies but also their implementation to facilitate the development and management of efficient and effective modern public transport systems. Although colonial and apartheid spatial planning mechanisms contributed to the current disintegrated land use pattern which perpetuates increased travel times and costs from isolated township to economic nodes for employment and other urban amenities. The apartheid spatial planning was characterised by fragmented spatial form, where a mass public transport rail network was used as the main mode of public transport. This also influenced the rise of the mini-bus taxi industry as an alternative form of public transport to take people from isolated residential areas to places of employment. Notably, South Africa has been adopting several enabling policies and legislative instruments to promote innovative urban public transport systems since the realisation of the democratic dispensation in 1994 and these commenced with the National Constitution of 1996 that culminated in the adoption of the National Transport Policy White Paper later in the same year. Recently there has the National Rail Policy Green Paper launched in 2015 to solicit views and ways of facilitating the planning and development of improved railway transport systems within the country.

In particular, the Gauteng province as the economic hub of South Africa, is experiencing ever-growing demand for public transport hence the adoption of the innovations in public transport systems. Consequently,

the province adopted the Gauteng's 25 year Integrated Transport Master Plan that seeks to improve urban public transport systems within the province. Thus, the policies that sought to promote and support public transport in Johannesburg include, the National Rail Policy Green Paper of 2015, National Transport Policy Green and White Papers of 1996 and the Gauteng's 25 year integrated Transport Master Plan of 2013 (ITMP 25) (Gauteng, 2013). The ITMP 25 plan seeks to achieve several objectives through the adoption and implementation of several strategies and among others they include the provision of responsive and efficient urban public transport systems that is well linked and connected to promote its use and reduce reliance on private modes of transport. Consequently, this has given rise to BRT systems such as Are Yeng in City of Tshwane, Rea Vaya in City of Johannesburg and the high-speed railway (Gautrain).

6 CONCLUSION

Evidently, post 1994 South Africa has emphasised spatial and socio-economic transformation through policy pronouncements to deal with past spatial injustices to alleviate poverty, reduce unemployment and reduce the ever-widening inequality gap. Interventions have been centred on spatial restructuring through a public transport framework to support the economy. Other than visible physical infrastructure, spatial integration and socio-economic transformation as realistic indicators of transformative policy and legislative interventions have lacked. Policy frameworks have been good on paper but require a practical collective implementation strategy. An autonomous approach to implementation by each sphere of government or even sector departments have meant that all public transport infrastructure investments consistent with policy and legislative frameworks have indirectly perpetuated spatial and socio-economic disparities. Despite numerous policy and legislative framework interventions since 1994, spatial and socio-economic disparities continue to manifest spatially and racially. Though commendable work has been done through innovative urban public transport systems, the criteria for prioritisation on policy interventions must be reviewed, as those who need public transport the most appear to be far from being a top priority. Lack of cooperation and coordination amongst the three spheres of government was found to be a hindrance to effectiveness of public transport infrastructure investments. It is evident that all spheres of government and some sector departments are interdependent in their core functions despite each having its own constitutional responsibility and legislative autonomy. Thus, collective implementation strategy is central to attaining redressing spatial disparities

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