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Integration and Spatial Transformation of South African Cities

Paper 1: Realising social and economic integration in South Africa's residential property markets

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1 Introduction

South African cities have been affected by a particular form of segregated, decentralized planning that has resulted in disconnected and dislocated areas within the urban system. The last four decades of urbanization, influx, changing markets, infrastructural constraints and unmanaged private forms of development have all affected city systems. As a result, our major urban centres are largely characterized by spatial, social and economic disparity and inequality.

To address these issues and to create integrated cities requires numerous interventions from government. In the past, however, such interventions have often been limited by capacity, resources and narrow assumptions of what is required.

This paper is the first in a series of four papers that together look at how to use public property to realise value towards the integration and spatial transformation of South African cities. In this paper, an overall approach is set out, focusing on the relationship between value realisation of value, integration, and the creation of functional urban systems. The paper establishes a framework where value realisation is defined in economic, social and financial terms. Section two scopes the city, highlighting the integration needs and opportunities in relation to different settlement types. Section three then posits the overall approach against the different settlement types, considering how each form of settlement can be made more 'valuable' through targeted strategic interventions. The three annexures to this report provide a review of the urban systems in Johannesburg, Tshwane and Cape Town.

The intention of this paper is to understand the concept of integration; to identify the factors that are prohibiting or limiting it; and to help cities use this analysis to inform effective strategies and interventions.

With the background set out in Paper 1, Paper 2 then highlights key instruments, approaches and strategies to achieve functional and integrated South African cities. Six integration strategies are explored: transit orientated development (TOD), land development incentives, inclusionary housing, the use of public property as an instrument for transformation and integration through value realisation, a shift from property management to asset management, and the process of realising value. The third section of the paper then explores the development process and approach that applies.

Paper 3 then explores in detail the release and development of public property as a tool for integration. The paper examines property portfolios owned by government that can be used to achieve functional and integrated cities. It also broadly assesses the approach being used to manage these property portfolios at different levels of government and how this impacts on property development for transformational goals. It reviews the potential constraints and issues that are preventing or limiting the use of public properties. The paper provides guidance on how to realise value from public properties using a development approach which is based on determining best use value and ensuring synergy between the various parties responsible for development.

The fourth paper in the series then explores case studies in the cities of Cape Town (the Tafelberg Site in Sea Point, the Conradie Hospital Site, and the Athlone Power Station), eThekweni (Cornubia and Bridge City), the Johannesburg (Jabulani, in Soweto). These case studies provide examples of different approaches and demonstrate how these approaches are determined by the intended outputs. They illustrate the importance of ensuring accountability and the alignment of priorities and objectives through the development process. The case studies are also used to evaluate key factors for success and provide a general set of guidelines on required processes, systems and capacities to ensure implementation and the achievement of intended outcomes.

2 A focus on value realisation and creating functional cities

Since the late eighties and nineties, the segregated decentralized nature of South African cities has been further complicated by growing sprawl and the creation of numerous decentralized nodes moving further away from the core. In addition, the scale of the demand for low-income housing resulting from a long history of inadequate supply and massive influx has placed enormous strain on the existing systems, land, infrastructure and services. It has also put pressure on the various agents responsible for providing housing and services, to do so speedily and at scale. The result has been, in most cities, a mass housing delivery approach on the periphery of urban areas where land is available and scale can be achieved without NIMBY¹ or physical constraints. Despite the consistent acknowledgement that this approach is inadequate, and often perpetuates spatial dysfunction, it remains the dominant form of delivery. Meanwhile South African cities demonstrate some of the lowest densities in the world (*although this is shifting with the introduction of public transport and growing corridor investments*) and as a result our cities experience poor urban efficiencies.

There is an obvious need to shift focus to the densification of the core centres and corridors (our Central Business Districts (CBDs), inner cities, immediate suburban areas, and the secondary decentralised nodes that are well integrated and connected to the centres). At the same time, there is also a need to consider how best to integrate those peripheral areas into the overall urban systems of cities.

To counter the trend of sprawl there has been a growing emphasis in government policy and programmes on increasing the number of low income households into the core of the city and strong economic nodes. This approach has been largely driven by a strong demand for housing, and in instances where it has occurred (e.g. Johannesburg, Tshwane and eThekweni inner city areas and secondary economic nodes) it has proven to be relatively effective in starting to create greater access to the cities' social and economic wealth. However, this approach has been limited both in actual delivery and as a strategy by virtue of its mono-focus on housing delivery which often neglects to consider how best to create a more functional urban system.

2.1 Understanding the concept of value

While the notion of land value is fairly freely used, what this means in practice, and for the different actors (state, private and household), requires careful consideration. There are four broad components of value worth considering: financial, social, economic and functional².

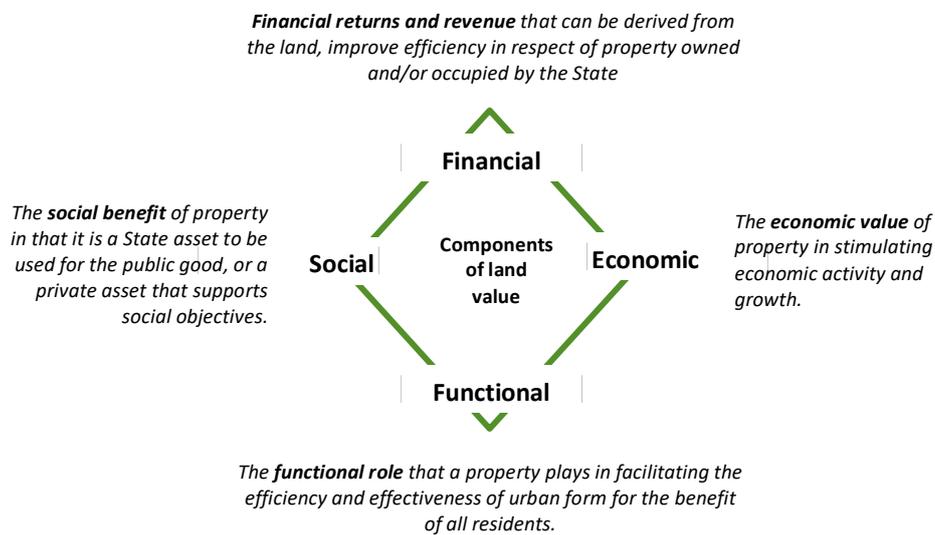
- The most straightforward is the **financial value** of land and in this, the ability to leverage a financial return or resource. Land can be sold for a price, or finance can be leveraged against the value of a property. The price realised, or the amount of finance that can be leveraged, is a function of the financial value of land – what the transactors are willing to pay or invest.
- **Social value** relates to the extent to which land is valuable as public good, either as a site for a public service (a school, church, community center, etc.), or as a contributor to a sustainable human settlement – someone's home, from which they can grow their family and participate in society.
- The **economic value** of land relates to the contribution it can make to economic development. This is often shaped by the rights assigned to a piece of land, but may also relate to its locational benefit – along a transport route, for example.
- Land's **functional value** relates to the role that a particular land parcel plays in facilitating the overall functionality of a city: a road, for example, might connect a low income residential dormitory suburb with

¹ Not In My Back Yard

² The Government Immoveable Asset Management Act (GIAMA), 19 of 2007 defines "best value for money" as "the optimisation of the return on investment in respect of an immovable asset in relation to functional, financial, economic and social return, wherever possible"

an area of economic opportunity; a municipal property in a section of a city may improve residents' access to municipal services and thereby improve the payment of rates.

These four components are illustrated below



Value realisation refers to the impact an intervention has on increasing the productivity of a city, decreasing the cost of accessing opportunities for individuals and increasing the ability for communities and individuals to participate in social and recreational activities. As illustrated, value is derived in *financial* terms in the form of increased land values and therefore the ability of households to leverage finance or realise equity from property they own, and of the city to leverage property taxes on property they govern; in *economic* terms in the form of jobs, activities and opportunities; and in *social* terms in the form of access to amenities, good schooling and health services etc. Focusing on value realisation in each of these three areas can result in far greater benefits to the users and occupiers of cities whilst addressing the demand for affordable housing.

Cities are 'ecosystems' that operate on multiple levels and are only as effective, functional and efficient as the systems that frame their operations. The approach to integration needs to stem from a broad understanding of how to increase the functionality of the city as a whole – that is, the ability of the city to perform a series of roles and/or functions that together result in economic, social and financial 'value' at a city-wide or local level. Creating functionality at all levels – regional, nodal and neighbourhood or settlement level – increases the ability to create social and economic integration.

2.2 Levels of functionality

The level at which interventions take place influences the capacity of each tier in the city to either transform or perpetuate the imbalance in the urban system. The premise of interventions must be to deliver 'value' at both a city-wide and local level. Three levels are considered in this report:

- i. **Functionality of a city or region** refers to the overall efficiency and productivity of that city or region. Functionality refers to the ability of that city to perform a series of roles and / or functions that results in economic, social and financial 'value' at a national, regional or local level. This requires strong economic drivers, efficient systems of delivery (public and private) and effective government. It requires interconnections throughout the city or region; synergy of activities and uses; appropriate densities; high standards of overall service delivery and infrastructure; efficient spatial configuration ensuring maximum access and movement; and capacity for change. It also, importantly, refers to social and economic transformation and inclusion which allows cities and regions to function

optimally. When considering an intervention into the urban system, it is essential to assess whether that intervention will contribute to the overall effectiveness and functioning of a city.

- ii. **Functional integration *within* nodes** in relation to spatial design and services, uses and activities, demographics and densities. Functionality of nodes is key to creating viable urban systems by ensuring convenient movement; easy access to facilities and resources; social exchange; dynamic shifts and changes in line with needs and demands; and robust local economies. The 'value' experienced by users of efficient spaces reduces actual costs to households, increases health and social well-being and builds strong communities.
- iii. **Integration *between* current nodes, areas and sub-regions** into the overall urban system and economy. This refers to the connections and integration of areas to other nodes and the linkages and synergies between economic, social and financial activities and resources.

Depending on the particular land area and the performance of the local property market, a city can use any one or all three of the approaches referred to above to drive its socio-economic developmental goals. Government has several instruments with which it can accomplish integration, value realization and functionality (as defined above). These include planning rights, infrastructure, regulations and public property.

As a key part of a city's toolkit, public land - whether it is available for development or as part of an infrastructure programme – can also be used to shape land uses on other, private properties. Cities need to consider their land within the scope of their integration goals, determining the best use of public land and properties. This requires cities to consider how to establish value (returns in the form of social, economic, financial, and functional outputs), actual costs (immediate and longer term) and the viability of different strategies.

3 Scoping the city: Integration needs and opportunities in relation to different settlement types

Cities consist of diverse areas or 'settlement types' that are created from government policies, public demand, market pressures, the availability of resources and the various dynamic responses to these. These have given rise to particular housing markets that, in some instances, have perpetuated segregation and 'disconnect', while in others have created opportunities for social integration.

In addition, different areas have different integration needs. For example, existing peripheral settlements need to be integrated back into the functional urban fabric. Inner cities and economic nodes pose ideal opportunities for mixed housing, which in turn needs to be supported by social infrastructure. In addressing these integration challenges, cities might use public land to:

- Provide the required infrastructure for an increased number of households;
- Deliver economic opportunities;
- Provide mixed-use and high-density nodes; or
- Deliver affordable housing as part of a strategic intervention.

The form of settlement, the needs that arise and the transformational goals of government will define the best use options for the public land that is available.

Most of the big cities in South Africa comprise a limited number of settlement types. Although the precise nature of each settlement varies from one city to another, there are similarities across cities for each settlement type, in terms of the main characteristics and issues relating to integration and transformation. Common strategies and interventions can then be developed for each settlement type, and adjusted at the local level, given local issues and context.



Masiphumelele and Lake Mitchell, Cape Town. Quartz Africa, 2016
Drone Images of "Architecture of Apartheid" in Cape Town' by Lynsey Chutel and Lily Kuo

Six common settlement types are described below:

- Peripheral settlements / developments
- Inner cities and economic nodes
- New middle-income housing developments
- Old Townships
- Areas with mixed income
- 'Old wealthy / white suburbs'

3.1 Peripheral settlements / developments

3.1.1 Character of the settlement

Peripheral settlements and developments are often severely constrained by their distance from economic activities and city resources and services. These settlements are isolated and marginalized, preventing communities from accessing economic opportunities and social resources. In addition, they have poor levels of infrastructure and services, social amenities and economic opportunities. They suffer from the highest levels of poverty in the metropolitan areas and lowest levels of employment and education.



By way of example Olivenhoutbosch in Tshwane and Diepsloot in Johannesburg are peripheral areas with single and distant routes connecting to the centre of their respective cities and with limited access to the large secondary nodes (Centurion and Midrand respectively).

3.1.2 Integration challenges & opportunities

Although the peripheral nature of these settlements limits the ability to which they can integrate with the city, it is useful to assess them as areas in a region or province as opposed to just a city. This provides a regional perspective and illustrates opportunities for broader linkages and connections. Increasing linkages to growth trajectories of cities is also a proviso to integration. A lack of integrated internal design and mix of uses creates inconvenience, increases the costs to individuals



and reduces chances that these communities will participate in the regional economy.

There are settlements that are substantially further from the centre of the city and from secondary nodes (e.g. Orange Farm and Doornkop in Johannesburg; Winterveld and Shoshunguve, in Tshwane; and Atlantis in Cape Town). They are large, poor and have little economic potential. In these cases, consideration should be given to how to provide greater access to general facilities and social resources, while also supporting land use diversification within the settlements and their immediate environments.³ The development of commercial and retail in Lenasia, for example, has impacted positively on the Orange Farm community. Public land in these settlements is often available and can play a role in providing for critical services and infrastructure. Housing development would be less of a priority than commercial and social uses in these settlements.

3.1.3 Possible strategic interventions

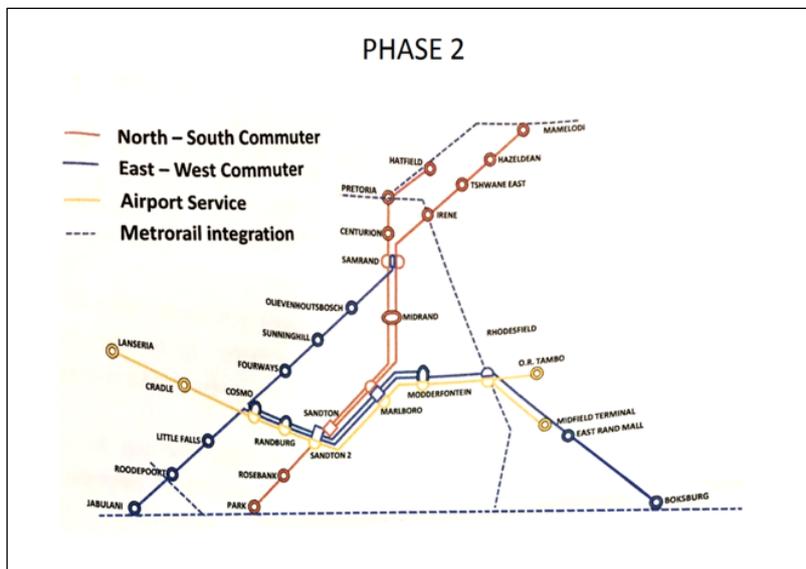
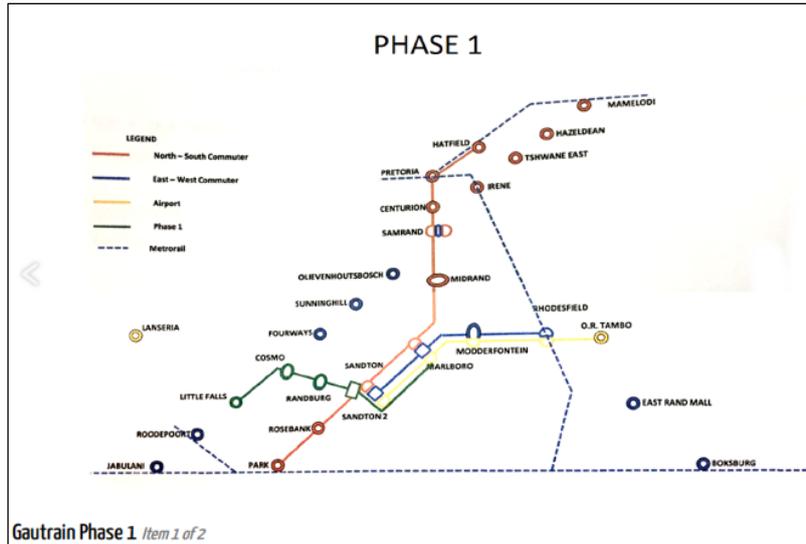
Access to a number of secondary nodes could make these areas more functional and provide greater access to economic opportunities, and in so doing, increase the viability for sustainable living and the overall value of the area. Active interventions into the adjacent areas of transport nodes and routes through land acquisition or holding and consolidating public properties could assist in the development of integrated housing models along these new linkages. Connections between secondary nodes should be seen as additional TOD opportunities (as opposed to the TOD approach being limited to the main routes from central economic nodes to secondary nodes through radial networks).

In the case of Diepsloot and Olivenhoutbosch, creating a TOD route that cuts across the northern section of Johannesburg (west to east) would improve the viability of the settlements as well as the burgeoning developments along the R115 (north/south route) which would substantially increase the value of the city's economic efficiency and functionality and improve the living conditions of residents in that region. In this case, public property may be less of a strategic tool than transport, although the development of public property in the area of intervention could support it and increase its effect.

³ There is an interesting phenomenon in Orange Farm where the majority of people commute daily as opposed to seeking weekly accommodation at their places of work. Although Orange Farm remains one of the poorest communities in Johannesburg, second to Diepsloot, there has also, up until recently, been a history of good schooling and far greater social cohesion than is present in areas where there are more transient and 'new city arrivals' residents e.g. Alexandra, Diepsloot and the Inner City.

Diepsloot is located on the periphery on Johannesburg but close to the centre of the province and in fact the corridor that connects the major nodes at a regional level. The planned expansion of Gautrain will connect Jabulani, Roodepoort, Cosmo City, Olivenhoutbosch, Sunninghill, and Fourways (map) has the potential to transform the various peripheral areas along this ring into the local and regional economy. This linkage could have a profound effect on the viability and integration of Olivenhoutbosch and Diepsloot into the overall urban system if conscious investments are made in connecting them to these routes. Although Gautrain may be an expensive transport option for poor communities, it nevertheless provides a strong anchor for a TOD that will dramatically increase the overall spatial linkages and synergies.

See adjacent images of Phases 1 and 2 of the Gautrain development.



3.2 Inner cities and economic nodes

3.2.1 Character of the settlement

Inner cities and core economic nodes are the historic economic base of cities. Although there has been substantial capital flight from these centres over the past decades, they remain relatively strong economic nodes with changes in the size of businesses and office grades located within them. Many still house some major economic industries. They are generally characterized by high densities, a mix of uses (although not always in the same nodes), are highly gridded and are usually where the city’s biggest transport hubs are located.



3.2.2 Integration challenges & opportunities

Inner cities and core economic nodes have been seen by all tiers of government as critical centres for social and economic integration and for housing delivery. This has led to major investments and policies such as

urban development zones, social housing areas, urban management partnerships and the location of government offices.

In addition to government's response to the housing needs in these centres, the informal market has played a substantial part in creating a housing or accommodation supply outside of a regulated and formal system. Depending on the location, available infrastructure, and affordability, these informal responses have provided diverse forms of accommodation - from backyard shacks to shared facilities and informal settlements through land invasions. Specific markets have been created in areas of higher density and generally decaying (but valuable in the informal housing market, largely because of location and good infrastructure) stock resulting in slumming and overcrowding. This market is particularly strong and active in the significant transport nodes and areas with diverse economic activities and opportunities.

While the informal market offers a very real and innovative response to particular segments of demand, it is also often characterized as insecure accommodation, highly exploitative, overcrowded and unregulated in terms of safety, health and security. Although there is an impression of low yields in this market, there is evidence of very high yields with most costs being externalised to the public or tenant (illegal connections, lack of internal maintenance etc.) The value realised in these areas is often dependent on low formal property values, which in turn limits the sustainable management of urban environments.

Pockets of 'stability' have begun to emerge where strategic nodes have benefited from new and innovative forms of residential investments resulting largely in lower income rental accommodation. These investments have allowed for a formalisation and regulation of the residential market (thus creating security of tenure, as well as safe and well managed accommodation) whilst providing stock for a lower income market. It is worth noting that these nodes are often well integrated into the overall region, allowing for greater levels of access and proximity to wealthier residential and economic nodes, and as such are an important form of integration. Where there is greater formalisation of these various markets, investment increases in the provision of housing units as well as in the urban and social environments.

These new forms of rental housing delivery create stable and sustainable neighbourhoods whilst changing the demographics and social dynamics of areas. A similar trend has also occurred in properties surrounding tertiary education facilities where student accommodation has been a very significant form of investment into areas that were in a state of decay. Braamfontein is a useful example because the forms of accommodation that are provided vary in typology and rental, thus accommodating diverse income groups.

The effect on Braamfontein has been an overall upgrade in the public environment and in the economic value of the node. Although this may be considered a form of gentrification, it is vastly different from the introduction of higher income earners that results



The Johannesburg Inner City and certain decentralised nodes in Greater Johannesburg, such as Randburg and Roodepoort, have seen a very significant growth in this housing supply. This is largely the result of a high demand that sits above the subsidy income levels. Although it is often considered as missing the mark for most households, it must be acknowledged that this market (rentals from R3500-8000/month) has historically not been catered for by government or private suppliers and so this new trend is significant in transforming these areas.



in a general increase in living costs and where affordability becomes substantially reduced to a high-end market only.

Social housing institutions have also had a large impact in these nodes with the creation of stock for households within the subsidy bracket. Often the costs of these are absorbed by a number of parties (national government through subsidies, local government through land and services and soft loans from various private entities).

In the Joburg CBD, investments have been made by certain private developers of rental stock into parks and schools for the increased number residents but there has been an inadequate response by government in providing these amenities and facilities. The result is poorly managed and unsafe recreational spaces, 'fly-by-night' schools, unregistered creches etc. There has also been a substantial impact on the urban environment given the large scale change of use from commercial to residential that has often not been catered for in terms of service delivery.

There is a strong contestation between the formal and informal house market suppliers which is reflective of the actual costs vs the affordability levels of households coming into the inner city of Johannesburg. 'Formal' developers require 'cheap' buildings in order to cover the real costs of construction. Management and maintenance of these buildings is high and there is an additional cost of managing the urban environment in which these buildings are located. 'Informal' suppliers use decayed buildings to accommodate large numbers of people at densities above what is permitted. They generally 'externalise' costs i.e. services are often obtained from illegal connections, public spaces are used for refuse, there is no maintenance of the building. This results in costs being at the expense of the individual 'tenant' or municipality or public in terms of inconvenience and lack of safety. The continued existence of the informal market is due to the lack of supply of housing stock for the very low end of the market.

The benefits of these new markets have resulted in savings not yet fully calculated - reduced transport costs and subsidies, an increase in economic activities (retail and services) from this new consumer base and in many instances the introduction of a residential market in declining commercial areas that has helped redefine the role of these areas.

A concern is the supply of adequate social amenities for a growing family market into these highly dense areas that were largely built for commercial purposes. The result is, in many instances, a decline in the state of the urban environment. This trend is clearly evident in many CBDs in the country.



3.2.3 Possible strategic interventions

The strategic interventions in these areas could include:

- Provision of social services and amenities to accommodate the growing number of families;
- Urban management, which is critical in highly dense and mixed use areas;
- Use of public land to provide the necessary public space and social services required for sustainable neighbourhoods;
- Provision of subsidised residential space where the markets operating are above the subsidy levels; and
- Strategic interventions that may solve problems specific to areas (parking, informal trading markets, ablutions, police stations, etc.)

3.3 New middle-income housing developments

3.3.1 Character of the settlement

The larger scale formal and medium density commercial housing suppliers have delivered new stock in areas surrounding secondary nodes in many South African cities. These developments cater largely for middle and lower-middle income groups, first-time homeowners and young families.



Increasingly, developers are including forms of social and lower-income housing options (gap or missing middle options) in these developments. Riversands (Johannesburg), Cornubia and Bridge City (eThekweni) are cases where this is occurring on private land. These differ from the larger scale public housing developments in their mix (i.e. number of lower end housing) and reflect an interesting trend of the market becoming an important supplier. These private developments seldom provide fully subsidised developments, but instead often perform the role of providing a wide range of housing options starting from just above the subsidy level.

Large-scale high end residential estates have also become a norm in most cities. These are in close proximity to major transport routes and along development trajectories of cities but are often on the periphery of cities. These developments are gated, exclusive and have a lifestyle appeal providing all forms of activities (schools, retail, health, recreational) for those residents

3.3.2 Integration Challenges and Opportunities

Private developments that are including affordable housing into the mix of options are often located in areas adjacent to lower income areas and provide an important 'link' between these communities and middle-income families. These developments begin to redefine sub-regions and, as long as there is actual connection, play a crucial role in integrating existing settlements, e.g. Riversands in Johannesburg is adjacent to Diepsloot and Steyn City and is providing low income market housing as well as high income housing. In some of these developments provision is made for social and educational facilities, open spaces and economic activity, all of which contributes to the sustainability of the node and sub-region. These forms of developments are beginning to make an important contribution to integration in cities and are often better structured and interconnected to the overall urban system than government housing projects.



The large-scale gated estates make spatial connections and integration impossible. They create holes in the urban system that are difficult to transgress and separate communities into enclaves. This separates communities further and prevents integration, access and transgress across regions and nodes. These also separate uses, making lifestyles dependent on private transport to economic nodes.

3.3.3 Possible strategic interventions

There are opportunities to partner with private developers to ensure that the provision of subsidised housing is catered for in these large-scale developments. Provision for social services is also required to ensure sustainability of these communities. Connections and integration into the sub-region and broader node is critical and should be a requirement in these forms of developments.

To counter the negative effects of the large-scale higher income estate developments, cities need to consider the following when reviewing new planning submissions:

- Public road networks transgressing these developments;
- The mix of housing provided by these developments;

- The linkage these developments have to economic activities in the region and the connection to these;
- The design of these estates, which in most instances has limited grid and access; and
- The number of points of entry.

However, where these developments already exist, opportunities to integrate with the region remain limited and consideration could be given to increasing points of entry, assessing opportunities for transgressing routes and requirements for increasing internal public transport servicing the developments.

3.4 Old Townships

3.4.1 Character of the settlement

These settlements are the original townships established at the time of the initial forced removals and are based on a single use, grid design with limited access and egress. Historically, these areas had few social amenities, retail options and economic activities and the housing was monotype and small. Basic infrastructure was very poor with gravel roads, no electricity until the 1980's and bucket systems. These areas continue to suffer from a lack of access to good social services and especially schools, have poor service delivery and infrastructure and limited connector routes to adjacent communities.



A few of the older township areas in certain provinces that, in today's terms, are relatively close to urban centres, have begun to transform. This *transformation* has largely been in terms of income and value, rather than in racial terms, and has been due to public investments in infrastructure, increased choice in public transport, the transfer of housing and private retail investment. The *integration* of these areas has also begun to occur through multiple connections with primary and secondary economic nodes in the broader region.

3.4.2 Integration opportunities and challenges

One of the results of this increase in value is an increase in the number of black property developers who are purchasing sites throughout these areas and building small flats for rental. The densification of these areas is supported by public transport routes such as Rea Vaya, the BRT line in Johannesburg, MiCiti Bus in Cape Town, well supplied taxi routes, upgraded public open spaces and new cultural and retail amenities.



An important observation is that the transformation in these areas is largely the result of public investment made over a long period of time into public infrastructure and spaces, and is therefore limited nationally.

It is, however, an important example of the effect of creating functional sub-regions and nodes and demonstrates how this can lead to greater economic empowerment of residents and a greater ability of these residents to function in the wider metropolitan area. Transfer of housing also has played a very significant role in this transformation.

3.4.3 Possible strategic Interventions

Most of these settlements continue to have limited economic activity and investments. To stimulate development, public investments into the general infrastructure, the creation of community facilities and open spaces and the provision of different schooling options will shift and transform these areas into more functional communities and settlements.



Increasing connections and transport routes to economic nodes throughout the region is also a means of increasing opportunities.

Although retail is growing, this is limited to strip malls that are disconnected from smaller neighbourhoods. Using public land to provide for well managed informal markets or smaller retail stalls could increase the economic activities of local areas. Major transport hubs (which are public properties) are often very badly managed, unsafe and derelict. These hubs have substantial potential (commercial and social) by providing commuters with a range of services and goods. Upgrading and managing these hubs could be a major intervention.

3.5 Areas with mixed income

3.5.1 Character of the settlement

There are many instances where informal and low income residential areas have arisen, been developed or have historically existed in close proximity to, or in wealthy neighbourhoods (e.g. Hout Bay and Imizamo Yethu, and Westlake Village and Tokai / Constantia in Cape Town; Alexandra and Sandton, Diepsloot and Dainfern in Johannesburg). This proximity should have allowed for easier access to economic opportunities, but this has not transpired and social and economic integration remains limited.



3.5.2 Integration challenges and opportunities

The examples cited above make it clear that spatial integration in and of itself is inadequate. One of the greatest limitations to integration within these sub-regions is the design of the road networks and transport routes that ensures a strong barrier between these communities, or natural barriers such as rivers or vleis or a lack of common social and communal spaces and facilities. The other obvious limitation is economic disparity which in turn affects or limits common use of social facilities (schools, recreation centres, clinics etc) by the different communities in the area.

3.5.3 Possible strategic interventions in these areas

In most instances the most important form of intervention required in these settlements is large scale public investment into infrastructure, township establishment and transfer of ownership of housing units in the poorer areas that can begin to increase the value of these property markets, allow for great stability and security and a more cohesive sense of community, and lessen the visible and stark distinction between the neighbourhoods.

In addition, these areas need common spaces (parks, recreational, commercial) as well as well managed public schools which allows for more interaction and common use. Direct interventions using planning can be employed to 'cross-subsidise' investments into public spaces and into the creation of diverse housing options. Public land in these cases would need to be considered as potential links between the communities

e.g. mixed developments as in the case of the large scale private developments referred to above or very innovative public spaces and facilities e.g. Soweto Theatre, and / or road links.

3.6 'Old wealthy / white suburbs'

3.6.1 Character of the settlement

A dominant feature of South African cities is the racial composition of wealthy neighbourhoods and areas. As indicated above, there are some instances where this is shifting and changing, predominantly where there is a greater shift in the local economy. However, wealthy areas remain predominately white, largely because of the structure, nature and history of the South African economy.



The 'old wealthy neighbourhoods' have low densities, a high level of service delivery and social amenities, although these are not always used by the local residents. The areas are well connected into the cities' networks through numerous connections to arterials and highway systems. They are well serviced by a range of retail outlets and are close to commercial and economic activities. These areas are often located in close proximity to CBDs and areas experiencing demographic and income changes. The interconnection between these neighbourhoods and the rest of the city allows for easy access. This is demonstrated with the large number of children being transported to schools in these areas. The old neighbourhoods often have good grid systems for maximum efficiency and have traditional high streets which continue to play an important role in forming a core of convenience.

3.6.2 Integration challenges and opportunities

These areas generally have low densities which limits the number of people that reside in the core and areas adjacent to the strong economic centres. Given that the value in the areas being referred to is high in financial, economic and social terms, there is a definite need and opportunity to maximize the land yield through higher densities. This will require incentives and amendments to planning requirements.

There is a growing densification in these neighbourhoods, especially along the highways and arterials and in the subdivision of large sites for cluster housing, which poses opportunity for strategic interventions by government either using its land or planning mechanisms to begin introducing a wider range of housing options. There is also a growing mixed income housing in these neighbourhoods resulting from the densification (although this does not include affordable housing).

3.6.3 Possible strategic interventions in these areas

The interventions in these neighbourhoods can include using public property for mixed residential, or transport hubs. Densification and inclusionary housing can be driven through planning requirements and incentives. It is also important to retain, upgrade and manage the existing public infrastructure and amenities which can be used by people working in the area, those that live in close proximity and potentially new residents where mixed income housing occurs.

The traditional high streets in these neighbourhoods are also potential areas for a greater mixed income housing.

3.7 Issues arising from different settlement typologies and their effect on integration

The types of areas identified, the descriptions and the analysis provided above is not extensive. As mentioned, this analysis aims to illustrate the different urban forms and settlements that can co-exist in an urban system and how each of these has different issues in respect of transformation and integration, that require different responses and interventions. The review also attempts to present insights into constraints to integration, changes that are occurring and opportunities that arise for transformation and integration.

At the same time the interrelationship between these areas is the crux of integration and transformation. Although each city has varying version of the above, the trends and issues reflect common features which include:

- i. Large peripheralised and very poor settlements on the edge of cities have limited internal resources, infrastructure and access to the rest of the city;
- ii. Decentralised nodes occur along radial arterials ranging from convenient distances to the core to very substantial distances away from the core. These include older established areas with well-structured and designed connections and amenities to large-scale public housing delivery projects, estate developments and smaller economic nodes on the edge of the city;
- iii. Developments along radial routes connecting strong economic nodes have higher value and have become important growth points for residential and economic activities;
- iv. Large scale public housing developments are usually some distance away from these main radial routes in areas with less opportunities and less connection to major economic nodes;
- v. A lack of interconnection between decentralized nodes which exacerbates the disparities between communities;
- vi. Low densities throughout but more especially in areas further away from the core;
- vii. Inner cities and 'older decentralized nodes' with good access to transport and access have become the centres of change in some of the cities; and
- viii. There is a direct relationship between distance and affordability.



Johannesburg, Tshwane and eThekweni demonstrate that cities consist of a complex set of dynamics and systems that restrict or enhance integration and which need to determine the form of intervention.

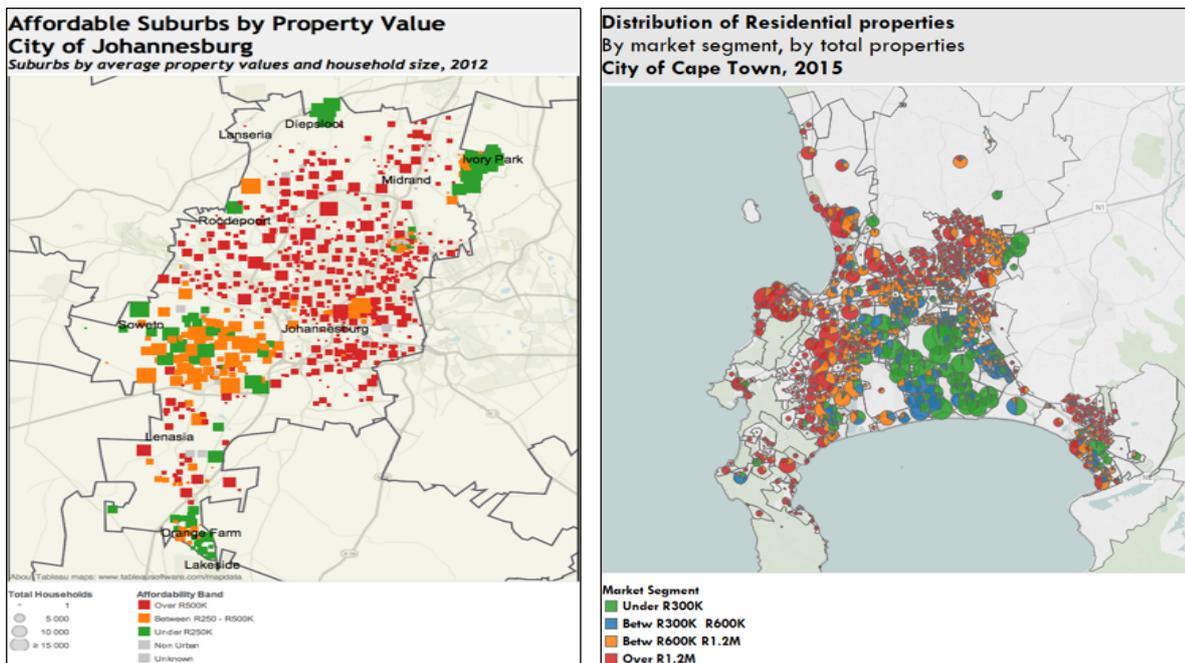
Proximity of different income groups and different uses is an insufficient base for integration. Integration requires direct spatial linkages and points of connection between local nodes and areas that allows for maximum movement and access as well as attractive, well designed and managed common public spaces where communities come together. Addressing economic and income disparities is the obvious requirement for sustainable integration;

Connection to the 'external world' is key to integrating areas and communities. This connection requires maximum internal connections, flows and accessible to transport and economic opportunities. Developments with limited points of access and egress stifle nodal efficiencies as do areas that have no or little economic synergy with the rest of the city;

The 'value' of areas differ depending on the needs and requirements of residents and communities and it cannot be assumed that an area that has high value to one economic group will have the same value to another. When assessing areas for intervention value proposition for different communities must be considered;

The property market operates formally and informally and will always realise value either through structured investments and retention or through irregular and informal means. Formalising markets, whilst ensuring maximum access, is a complex exercise of supporting and creating opportunities for targeted communities;

Strategic interventions can be small and basic e.g. good urban management or the creation of a park; or they can be complex and integrated e.g. TOD's that include infrastructure, planning, transport etc. 'Impact' is the goal and often the simpler the intervention the more likely it is to succeed.



City Mark, 2012 (taken from CAHF, 2017)

4 Determining strategic interventions

Housing markets (formal, informal, private and public) and responses to these markets, as described above, have begun to redefine South African cities in spatial and economic terms. However, these markets are affected by the economic and social structure of society, as well as the different challenges each type of settlement experiences which impacts on the potential for and experience of integration. The way in which this manifests in cities differs, however there seem to be general trends and characteristics that impact on the ability for government to intervene as described above.

The key factors that can or have altered the housing market to the benefit of communities currently marginalized and isolated from the urban economy include:

- i. Addressing distance from the core nodes or economic opportunities through the creation of multiple connection points and increased transport options (such as Soweto in Johannesburg through Rea Vaya or Bridge City in eThekweni that has included rail and additional road connections);

- ii. Ownership and transfer of housing in townships has a very direct impact on the value of properties in previous rental areas and has led to substantial investments in these properties and use of these properties as economic assets.
- iii. Access to rental stock in areas of high economic value is also a form of altering the market in that it provides better opportunities;
- iv. Public and private investments into social amenities, public spaces and recreation, transport infrastructure, retail, road upgrading (which includes pavements, stormwater drainage and street-lighting) all provide for better property values that can leverage economic opportunities, make areas more habitable and reduce the negative effects of poor living conditions to individuals.
- v. Increasing densities and mixed use allows for larger numbers of people to reside in core areas, provides 'volumes' of users which makes public transport viable, increases economic opportunities by increasing the consumer base, creates more efficient use of services thus reducing costs of infrastructure and service provision;
- vi. Changing markets, where downgraded areas realise new markets, allows for social and economic transformation in large cities such as Johannesburg, Tshwane, eThekweni. This needs to be supported by infrastructure, social amenities and urban management;
- vii. Public transport hubs and upgrading of transport routes provides opportunities for densities, mixed income housing and mixed use developments;
- viii. Urban management is crucial to manage dense areas, ensure value of properties and provide convenient and safe access to residents, commuters and users. Urban management is a crucial intervention in areas where there has been social and economic transformation;
- ix. Private investments need to be encouraged and incentivized to ensure economic growth of areas that will drive integration;
- x. Provision of good schools, often a missed factor, is crucial in creating integrated and sustainable neighbourhoods. It is well recorded internationally and in South Africa as one of the key determinants to overall value for local areas. It is the most obvious example of how a social investment can leverage community cohesion, integration and social and economic value.

5 Conclusion

Our cities continue to reflect a dysfunctional and disconnected urban system that perpetuates social and economic alienation and marginalization of most urban residents. City boundaries have expanded whilst low densities continue to create a lack of urban efficiencies, make the costs of servicing the city unsustainable and limit opportunities for integration. City growth has also resulted in different settlement typologies that reflect different needs and requirements.

There are also various trends that reflect changing dynamics that are allowing for increased connectivity, integration and a mix of incomes, uses and activities. The areas which appear to have the greatest opportunities are those where there are good connections to the rest of the city and economic nodes, good public transport, economic transformation, and a response (private or public) to the demand for affordable housing. Newly developed areas within the growth trajectory of cities have also begun to shift the market by creating more integrated forms of although these areas need to be better connected to the overall urban system.

Areas which suffered from a lack of infrastructure and public services have been positively affected by targeted investments in public spaces, transport and services. This has not only resulted in value realisation from properties in these areas but has increased economic activity, housing options, convenience and safety.

Connections between decentralised nodes has and can play an important role in forming a more integrated urban system. These require numerous interventions to ensure different communities and settlements that are located in decentralized areas in the city are able to use these connections.

Value realization and integration are interconnected. When assessing the most appropriate form of intervention, consideration needs to be made of how best to increase the overall value (in financial, economic and social terms) to the local community, the city and its residents.

Annexure A: Johannesburg – a city in flux

Johannesburg is a city that on the one hand, demonstrates negative trends of sprawl and segregation, and on the other, includes large pockets of change and integration, particularly in the Inner City.

Johannesburg is based on a decentralized urban system with nodes connected to a central core, which has historically been the home to the regional economy, and the place where all transport to secondary nodes converges. This city structure is a consequence of Apartheid forms of decentralisation as well as capital flight to secondary nodes.

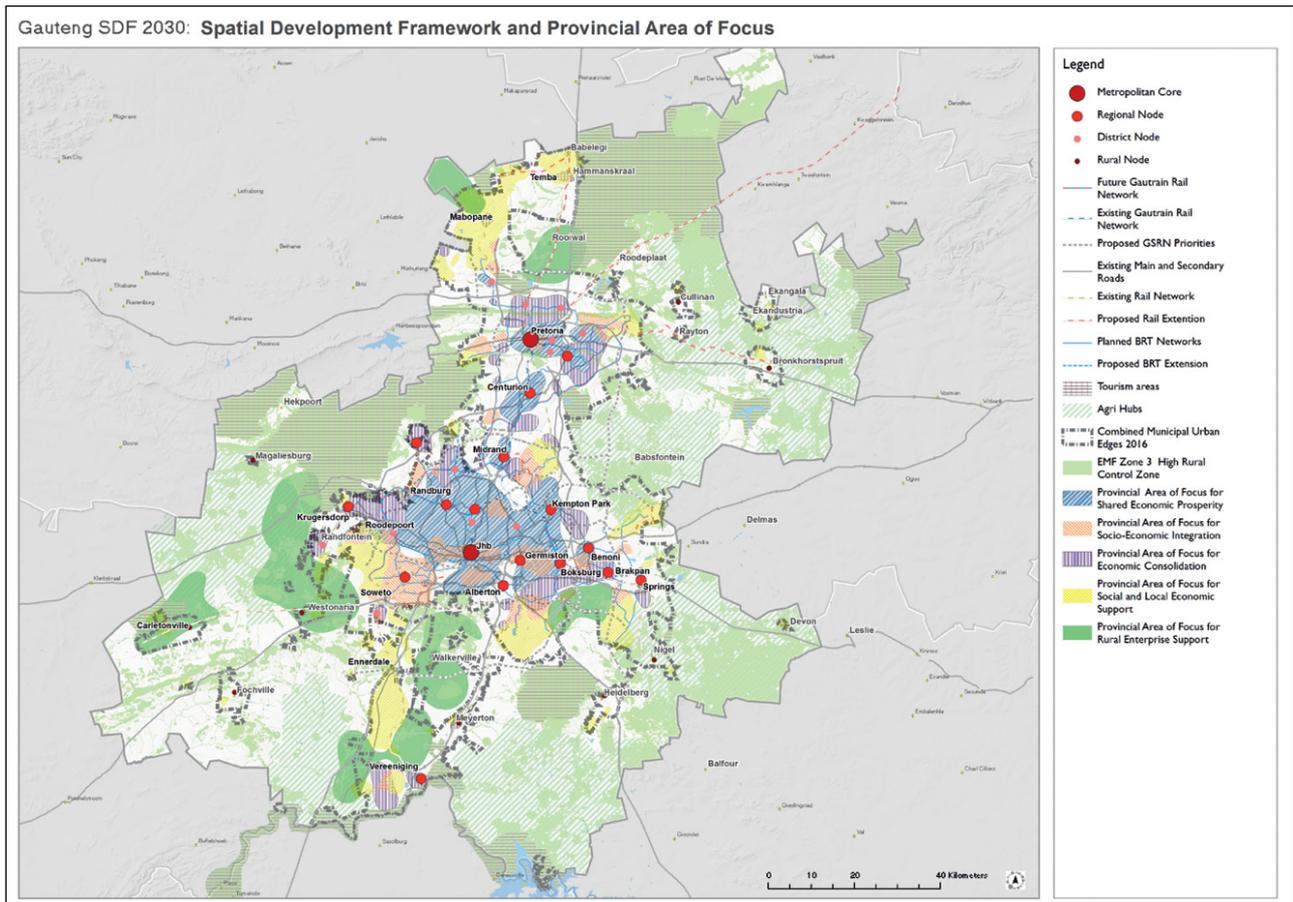


It is worth noting that these decentralised and secondary nodes are generally similar in proximity to the centre, forming rings around the core. As the distance from the centre increases, so the linkages between these decentralised points outside of large arterial connectors (freeways) are reduced, constraining the potential integration and functionality of areas north of the Sandton/Randburg/Roodepoort arch. Because Johannesburg has few physical constraints, this development trajectory outwards continues to create 'decentralised nodes' further from the city centre and has led to a very dysfunctional sprawl. Value in Johannesburg is based on locational access and advantage to economic opportunities, security, transport/road linkages and schooling. Physical features have little significance outside of a few ridges for good views. There are many instances where very low income and wealthy communities live in close proximity as a result of this continual urban growth. Divisions have, in these instances, taken on different forms - gated communities, public transport routes versus private vehicular movement and private versus public schooling.

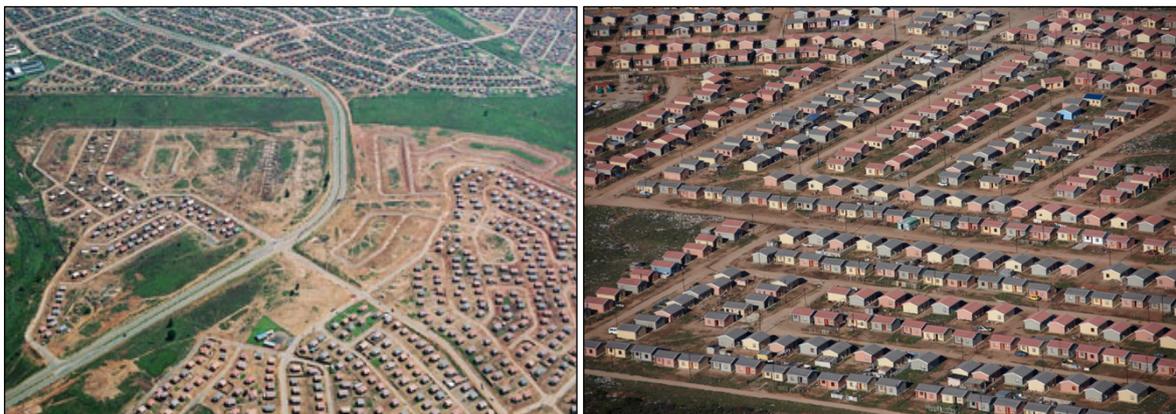
New settlements in these gated communities, as well as the newly developed cluster housing developments, often demonstrate a degree of racial integration as do schools in these areas. This allows for important change and shifts in social dynamics and forms of social engagement. In the main, however, the development of these areas has led to a dysfunctional city expansion and has increased segregation from other parts of the city due to a lack of road networks and transport linkages. Together with a proliferation of gated communities, this urban form dissects the city into small vehicular based nodes that struggle to connect outside of the main road routes. Limited access and egress onto arterial routes creates a very inefficient and congested system. In addition, there is a lack of public space linkages and systems i.e. walkable streets, parks and social amenities.

This is not only reflected in more affluent developments but, more problematically, in the large scale new housing developments being driven by government. The very urban design of these developments segregates, separates and perpetuates a disempowered urban population. Walkable distances, densities and a suitable mix of uses, and easy access to public amenities and transport are compromised if not completely negated. There is very little road access and integration into regional systems and as a result people located in these settlements that do not have access to private vehicles are automatically disadvantaged. Although the housing delivery may be integrated in proximity, it's disconnected nature creates greater levels of social and economic alienation and counters any strategy towards integration.

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The older sections of Johannesburg, which are still based on a strong grid system, display a greater integration of space and movement allowing public, private, pedestrian and cycling flow. Grids also allow for areas to change and transform in uses, densities and economic activities. They allow areas to be redefined in response to changing market demands whilst retaining a connection to the broader metropolis. This is in stark contrast to the decentralised nodes which, although they have closer proximity between diverse communities, remain largely socially and economically segregated.



However, the most important aspect of Johannesburg that has begun to determine integration is the use of the inner city by a wide range of users and communities. The more functional nature of the core and older sections of the city actually make these areas more valuable for lower income families. The concern, however, is the lack of private investment in areas of decay and the value loss of the location.

The growing emphasis by the City of Johannesburg on transport routes forming the anchor to integrative development has the potential to shift the urban system substantially allowing a wide range of income groups access to city wide resources and economies. The Transport Orientated Development (TOD) approach was launched by CoJ as an initiative (Corridors of Freedom) that links the transport investments made to the creation of diverse housing opportunities (particularly low income options), economic activities geared towards small businesses, and access to social resources. This approach has occurred organically in the commercial world with substantial private investments in nodes where transport hubs (particularly Gautrain stations) are located. These transport nodes and routes have experienced a transformation in densities, a greater mix of uses and an unprecedented increase in property values. In addition, there is an interesting reinvention of old Johannesburg (outside of the CBD) where main routes along the grid system are being used for these new forms of development, i.e. high density, mixed use, pedestrian friendly.

The approaches adopted by the City of Johannesburg for integration are useful to note: inner city investments, social housing programmes, TOD, and the delivery of new housing developments attached to existing areas. There are many gaps e.g. linkages between secondary nodes have not been forged, new housing developments are not yet providing more diverse housing opportunities in wealthy nodes, there are no real incentives for the private sector to deliver subsidised housing as part of new developments, and the city is not explicitly using its basic government functions (urban management, ensuring well managed schools and health care facilities, managing social facilities and open spaces etc.) to building strong nodes. These are general pointers for further discussion on how to make strategic interventions in urban systems that facilitate development, integration and functionality. Part of this discussion also needs to focus on the various regulations and incentives to be used.

Opportunities for public property to address integration

Public property holdings in Johannesburg pose interesting opportunities to create interventions. The emphasis should be on using property along the main corridor identified as Corridors of Freedom, main routes connecting the city, areas of low density and high value and in economic nodes. In addition, strategic interventions in peripheral communities should include using property for commercial and economic activities and social amenities. Transport systems connecting these settlements is key and public property should be used to create these facilities and use them to generate economic opportunities.

The approach to developing larger scale properties primarily for housing should be to ensure well designed settlements with maximum access to the city and the various nodes, high densities etc.

Annexure B: Tshwane – a capital city

As a capital city and home to government, Tshwane naturally has a mixed demographic makeup. This is reflected particularly in the CBD and surrounding nodes. Integration is less apparent in areas further from the centre and due to its size, peripheral areas are amongst the most segregated in the country.

Tshwane has a similar typography and geographic character to Johannesburg which has led to a similar phenomenon of sprawl. However, there are physical constraints to the north which have limited this trajectory, and a strong national government presence has meant that the CBD has not faced the same level of decay. The location of government in the CBD has fundamentally changed the racial composition and integration of the city.

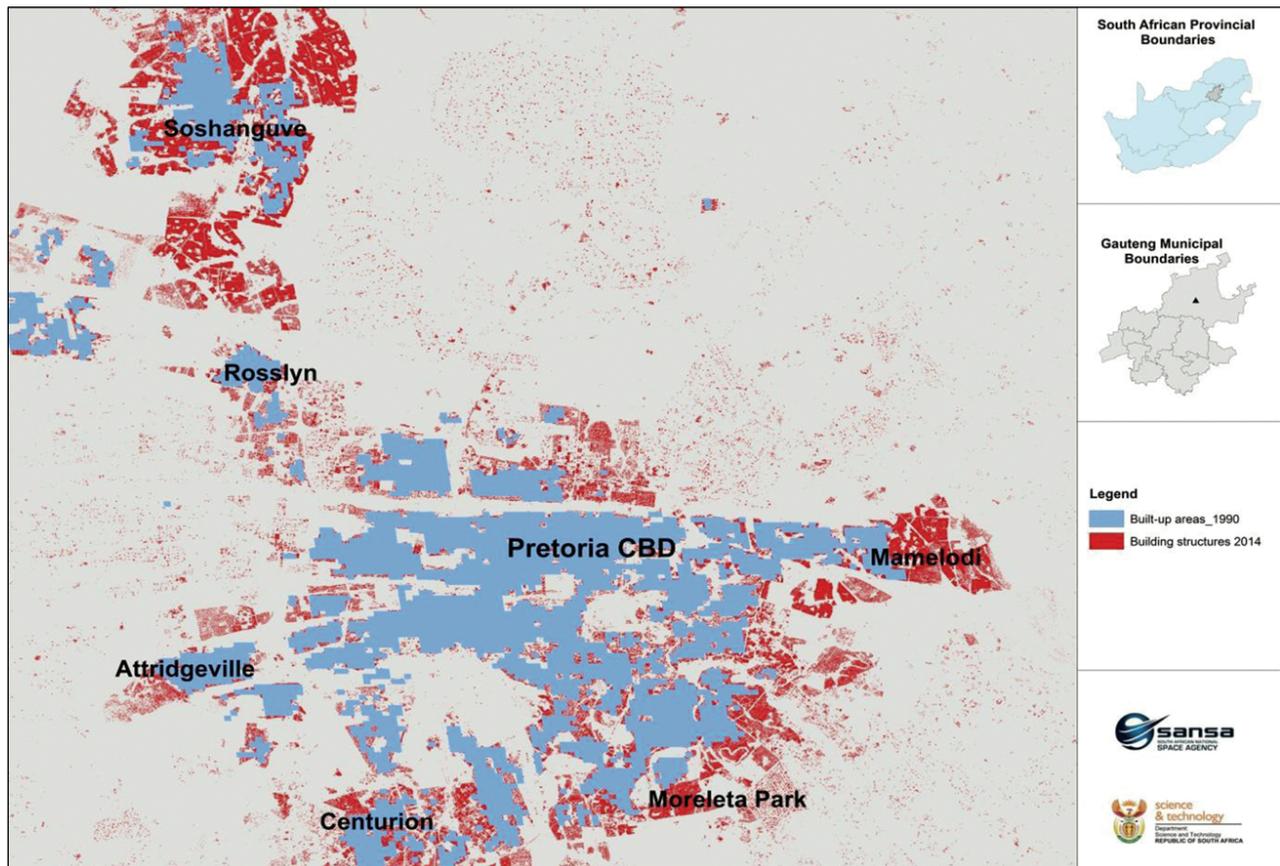


The densities in the inner city and adjacent areas, as well as the formal economic activities in the CBD, have allowed for a growing lower middle class to occupy the area, providing easy access to work, retail and schools and may be a useful example of integration - socially, spatially and economically.

There is an increase in the formal housing supply (using converted commercial buildings) in the CBD that is providing rental accommodation in a very similar fashion to what is happening in Johannesburg. This new market has also begun to assist in 'cleaning up' the urban environment which helps to develop viable mixed-use areas. However, there is generally a lack of urban management by the Council which impacts negatively on the development of an integrated housing market.

Similar to Johannesburg, older areas closer to the CBD, which are largely residential, are well 'gridded' and integrated and have social services and amenities. They are higher in densities and have access to transport. Given the nature of the core business in Tshwane i.e. government, the 'old white neighbourhoods' near the core of the city are far more integrated in terms of demographics.

Tshwane is 6,368km², the largest municipal metropolitan in the country. The distance of areas such as Winterveld and Shoshanguve from the city centre makes their integration into the general urban system almost impossible. These areas are more isolated than areas such as Orange Farm or Doornkop in Johannesburg due to the lack of secondary or smaller nodes in closer proximity that can be used to provide for some economic activity. Given the size of these settlements it is unlikely to move to the centre, however, there is an obvious relationship which involves commuting large distances. This is a huge burden, time and cost, to the commuter. It is likely that many commuters find it less costly to use informal accommodation in the centre or close to it.



Tshwane has strong development corridors - to the south linking to Midrand, which has seen very large scale investment in commercial, retail and residential developments; and to the north-east along the N1, which has created lower density residential, commercial and retail that is able to by-pass the centre of the city in accessing Midrand and Johannesburg. The western portions of the city have suffered from a lack of access to the growing economy along this route. The corridor linking Johannesburg and Tshwane CBDs has developed a strong linear set of economic mini-nodes. Residential developments have been built adjacent to these nodes along the corridor. These cannot simply be considered sprawl given connections to the corridor. However, the urban form created has been a series of enclaves connected through major routes which then connect onto the freeway system. As a result, there is huge congestion and access to the different parts of the corridor are constrained.

Tshwane is experiencing an interesting growth along the eastern section of the city which includes low and high income residential developments. In this section of the city there has been an increase of high income residential estates that are in many instances gated communities which offer 'eco-lifestyles'. In reality these developments have the same effect as in the Greater Johannesburg region i.e. a segregation of residential areas from the overall system, creating enclaves as well as barriers for transport linkages and connections. These areas are characterised by an unconnected internal road network, have very low densities, are completely 'self-sufficient' - schools, retail, recreational but are exclusive. Their links to the city are through large arterials which create problematic traffic congestion and related inefficiencies. These forms of development are highly problematic and create long term dysfunctional urban forms.

A strategic portion of public land, Nellmapius, is located in this eastern sub-region of the metropole. It is currently being developed for a mixed use and housing project. This project aims to deliver over 12,000 housing units. Although the land sits on the eastern edge of the city, it is potentially strategically positioned to integrate and connect Mamelodi to the city core. The initial framework for the development drafted in 2010 shows high densities and a mix of uses, strong linkages, and well designed internal connections. This

framework is based on easy access and maximising the economic and social value of the site. The current programme for development, however, appears to be limited by lower densities, inefficient internal design and a lack of connection to the region. The potential of this project will be lost with poor integration to the region and ineffective internal design. It will be these factors that will restrict the potential for integration and of the housing market.

Opportunities for public property to address integration

These could include: creating social services and amenities for new inner city residents, developing well design and high density models for housing in the lower density residential neighbourhoods especially along corridors, using large properties to develop neighbourhoods that are linked to the city, create interconnections with existing isolated communities and providing a well designed internal system.

Annexure C: Cape Town – a spatially and demographically disconnected city

Cape Town is probably the least integrated South African City. This is partially a result of the fact there are physical constraints to connecting different parts of the city, and partially a result of Cape Town's distinctive community identities.

Cape Town has a very different spatial configuration to Johannesburg and Tshwane. The decentralised segregation is very apparent in the northern sections of the city (similar to decentralized areas of Johannesburg and Tshwane), but the spatial form of the city is highly constrained by physical features which seems to restrict connections between secondary nodes. There seem to be strong connections between these decentralised nodes and the centre but limited connections between secondary nodes. The growth of the

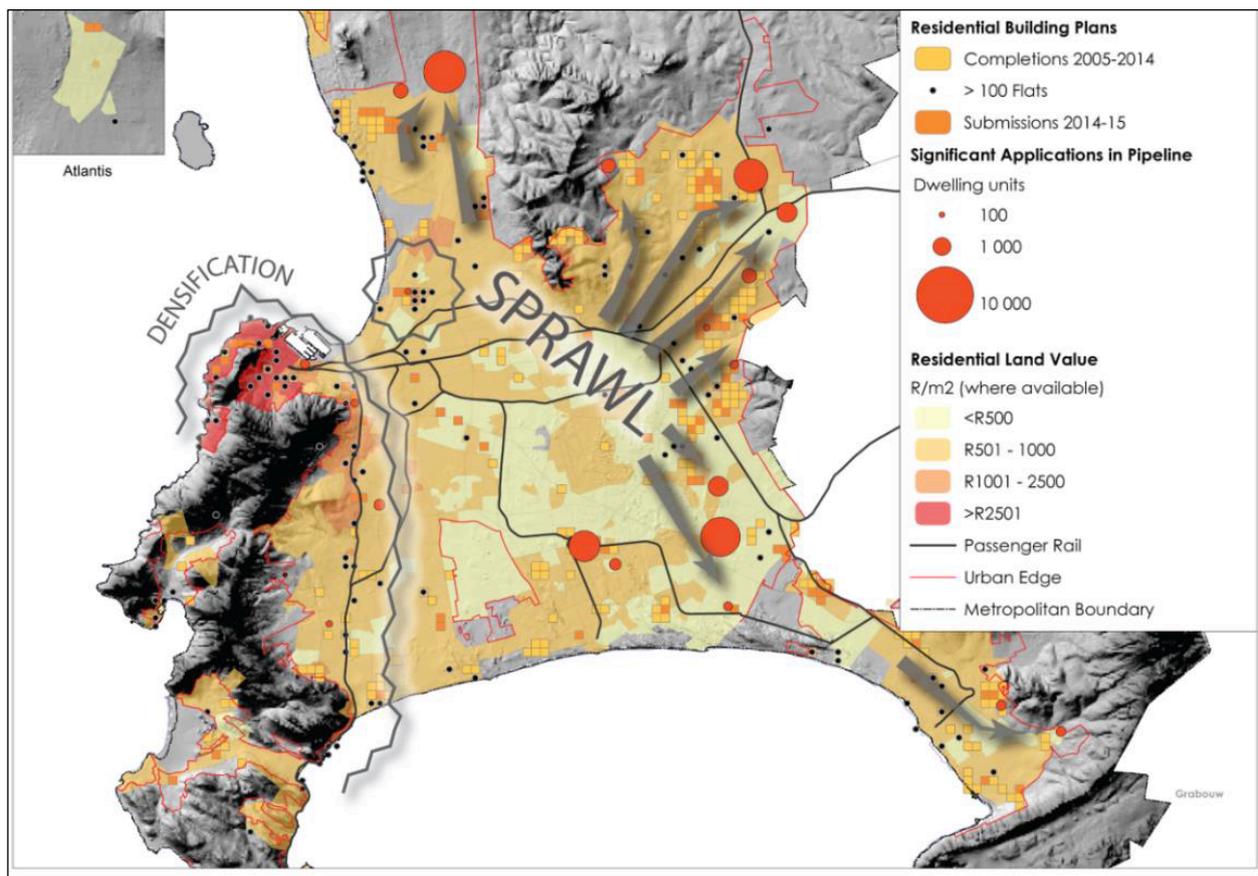


Stellenbosch, Somerset West, Durbanville and Blouberg / Strand areas reflect the national trend of decentralized economic nodes. There are far fewer gated communities in the the Cape Town metropolitan area which is healthier for the overall functionality of the city.

The CTMM is planning a major connector rail route linking Khayelitsha, to Kuils River and the MyCiTi routes that aims to connect dispersed nodes and settlements throughout the greater metro area. This plan emphasises connections between the core (and surrounding areas) with areas that lie on the periphery with one major route cutting across the secondary nodes. Once implemented, this network will have a major effect on the functioning of the city.

A prominent feature of Cape Town is the general lack of economic integration (in comparison to Jhb, Tshwane and eThekweni) which, in turn, demonstrates itself in very racially defined residential areas (StatsSA figures for integration, 2011) This is very evident in the southern suburbs that remain predominantly white. The further south, the more racially polarised the city becomes. However, the corridor that runs along Main Road (M4) into the CBD is an interesting example where there is greater racial and income mix, more diverse uses and higher and more functional densities. This is particularly strong from Observatory to the Inner City (although this entire corridor from Retief demonstrates opportunity for integration). The impact of the rail and road to connect different markets, communities and areas along this route demonstrates the ability to use transport and corridors to create nodes with a diversity of use, income levels and densities. The connecting road system creates a very functional spatial form that is accessible and available for adjacent communities. The strong linkages and movements between and through these areas, as well the direct connection to the CBD, make this area an important point of convergence. The economies and residential markets that occur along and around this corridor already demonstrate higher levels of integration and show strong potential.

Cape Town's Inner City has not lost its formal economic position which has allowed for a strong formal, largely commercial market to be retained. This in turn has limited the growth of an informal residential market. A largely middle income growth on the periphery of the CBD has further consolidated this character. This is important, as the retention and increase in the value of the area allows for greater levels of private investments and economic activities and limits, to some extent, the creation of decentralised nodes (i.e. residents and businesses don't move away to decentralised nodes). However, the retention of high formal property values has limited the ability for the CBD to accommodate a wider range of housing options, in particular lower income housing.



Market housing and land values
Cape Town Municipal Spatial Framework (MSDF) 2017-2022

The inner city is also an important transport hub for the whole city and performs a central role in pulling the various areas together. This is an important feature in identifying opportunities for housing for lower income families.

Sea Point remains integral to the city and the CBD and provides linkages to the more exclusive areas along the Atlantic seaboard. Its composition of different residential typology and some retail provide a wider range of opportunities and there is good social infrastructure for communities that reside and work in the area. Areas further south of Sea Point appear to operate on 'exclusive value' i.e. value that can only be accessed and enjoyed by very high income earners. The value is not necessarily 'functional' but rather aesthetic / 'lifestyle'. There is a severe shortage of public spaces, amenities, transport and schools which would disadvantage lower income residents. However, the value of these areas is also so high that there is the potential for this real estate market to supersede the South African market and make these places completely inaccessible.

Given the decentralised nature of the city, the lack of economic integration and the continued importance and value retention of the CBD and Inner City, Cape Town does not reflect the general trend in other South African cities where inclusion of lower income households into the urban economies is largely through inner city nodes.

Cape Town also has a strong formal housing market in the southern suburbs that is low in density and remains largely white. It has good social and economic infrastructure and services and is able to access the core of the city and the Atlantic areas with ease. These higher income residential areas stretch from the southern suburbs along the M2 linking to Hout Bay and to Tokai. These areas have similar characteristics to the

southern suburb areas although access is far more limited. The areas around False Bay have a different characteristic with lower income residential being more prominent and greater access through the rail system that connects these areas to the CBD. The settlements closer to Simon's Town and The Point are very isolated and have limited access to the rest of the city. There are several informal settlements and poor communities that are located in the area that crosses from the Atlantic to the False Bay which have very poor services and access to transport and opportunities. The integration of these isolated areas is very important to consider in city planning and strategic interventions.

Opportunities for public property to address integration

Opportunities can include using the TOD to direct public property development for the purpose most effective in that area (commercial, economic, residential, social); using public properties around the CBD and Inner City to begin delivering high density mixed income housing that can give communities access to the economic core, creating connections with existing settlements (Khayelitsha) to secondary nodes using properties along these corridors for mixed residential developments; and using properties in existing informal settlements for social and economic amenities.