

WHAT DOES TRANSIT ORIENTED DEVELOPMENT MEAN IN A SOUTH AFRICAN CONTEXT? A multiple stakeholder perspective from Johannesburg

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ABSTRACT

Car dependency is increasing in South African cities, and apartheid spatial patterns continue to be observed in the accommodation of public transport captive communities at low densities on the fringes. It has been argued in many contemporary plans and strategies that Transit Oriented Development (TOD) offers a potentially useful concept to drive the restructuring of South African socio-spatial patterns. The 2011 National Development Plan, in particular, calls for 'the internationally accepted principles' of TOD to be employed. The concept of TOD is rooted in North American attempts to overcome the predominant use of private cars, and the inefficiencies of urban sprawl. This paper aims to explore what TOD means in a South African context. It is argued that identifying and adopting internationally accepted principles of TOD design is fairly straight forward, and it is clear that South African TOD strategies have largely been informed by these. However, the international experience highlights that the implementation of these principles encounters many complex challenges, amongst which divergent stakeholder interests are particularly important. Adopting narrow physical and urban design principles, without paying attention to attendant complex implementation challenges, is unlikely to achieve success. Drawing from (n=11) qualitative practitioner interviews in Johannesburg, the paper highlights that local TOD stakeholders often have contradictory and competing interests and understandings. This poses a risk to achieving TOD objectives. It is concluded that greater effort is required to understand local TOD stakeholder dynamics, and that local governments need to provide frameworks and associated strategies through which competing interests can be resolved.

1 INTRODUCTION

Transit Oriented Development (TOD) has become increasingly drawn upon in South African urban and transport planning strategy. The concept is rooted in a North American context, as a means of lessening the predominant use of private cars and mitigating the inefficiencies of urban sprawl (Carlton, 2007). The South African context is somewhat unique when assessed relative to North America however. While South African transport policy for the last half century has focused primarily on providing infrastructure for the car, the vast majority of people are public transport users. The spatial challenges faced in South Africa are in part due to a growing

dependence on the private car, but arguably the more pressing challenge is due to persistent apartheid spatial patterns where public transport captive communities live in detached single-unit housing on the fringes of cities. It is to this dualistic nature of South African cities, whereby wealthier people rely on private cars and poorer peripheral communities rely on public transport, that TOD will need to be adapted.

In the National Development Plan (NDP), the National Planning Commission (NPC, 2011:285) drew on TOD explicitly as an element of the spatial vision to achieve socio-spatial transformation stating “new urban development and infrastructure investments should be focused around corridors of mass transit and around existing and emergent economic nodes, applying internationally accepted principles of transit-oriented development”. However, the NDP does not go further to explain what this might mean, nor does it provide any sense of the need to adapt TOD to local contexts, as suggested by Wilkinson (2006). International experience highlights that many complex challenges surround the implementation of TOD. This paper focuses on the multiple stakeholder nature of TOD, which is one of the often cited challenges to implementation.

The aims of this paper are: to briefly explore the notion of ‘internationally accepted principles’ of TOD and what they might mean in South Africa, shifting the discussion beyond listing physical design principles, to highlight why the multiple stakeholder nature of TOD implementation is critically important; to analyse how stakeholders in the case of Johannesburg understand TOD; and to suggest how divergent stakeholder interests might be overcome. This paper will not discuss the challenges which accompany the provision of a rapid and frequent public transport system. Suffice it to note that such an offering is fundamental to achieving TOD principles, and that implementing integrated mass public transport systems is proving a challenge in the contemporary South African context.

The paper is divided into five sections. The following section briefly presents findings of a literature review on what ‘the internationally accepted principles’ of TOD might be, and then discusses the challenges associated with international efforts to achieve such principles. Section 3 makes a case for why multiple stakeholder dynamics is one of the most important challenges to overcome. Section 4 presents the findings of stakeholder interviews in the case of Johannesburg. Section 5 presents recommendations and conclusions.

2 INTERNATIONAL PRINCIPLES AND CHALLENGES IN TOD IMPLEMENTATION

There is a relatively extensive literature on TOD internationally. The outcomes of a review of this literature are discussed in this section. ‘Internationally accepted TOD principles’ will be discussed, and implementation experiences will then be discussed in more detail.

The term ‘transit oriented development’ was first coined by the American urbanist Peter Calthorpe in the 1980’s. While most of the TOD literature and experience is based in the North American context, the concept has begun to spread across the world to be included in urban developmental thinking in both developed and

developing countries with diverse urban contexts (Suzuki et al, 2013; Sussman and Gilat, 2002). A review of the literature highlights that the rapid increase in private vehicle use remains the primary driver for advocating TOD across all contexts.

Cervero (2006) argues that 'TOD is a straight forward concept: concentrate a mix of moderately dense and pedestrian friendly development around transit stations to promote transit riding, increase walk and bicycle travel, and other alternatives to the use of private cars'. While there is no set definition for TOD (Renne, 2005, Transport Research Board, 2004; Queensland Government, 2010), analysis of the available literature suggests that there are certain elements which have become relatively common. The literature highlights that the following have become recognised characteristics of TOD:

- an efficient, integrated and reliable public transport system;
- a high quality public realm which prioritises pedestrians and cyclists over vehicles and ensures high accessibility of the public transport station;
- a mix of residential, retail, commercial and community uses;
- medium- to high-density development within comfortable walking distance of the transit station (i.e. the TOD precinct); and
- reduced rates of private car parking.

Drawing on Wilkinson's (2006) analysis, highlighting that the principles underpinning TOD are aligned to South African urban policy objectives, it is argued that all of the above mentioned characteristics are critically important to the South African context. However, adaptation is required to ensure that TOD will be effective in achieving broader urban policy objectives. Part of this adaptation might require thinking through the inclusion of affordable housing options, as socio-spatial transformation is high on the policy agenda and income diversity is a prominent policy directive. There is evidence of income diversity becoming an increasingly important component of TOD internationally, but it does not seem to be a widely accepted characteristic. It is clear that there is much work to be done in thinking through how TOD could be adapted to best suit the South African context.

The international literature highlights that understanding the physical design principles of TOD, and their benefits, is relatively straight forward. What has emerged as arguably more important is understanding the many challenges which surround efforts to implement TOD. TOD outcomes have been disappointing when implementation issues have not been thought through and addressed. Land development issues, in the form of political, institutional, financial and stakeholder dynamics, are often argued to be the most significant barriers to TOD development (Suzuki et al, 2013; Sussman and Gilat, 2002, Ditmar and Ohland, 2004, Hook et al, 2013, Belzer and Autler, 2002). These issues are often the defining aspects of TOD projects, but surprisingly are seldom included in attempts at defining TOD principles. Thus it is advocated that these issues become more prominently incorporated into TOD understandings in South Africa. Sussman and Gilat (2002) as well as Suzuki et al (2013), in their analysis of TOD application in the developing world, highlight that these issues present potentially greater barriers in developing world contexts.

3 THE IMPORTANCE OF MULTIPLE STAKEHOLDER DYNAMICS IN TOD IMPLEMENTATION

The international literature highlights that the multiple actor nature of TOD implementation poses one of the greatest challenges to achieving effective outcomes (Belzer et al, 2004; Charles and Hale, undated; Suzuki et al, 2013). The misalignment of government plans and programmes is also a challenge (Suzuki et al, 2013), which arguably stems from multiple understandings of TOD and what it is able to achieve. Furthermore, private sector development and financing partners, along with community members, are essential actors in TOD implementation (Belzer et al, 2004). A lack of coherent understanding around what TOD is and how each respective stakeholder group plays a role has crippled many TOD projects (Belzer et al, 2004).

Duffhues et al (2014), Belzer et al (2004), Greenberg (2004) and Charles and Hale (undated) indicate that various stakeholders often have competing and contradictory interests which will need to be balanced and negotiated. Belzer et al (2004) presents the range of stakeholders to be considered in TOD projects in a North American context. Broadly, they include local government, public transport agencies, federal (national) government, developers/ financiers and the community. However, these stakeholder groups, as well as their respective roles, might vary across different contexts. Discrepancies in stakeholder understandings of TOD occur at a conceptual level, a strategic level and at a detailed implementation level. Engaging and developing greater consensus between stakeholders at all of these levels is vital.

At a conceptual and strategic level politicians have to deal with articulating decisions to constituencies which highlight benefits. Politicians who are key local government decision makers have to account to a broader city population. Often they are faced with making tough decisions given resource constraints. A forum which brings stakeholder groups together will have clear benefits for overcoming the short term pressures faced by many politicians. It will allow for a greater understanding of what decisions are possible in the short term, which advances the long term TOD agenda. A forum of stakeholder groups will further allow for conceptual understandings of the concept to be more strongly aligned and a shared vision developed amongst the range of TOD stakeholders, merging the understandings of financial barriers, institutional barriers and development processes.

At a detailed implementation level, transport systems by their very nature traverse a wide variety of contexts. This variety of contexts has been understood to be an informant of providing nuanced approaches to TOD from its original conception (Dittmar and Ohland, 2004), but also exacerbates the complexity of stakeholders engaging with TOD at a regional level. Each station precinct will bring with it a variety of stakeholders and issues. Duffhues et al (2014) highlight that the institutions and jurisdictions associated with a corridor development are wide ranging and complex. The many actors required to co-ordinate efforts to deliver the TOD projects make such a task difficult. Often the outcomes are reflective of political compromises which lead to ineffective TOD developments (Duffhues, et al, 2014). The stakeholder complexity and the idea that it varies in nature along different parts of a public transport route make the challenge of implementing localised TOD solutions at the site level that much more challenging.

Various stakeholders and their individual decision making frameworks come together differently around each public transport station. Depending on issues around land ownership, existing levels of development and current planning regulations, for instance. As an example, a station might exist in an existing suburban setting where land is divided amongst many individual owners of small land parcels. Property developers will struggle to assemble land efficiently in such environments, and will therefore generally seek alternate land for development. This issue aside, such environments bring a particular level of complexity as existing residents will have a particular view on what are the desired densities and mix of land uses (often seeking to protect the status quo of low densities and mono-functional residential areas). In contrast, the local authority might seek to facilitate increased densities and affordable housing, and the public transport agency might push for greater density to increase ridership (Belzer et al, 2004).

Contrast this scenario with a 'greenfields' site where one private land owner owns the majority of land around a public transport station. The local government as well as the public transport agency will be eager to develop land surrounding the station. The public transport agency might want to ensure that the land accommodates public transport users to increase total ridership (this might vary depending on the nature and affordability of the public transport mode). The local authority might like to see higher density development, the creation of quality public spaces and the inclusion of affordable accommodation developed on the land. Private developers might speculate on the value of the land waiting for it to increase, and delay development. When development finally takes place, developers seeking to generate maximum return from development might mean that the scheme caters for a wealthier population group primarily, unwilling to compromise on parking provision or focus on retail in areas where public transport serves poorer communities, and not generating the required mix of land uses to optimise public transport use (Belzer et al, 2004).

These two broad scenarios highlight how the different interests of various stakeholders come together depending on individual station precinct conditions. The rationale for having a single developmental vision is outlined by the NDP. Private developers and financiers should not isolate their practices from the broader socio-spatial and economic context in which they operate. Improving the equity, sustainability and liveability of South African cities will arguably have long term benefits for all urban development stakeholders.

Authors have argued that TOD success is dependent on the ability of stakeholders with diverse interests to collaborate in building a shared vision and understanding the roles various stakeholders will play in making decisions to realise such a vision. Of course compromises will need to be made, tough negotiations will need to take place, and mediation of power dynamics will be required. Trust will need to be built between stakeholders and a decision making framework which is transparent will be essential. Political leaders will need to articulate trade-offs, benefits and consequences effectively. Planning theory offers some guidance on a more communicative rational for decision making (Healy, 1993; Cornwell, 2008; Willson, 2001). For all this to occur, acknowledging the multiple actor dimension and engaging with stakeholders honestly and constructively, is essential.

This paper focuses on the multiple stakeholder issues surrounding TOD while acknowledging its position amongst a range of other issues. The next section provides a detailed discussion on the multiple stakeholder nature of TOD and the issues it presents in the case of Johannesburg.

4 STAKEHOLDER ANALYSIS IN SOUTH AFRICA: THE JOHANNESBURG CASE

South African literature highlights that a limited urban design-based understanding of the TOD concept has been adopted in urban policy and strategy. It is important to note that TOD has been understood from a policy perspective as a means to overcome socio-spatial challenges, and not explicitly to overcome automobile growth as has been the case internationally. This inherently means that adaptation of the concept is required. However there is no clear evidence of thinking around adaptation of the concept at both a broader conceptual level and a more detailed characteristics level. Nor is there any detailed publicly available information on strategies to overcome the many issues which have plagued TOD implementation internationally. To date no research has been conducted around the multiple stakeholder dimension of TOD in South Africa.

The most substantial and advanced effort to think through how TOD might be applied in South Africa has arguably occurred in the City of Johannesburg. The municipality has centred its urban development strategy on TOD corridors dubbed 'corridors of freedom'. The concept has become an overarching element of the Integrated Development Plan (IDP), the Integrated Transport Plan (ITP) and specific Strategic Area Development Frameworks (SAFs) have been produced along the three selected corridors in the city. A review of these documents highlights that the City has largely developed thinking around the narrow physical principles and not published strategy outlining how the many challenges associated with achieving TOD principles can be overcome. While spatial frameworks cannot be expected to engage with all of these issues it is argued that additional planning and strategy covering the issues which have the potential to impede effective TOD need to be developed to support spatial plans.

It is argued that while the 'corridors of freedom' undoubtedly represents the most advanced thinking of TOD in South Africa, understandings remain narrow relative to international experience. With regards to the focus of this paper, there is no published evidence of how the city is planning to engage with the multiple stakeholder dimension of TOD. While this paper focuses specifically on Johannesburg, it is argued that findings will be applicable for other cities in South Africa grappling with similar issues.

This section investigates the extent to which various potentially important TOD role players in the City of Johannesburg understand the concept. The method utilised to carry out the stakeholder interviews will be briefly discussed. Following which the results of the interviews will be critically discussed.

4.1 Stakeholder analysis method

First the possible Johannesburg-based stakeholder groups were identified by drawing on international literature and knowledge of the South African context. Following which, individuals representing stakeholder groups were identified and sent a set of broad questions which would guide a qualitative open ended interview. Initially a total of 15 people were targeted with letters requesting a personal interview. Of the 15 only 11 responded and 10 were interviewed. Representatives from both public sector organisations, as well as private sector organisations who were deemed to be prominent role players in TOD, were interviewed. This sample is not comprehensive and there are many other stakeholders whose views have not been represented in this research. Nine personal interviews were conducted while one interview was email based. The interview responses were synthesised according to the questions asked and the objectives of the research. Annexure A summarises the various understandings of the TOD concept as represented by individuals from the respectively targeted organisations and departments.

4.2 Interview analysis

The interviews highlighted that beyond the public sector stakeholders (besides two urban planners working for property developers) there is limited awareness of the TOD concept. While it might be argued that the term is less important than understanding the principles which underpin it, understanding the term allows all stakeholders to engage with where interests can be met, compromised or not affected at all.

4.2.1 Objectives

While it is clear that public sector stakeholders have better understandings of the TOD concept and have formulated ideas on how to achieve outcomes, the understandings and depth of detail varies across various departments and agencies with different agendas. It is clear that the City of Johannesburg officials understand TOD to be a strategic tool to breakdown apartheid geographies and achieve socio-spatial transformation. This however did not translate clearly into coherent responses on what needed to be done to achieve these objectives. Desired densities varied significantly both in quantity and measure. Public transport agencies drew on public transport system capacity to inform density, the planning department utilised UN-Habitat guidelines The Johannesburg Development Agency (JDA) referred to the SAFs which contained a unique density target. The Johannesburg Property Company (JPC) however did not display the link to socio-spatial transformation, rather the more traditional link with car usage reduction was made. The envisioned inclusion of affordable housing in TOD also varied as the planning department indicated that housing for the poor was the most important opportunity TOD presented, the JDA indicated that it was very challenging to reach the lower rungs of the housing market due to high costs associated with TOD, and a similar sentiment was shared by the JPC representative. The transport department indicated that affordable housing would be challenging to provide in certain areas where the market was geared towards wealthier people, taking transport to the periphery was in this case seen as more essential than housing.

PRASA, as a major public transport operator in South African cities, suggested that TOD presented a useful tool to maximise revenues from land holdings. Inherently, this presents a different understanding to TOD in that it is less about driving socio-spatial transformation and more about ensuring revenue maximisation from land development. PRASA linked density understandings to rail transport ridership targets but did not have an exact indication as to the desired densities. Their particular TOD understanding meant that they had not really considered residential uses and focused on commercial property.

Besides the private developer representatives from Investec and Interprop, who were urban planners by profession, there was a general lack of understanding as to what TOD was. This perhaps highlights the value of multi-disciplinary teams in urban development projects. Financiers showcased a particularly weak understanding around what TOD is and what it could achieve. The planners working for property developers demonstrated a varied level of understanding, but none had any real sense of the detailed characteristics required for TOD in Johannesburg.

4.2.2 Respective roles

The details of how TOD will be achieved vary considerably across different departments and agencies in the city. While each department is thinking about the concept generally, it seems there is an opportunity to think through their respective departmental roles more thoroughly given functions and mandates. Without acknowledging that the city departments' mandates alone perhaps lend themselves towards achieving a different objective through TOD there is the potential that integration will always remain poor. PRASA have developed strong perspectives on development opportunities around certain stations: through a station typology guide. It is here that they argue that the city is a key partner to ensure the correct plans and development frameworks are in place to support the development of rail station precincts. This was supported by the development planning department. PRASA highlight that they only own limited amount of land around the precinct and it is up to the municipality to ensure that the remaining land development is facilitated.

Intersite indicated that their role was to attract private sector investment, as this is essentially their approach to TOD. However, the city representatives did not mention their intention to attract and facilitate private sector development. It seems that property developers are interested in investigating the extent to which public transport infrastructure proximity can increase value, but remain concerned about reducing parking. This is where they see the role of the public sector in ensuring quality and expansive public transport systems. It seems as though property financiers are unsure of the role they can play in a TOD agenda at present.

4.2.3 Challenges

The results from the interviews illustrate that public sector individual understandings of the challenges facing TOD are aligned to some of the international insights and are more prominent than those reflected in policy and strategy documents. However, the perceived challenges are not homogenous across all interviewees, and there is no clear alignment of what the most pressing challenges are and how those are to be overcome. Of particular interest is the extent to which representatives portrayed the most important problems as those that were outside their direct responsibility or influence. The transport department drew on land use planning and property

development challenges, the planning department indicated parking, vehicle use and perceptions about public transport as major challenges, The JDA identified urban management, political perception as critical issues and the JPC identified car use as a challenge.

The PRASA representatives interviewed highlighted the lack of integration between the cities and themselves as the most major obstacle to achieving TOD. Intersite specifically highlighted that reactive planning from municipalities presented a major challenge. There is a clear deficiency in terms of dealing with the challenges effectively, this is perhaps the result of a lack of strategy development targeting the land development issues which underpin realising physical TOD principles.

Property developer respondents identified challenges around density, linking this to parking provision requirements which developers are not willing to reduce. According to them this reduces the feasibility of achieving very high densities. The most prominent issue private sector representatives mentioned was the quality of public transport. It was evident that throughout the private sector there is no confidence in the ability of the public transport system to provide safe, reliable services across the entire city. Thus it was hard for them to imagine properties built primarily for public transport access. Financiers were generally concerned about the feasibility of such projects and believed that currently they are simply not bankable.

5 RECOMMENDATIONS AND CONCLUSION

Private sector financiers and developers remain concerned about the extent to which the public transport system will be reliable, safe and extensive enough to reduce car dependency. Without significant confidence in the public transport system the private sector remain reluctant to invest in development which relies on public transport for access and mobility. It is clear that developing principled TOD will require developers to take on significant risk. At a time when private car infrastructure remains superior such a risk does not make sense from a developer perspective. It is the role of public sector and public transport agencies to focus intensely on providing 'car-competitive' public transport systems which instil confidence that public transport systems are the access and mobility networks to invest in. This will require trade-offs around private vehicle infrastructure investment and these will need to be understood and clearly articulated.

Furthermore, there is general concern amongst the private sector as to the bankability of the strict TOD principled projects. Bankability refers to whether a project is able to pass the checks and processes of banks in approving finance. Of major concern is the ability to underwrite such projects and ensure confidence in the rate of return on investment. With the relatively new and complex nature of TOD projects, such projects are often deemed to not be bankable. As such it is worth exploring alternate funding sources and arrangements for TOD projects. Experimenting in accessing financing, assembling land and piloting development will be essential to getting principled TOD off the ground. Showcasing the benefits and challenges will provide significant lessons for all stakeholders. This will require far greater collaboration in conceptualising, planning and implementing TOD than is currently taking place in Johannesburg and arguably elsewhere in South Africa.

While it is acknowledged that this will not be straight forward and will require negotiation and compromise, it is argued that it is essential to being able to achieve effective TOD outcomes.

This insight in the South African context highlights the conflicting interests which various stakeholders bring to the table. Furthermore it is evident that there is awareness of the challenges which face TOD but very limited thinking has taken place around how to overcome these issues. The lack of alignment in TOD thinking is a major obstacle present in South African cities. While the paper has by no means captured a comprehensive stakeholder perspective it does begin to provide important insight into how the TOD concept is being thought through by various stakeholders in a South African context. Local governments need to provide frameworks and associated strategies through which competing interests can be resolved. From this indicative research it is clear that much work needs to be done to engage with stakeholders around what TOD means, what is being attempted and how it can be supported.

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Annexure A City of Johannesburg TOD stakeholder understandings

Stakeholder	TOD understanding	Objective of TOD	Role	Major challenges
JDA (Municipal development Agency)	Huge potential to achieve policy objectives- 'TOD is everything'.	Restructure the city	Manage implementation of housing and infrastructure incl. public realm.	Existing residents objections, Urban management, planning process, possible gentrification
CoJ Development planning department	An exciting opportunity to reduce car use and improve inclusivity	Restructure the city and reduce reliance on cars	Policy proponent to entrenching TOD and investment co-ordinator	Funding of 'over and above' aspects, poor stigma associated with public transport use
Johannesburg Property Company	Exciting development option for the few station areas with market 'pull'	Reduce reliance on private vehicle	Seeing minimum requirements of TOD on city land, demonstrating 'no car' solutions	Car Dependence and Parking
CoJ Transport Department	Transformation tool to breakdown socio-spatial divide	Restructure the city and reduce reliance on cars	To provide high quality affordable public transport and pedestrian prioritised public realm	Better return for gated estates, private car reliance and aspirations
PRASA	Differs with station type and precinct context	Tool to achieve increased ridership along the corridor	Co-ordinate plans and integrate station design with surrounding area	Integration of institutions

Intersite	Increased densities around mass public transport	Tool to achieve greater revenues for rail operators	To attract private developers to PRASA station adjacent land	Certain station areas will simply not attract development
Standard bank	No real understanding	N/A	N/A	Bankability of projects, Basel III report
Investec Finance	No real understanding	N/A	N/A	Parking, Feasibility and public transport service quality
Investec Property	Aware of the concept but in a TAD manner	Extracting value from public transport access	Develop higher density properties along the route	Parking, feasibility and public transport service quality
Affordable housing financier	No real awareness of TOD concept	N/A	N/A	N/A
Interprop (Property developer)	Opportunity to maximise potential of existing infrastructure	Tool to drive redevelopment	To contribute to the responsible social and economic development of the city	Development approval processes NIMBYism ¹

Note:

1. NIMBY is the acronym for the 'not in my back yard' syndrome, referring to locally organized resistance to adjacent land use developments that may be supported elsewhere in the city.