

HAVE MEGA PROJECTS ACHIEVED WHAT THEY HAVE SET OUT TO DO? A CASE STUDY OF SAVANNA CITY

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**Have Mega Projects Achieved What They Have Set Out To Do? A Case
Study of Savanna City**

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DECLARATION

I Dikeledi Lephondo, hereby declare that the work conducted in this research report is my own and that all the sources used to support the research study have been accurately acknowledged and reported throughout the document, and that this dissertation has not been previously submitted, in its entirety, to any University to obtain an academic qualification.

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ABSTRACT

In July 2014, former Minister of Housing Lindiwe Sisulu announced a new policy direction moving away from small scale, and infill housing development to large scale housing called mega housing projects. These mega housing projects would deliver 15 000 units and above per project and were expected to deliver 1.5 million houses by 2019 and this was called “A new Marshall Plan” by the minister. The policy shift was primarily driven by the slow delivery of housing, which was not meeting the growing demand for housing in the country, since her last appointment as the minister of housing between 2004 and 2009. This was caused by bureaucratic entanglements and the complexities of multiple small projects. In addition, there was a need for something attention grabbing in the context of political troubles and economic struggle. In development of the new housing vision, Premier David Makhura announced Gauteng’s own mega project initiative to create large self-contained new cities of no less than 15 000 units each. These would be strategically located along the north, south, east, western and central corridor developments of Gauteng province and would contain a mix of private and public housing and located mainly towards the urban periphery. The main objectives of the new housing policy approach were identified as increasing housing delivery; solving governance problems; adopting new utopian thinking; promoting spatial equity; and scaling up. Although mega housing projects are not a new phenomenon in South Africa; the turn to mega projects as the sole mechanism of state housing delivery has been met with criticism by scholars and professionals. In terms of adopting two urban agendas in urban transformation, the mega project approach has been criticized to contravene with the existing urban agenda of creating compact city development.

The research sought to unpack what has been done since the announcement in 2014, through evaluating the progress of a mega housing project in Gauteng. The research sought to determine whether Savanna City, as a prototype mega housing project, has been able to meet the objectives stipulated in the mega housing project document and determine whether this could be a useful mechanism in housing delivery and provide an alternative perspective on urban transformation. The research mainly focuses on the delivery perspective and partially on the residents’ lived experiences in answering the research question.

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CHAPTER 1: INTRODUCTION AND BACKGROUND

1. 1 A new housing policy direction and the rationale

In July 2014, the Minister of Human Settlements Lindiwe Sisulu announced a new policy direction moving away from small scale, and infill housing development to large scale housing called 'mega projects' or 'catalytic projects' (Ballard, 2017). These large scale housing projects would deliver 15 000 units and above per project and were expected to deliver 1.5 million houses by 2019 and this was called "A New Marshall Plan " by the minister. It has been noted that the development of the policy approach by the National Department of Human Settlements created widespread confusion as different terminologies were used to coin the policy approach (Ballard, 2017; Ballard and Rubin, 2017). This resulted in the interchangeable use of the terms 'mega projects' and catalytic projects' by politicians. This implied that the terms had the same meaning as these terms were also fused together in once sentence during public announcements (Greve, 2015 as cited in Ballard, 2017). At the Gauteng Provincial level, the Gauteng MEC for Human Settlements made use of the terms 'mega human settlements', 'mega cities' and 'post-apartheid cities' in public announcements and policy documentations (Ballard, 2017:9).

The policy shift was primarily driven by the slow delivery of housing, which was not meeting the growing demand for housing in the country, since her last appointment as the minister of housing between 2004 and 2009. This was caused by bureaucratic entanglements and the complexities of multiple small projects. In addition, there was a need for something attention grabbing in the context of political troubles and economic struggle. This was due to the ANC party's loss of Johannesburg metropolitan municipality and the fear of losing further electoral votes in the West Rand municipal district. The appeal of also starting again with the development of new self-contained and self-sustained cities was seen as an opportunity for the government to do something new and also as a solution to the multitude of problems in housing delivery (Ballard and Rubin, 2018).

In development of the new housing vision, Premier David Makhura announced Gauteng's own mega project initiative to create large self-contained new cities of no less than 15 000 units each (Makhura, 2015). These would be strategically located along the north, south, east, western and central corridor developments of Gauteng province and would contain a mix of private and public housing and located mainly towards the urban periphery (Gauteng Infrastructure Funding Summit for Mega Projects, 2017). The five main objectives of the new housing policy approach were identified as increasing housing delivery; solving governance problems; adopting new utopian thinking; promoting spatial equity; and scaling up. In order to deliver 1.5 million houses, projects focusing on the delivery of 15 000 units would be considered, while those that did not meet the criteria, would not be considered. The policy also aimed to consolidate government spheres in the delivery of housing and create new self-contained cities which would feed into the greater metropolitan area. The policy also aimed at prioritizing housing delivery in municipal areas which feature the greatest need for the product. In terms of scaling up, the policy sought to use mega projects to solve a variety of problems while also achieving numerous objectives and reinstating the authority and ability of the ruling party (Ballard and Rubin, 2018).

1.2 A history of South Africa's large scale housing delivery approach

The shifts leading to the mega housing project approach can be traced back to the Reconstruction and Development Program. The program primarily focused on a mass roll out of housing units throughout the country. The program objectives focused on addressing the socio-economic problems brought by apartheid planning. The objectives also focused on improving the quality of life for the marginalized, through the provision of basic services. Housing through the RDP was delivered on the peripheries of the urban centers, on greenfield sites. In terms of social achievements, the RDP, did not only deliver houses but also provided clean water, electricity, healthcare and land tenure. Although the program was successful in housing 5 million citizens, since its start, it has not been able to keep up with the growing housing demand in the country (Turok, 2015).

The shortcomings of the program, such as poor-quality units and peripheral location, influenced the shift in policy towards the Breaking New Ground (Tissington et.al. 2013). The policy focused on delivering subsidized units closer to economic centers and developing sustainable human settlements. This enabled the formulation of social housing programs, mixed income housing as well as upgrading of informal settlements, however the lack of intergovernmental coordination in these projects, coupled with the slowing delivery of housing was met with the proposal of mega housing projects. Mega housing projects were settlements which would deliver a minimum of 15 000 units of houses. Embedded in the principles of the Breaking New Ground Policy, this housing approach sought to consolidate all the housing programs under the BNG policy into a mega housing project program.

In contrast to mixed income housing developments, mega housing projects sought to deliver a minimum of 15 000 mixed housing units per project. Subsidized, social and bonded housing will be incorporated within one vicinity in the settlement; where public spaces are defined by buildings. These projects would reflect a similar character of self-contained cities which have their own sustainable economic base feeding into the urban greater region. In the Gauteng 2015 Mega Projects document the various economic bases included agriculture, manufacturing, administration, agro-processing, mining and financial services (Gauteng 2015: 24). These would create employment opportunities for the residents in the settlements. Inclusivity and integration in the project are applied through the development of mixed incomes, typologies and land uses within a single project than in an existing urban area (Charlton, 2017:97).

1.3 Mixed reactions from the housing policy shift

Since the announcement of the new direction in housing policy, a series of critiques and concerns regarding mega projects were raised by scholars and bureaucrats. Firstly, spatial implications of such projects were highlighted. Given that the adopted approach prioritized projects that would deliver a minimum of 10 000 housing units, projects favored greenfield development locations. This is because of limited land available for such large scale projects as well as the costs of well-located land (Ballard and Rubin, 2018). This led to more criticism over the poor location of the mega projects.

Scholars also viewed the new development approach to be poorly matched to demographic realities. The relatively low population densities in South African cities and the declining urban

growth rates would make it challenging for local governments to support densification and expansion in terms of development agendas (Harrison, 2017). This meant that the creation of new cities on peripheral land could ultimately lead to urban sprawl (Turok, 2015; Harrison, 2017). Other concerns that were raised focused on the institutional and financial implications of these projects on municipalities.

Mega projects were seen to contradict the new urban agenda since large scale housing projects would be favoured over small scale, infill housing developments. City of Johannesburg officials have raised concerns that these projects divert from spatial policies of the municipality (Ballard and Rubin, 2017). Charlton (as cited in Ballard and Rubin, 2017:21) also argued that peripheral developments would undermine the attempts of government policies in curbing urban sprawl and promoting compact city development. This was made with reference to the National Development Plan 2030, National Treasury's City Support Programme; the Integrated Urban Development Framework, Gauteng's Growth Management Strategies; Integrated Development Plans and Spatial Development Frameworks. Peripheral developments also presented other challenges for municipalities.

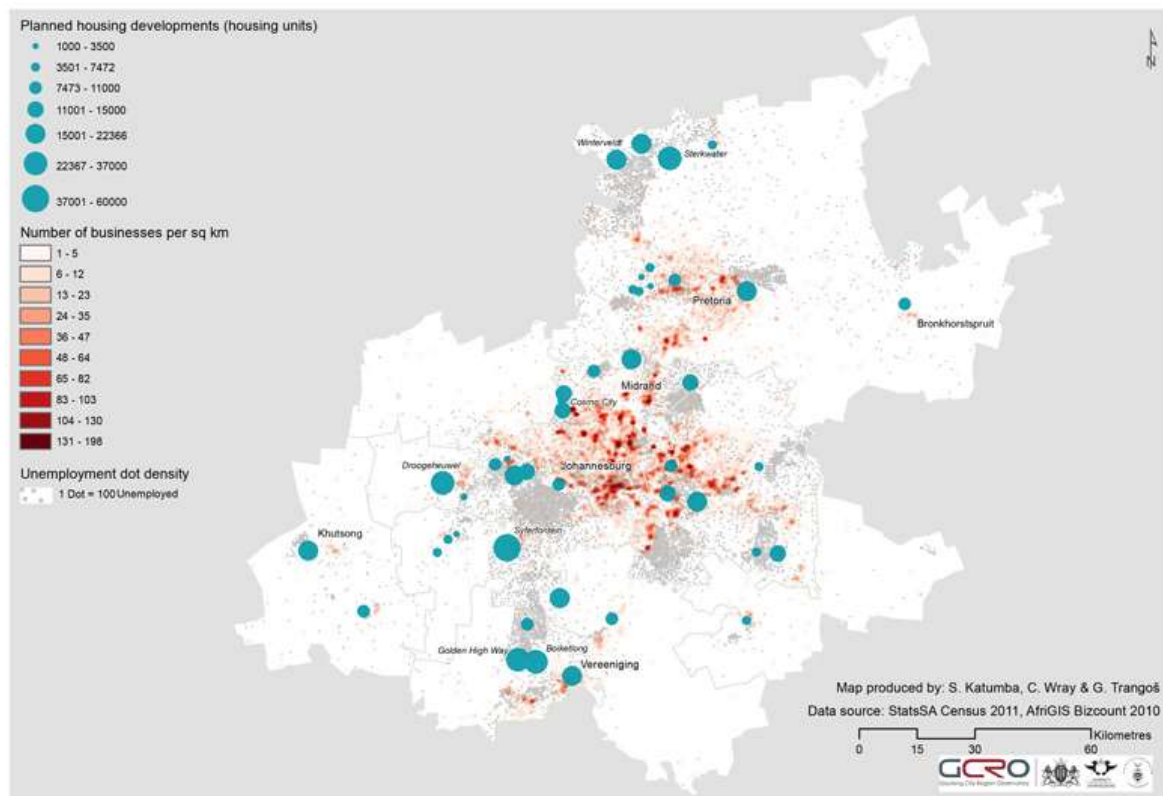
Noted in the literature by Ballard and Rubin (2017: 21), interviews with stakeholders highlighted that mega projects came with the need for massive bulk infrastructure provision by the local government as projects were located far from basic services such as water, sewage and electricity. Such massive bulk infrastructure investment may be unaffordable for local authorities. It is also argued that this has the ability to jeopardize financial positions of metropolitan municipalities, who have to ensure the provision and maintenance of services. Based on previous experiences, municipalities were reluctant to support these projects. This was due to the process followed; which undermined municipalities. In many instances municipalities were not included in the project planning processes as this was handled by the provincial government, which contracted large construction companies. Projects overlooked municipal rules and regulations yet the final project product was given to municipalities to service and maintain and this has proven to be costly. In addition, officials were skeptical of the opportunity cost these projects presented as the majority of the residents in these developments were not contributing to tax revenues.

Mega projects also included the risk of major cost overruns, compromised quality output as well as undermined environmental degradation (Turok, 2015). Previous projects also indicated that the proposed number of units to be developed is hardly reflected in the actual output, as project constraints caused alterations in the implementation phases (Jordhus-Lier, 2015). Another concern was the amount of time required to get the projects implemented as a result of its scale. This would inevitably slow the delivery of housing units (Ballard and Rubin, 2017). Other critiques which emerged was that this approach to housing delivery was not based on a rigorous risk analysis as the inability to evaluate the profitability of mega projects made it risky for metropolitan municipalities to make financial commitment to parallel urban agendas given that changes in macroeconomic conditions could affect their medium and long term fiscal conditions (Turok, 2015, Harrison, 2017).

The social implications of these projects were also questioned. Turok (2015) argued that little consideration has been given to the socio-economic implications that would result from the projects. Many residents would be required to make longer trips to the main economic centers

within the metropolitan area. These beneficiaries would also incur increased travelling costs, while those who are unable to access such opportunities remain unemployed. This was supported by the Gauteng City-Region Observatory map published after the launch of the province's mega project policy.

Map 1: locating the proposed mega projects across Gauteng region



Source: Wray et al, 2015 as cited in Ballard and Rubin, 2017

The map illustrates that although the projects would be developed close to the marginalized poor communities, they were also located far from economic centers where beneficiaries could access employment. Inevitably, this was seen to compromise the economic efficiency of the region and increase traffic congestion (Turok, 2015). In addition mega housing projects located on 'well located land' may be faced with NIMBY reactions from middle income citizens living in the suburbs. This continues to contribute to the poor location of the projects (Ballard and Rubin, 2017).

The Province' ability to create sustainable local economies in the settlements through zoning was criticized. Previous experiences on new town development highlight little economic activity taking place in these settlements that could support the growth of the local economy. Research done in the UK between the 1950s and 1960s highlights the effects that changing global conditions; shifts in policy; and new global dynamics, have on the economic prosperity of new satellite settlements. Through their new town programme, UK countries focused on the decentralization of industries to the peripheries (Ward, 1993, cited in Harrison and Todes, 2017). This was done through incentivizing industries to relocate to peripheral land. Initial outcomes showed diversified local economies until the 1970s recession and economic restructuring. This period was later preceded by deindustrialization and globalization in the

1980s. Settlements that were primarily driven by the industrial sector experienced high rates of economic decline (Harrison and Todes, 2017). Critics argued that while temporary construction jobs could be available in these mega housing projects, these would end upon the completion of the project (Ballard and Rubin, 2017).

While, providing commercial space in new settlements is seen as a corrective measure of the past apartheid settlements, scholars saw a narrow understanding on what drives private investment. Turok (as cited in Ballard and Rubin, 2017:22) explains the difficulty in creating sustainable new urban centers; by highlighting that business relocation is not only driven by state support in the form of incentives and land use zoning. He highlights the fact that businesses location is also influenced by external factors, such existing market conditions, business concentrations risk aversion and inertia. Officials have also argued that housing should follow the economy and not vice versa. Critics argue that these new cities could reflect dormitory towns that would eventually become ghost towns (Turok, 2015; Harrison and Todes, 2017).

With mega projects aiming to develop self-sustainable economies in their ideals of the modernist city, caution is needed. Based on the Lufhereng mega project, lived experiences of people living in subsidized housing indicate that functions of a settlement are entirely dependent on how beneficiaries produce spaces which the government has provided them and this also affects efficient use of the infrastructure (Charlton, 2017).

1.4 Policy intention versus policy implementation: the policy practice gap

Policy implementation theories have highlighted the policy practice gaps. The first generation policy implementation theorists argued that the uncertain relationship between policies, decisions and implemented programs has been the reason behind undesirable and unexpected public policy outcomes. The second generation theorists were more focused on the policy implementation framework. deLeon (2002) argued that the top-down approach to policy implementation created heavy reliance on the governing-elite and excluded the practitioners from the process of policy formulation. This created suspicion over policy implementation and affected the manner in which public policy was implemented. The third generation theorists argued that failure to consider social variables was the cause of policy implementation pitfalls. Paudel (2009) mentioned these as social practices, norms, and social values, political and economic variables and argued that these differ from context to context.

Other reasons which attempt to account for the difference between policy formulation and outcome can be found in Lipsky's work (2010) which explains how public service workers (bureaucrats) act as policy decision makers within the implementation process. Within their roles, they modify policy objectives in order to match their ability as well as to reduce psychological tension of working with citizens according to the ideal service models. This is protected by their ability to exercise discretion in everyday public programs. In addition, public service workers face trade-offs between serving the client and adhering to their work requirements. The occurrence of these contradictions on a daily basis has led them towards rationalizing their reasons for altering public policy objectives.

Mthethwa (2012) argues that not one perspective can be used to account for the challenges in policy implementation; therefore a supportive policy environment can be taken as one of the solutions on which public policy can be improved. According to Mthethwa (2012), strong strategic action plans, work plans, budgets, and operational directives are often the missing links between policy formulation and actual implementation. The process of change and conflict occurring in the implementation stage is another contributing factor. As much as policies are influenced by contexts, new policies often involve new strategies which may require organizations to be modified and to abandon old practices. What is often overlooked in the policy implementation process in South Africa is the need to train implementers in the content of the new policy and required skills. In addition, the ambiguity of policy guidelines affects organizations' ability to adapt to the new policy direction. These factors, along with effective feedback and monitoring systems, are often overlooked in the implementation process (Tebele, 2016).

Ballard (2017) identifies the gap between policy intention and policy implementation. He argues that good policy intention does not necessarily yield good outcomes, particularly in South Africa, where the housing policy shift was politically driven. He argues that although the policy vision had positive intentions, they fall short in realizing the actual vision. Government's drive to demonstrate its will to fix problems and prove its commitment to society suspends the possibility that its plans may generate complications which may not articulate well in the lives of those who will use these spaces, for example where target chasing causes peripheral location of housing. Plans may also overlook other approaches which may yield socially just outcomes. The new policy direction to housing delivery has also been articulated to a Prefix which has been developed overnight. Other factors such as context and financial positions of the public sector, as well as the interpretation of the policy by bureaucrats, can alter the initial goals and objectives set out in the policy (Sutherland et.al. 2015).

Given the challenges and critiques of mega projects, Minister Lindiwe Sisulu's housing policy direction and Johannesburg MEC's support of mega projects has sparked an interest in determining their value in housing delivery within the current context. This leads us to determine whether mega housing projects are the solution to housing delivery.

1.5 Significance of the study

Even after two decades into democracy the housing backlog was estimated to 1.5 million in 2018. This is despite the 2 million houses delivered since 1994 (Creamer Media Reporter, 2018). A symptom contributing to these disparities is the slow process of housing delivery (Rubin, 2011). Rapid urbanization has also increased urban housing demand and put more strain on metropolitan municipality funds. In addition, the evident concussion of urban challenges that these metropolitan municipalities face compounds to the long-standing problems that the country has been dealing with since the repeal of the apartheid laws. Some of these challenges were identified as urban poverty, urban redevelopment and socio-spatial segregation (Sibanda, 2017). The inability of the national housing subsidy to keep up with the growing construction costs has limited housing opportunities for the urban poor annually. Former Housing Minister, Lindiwe Sisulu has also raised concerns over society's dependence on the state to provide them with free housing; which has also impacted on government's inability to address the housing backlog (Merten, 2014).

It would also be interesting to determine if the national vision on mega housing projects would obtain local political and management support; given that the ANC political party has lost control over three metropolitan municipalities in the 2016 elections. In addition, the mega housing projects policy had emerged through the frustration of the ANC government; who were under pressure to reinstate their legitimacy in addressing enduring problems of poverty and inequality (Ballard and Rubin, 2017:4).

Much has been written on the possible impacts of adopting a mega project approach to housing delivery by scholars. It would be useful to determine if the objectives of the mega housing project approach have been met, since the announcement given in 2014.

1.6 Research question

Has Savanna City, as a prototype mega project, achieved the objectives stipulated in the new housing approach?

1.7 Research objectives

1. To identify the state's objectives through mega housing projects
2. To evaluate which state objectives have been achieved and which ones have not been met
3. To evaluate whether what has transpired confirms the critiques that have been raised
4. To determine what the results obtained allude about mega projects as a housing delivery mechanism

1.8 Research method

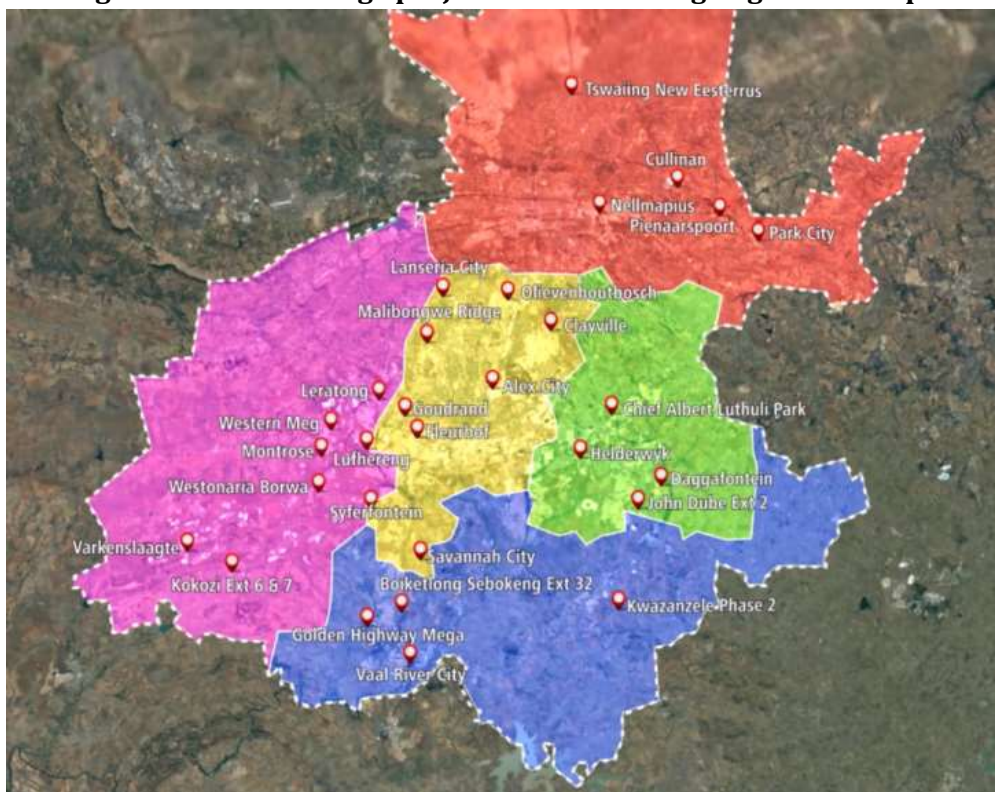
The research will use a qualitative method approach in the data collection process. The study will also be conducted in two phases; the first phase will encompass a desktop study as a secondary source data. Data that will be collected includes identifying the states objectives of mega projects and how they have been applied to Savanna City mega project. Data that would also be collected includes the outcomes that have transpired from the project thus far. The information would be gathered through archival source data as well as newspaper reports.

The second phase of the study will comprise primary interview based research. The raw data will be collected using semi-structured questionnaires and participants will be interviewed individually. Participants are separated into two categories namely state official and beneficiaries. State officials include the officials from HDA, Gauteng Provincial Government, Midvaal Local Municipality, Emfuleni Local Municipality, Sedibeng District Municipality and City of Johannesburg municipality. One key stakeholder of the project that will also be interviewed is the Basil Read project manager. Field observations would also be made in order to generate information which is independent of a participants' interpretation of the situation. This will be done through a site visit in the study area.

1.9 Case study rationale

The case study chosen to address the research objectives is Savanna City Mega Project. The project forms part of the 30 residential developments prioritized under Gauteng provincial government's southern development corridor (Writer, 2019). The project is also regarded as one of the biggest integrated housing development in the province and the largest and most significant public-private driven housing development that features mixed income housing typologies Midvaal Local Municipality. The project is also regarded as one of the biggest integrated housing developments in the province. Therefore Savanna City development enables the researcher to evaluate the success of the mega project approach in housing delivery. The case study has also never been used in any research study on mega projects.

Map 2: showing the location of mega projects in the Gauteng Region Development Corridors



Source: Writer, 2019

The settlement is located near Orange Farm and Lakeside in Midvaal Local Municipality. Savanna City's project concept entailed the development of a city that had a direct link to Lakeside, Orange Farm and other surrounding agricultural areas. It also sought to offer easy access to services and amenities through walking and public transport; and provide open spaces close to residents. The project concept also included the development of various mixed income housing and economic nodes that would be strategically located within the settlement; in addition contribute towards uplifting the surrounding low income areas in the area (Savanna City, 2018).

Map 3: locating Savanna City in the greater region of Gauteng



Source: Savannacity.net, 2019

Gauteng is the 7th biggest economy in Africa (Africa Check, 2018). The province is also considered the economic heartland of South Africa; accounting for up to 34% of South Africa's GDP with Johannesburg continuing to outpace the country's GDP with a 2% growth annually (Charlton, 2017, City of Johannesburg, 2018). It is also home to 14.7 million (25. 4%) of the country's population, making it the province with the largest population in the country (Stats SA, 2018). There are currently 148 Strategic Mega Projects earmarked nationwide, with 48 of those belonging to Gauteng, of which 31 have a green-light status and 10 prioritized by the Gauteng Department of Human Settlement (Creamer Media Reporter, 2018). An amount of R657 million was set aside for housing projects in the 2015/16 financial year – almost double the allocation for the previous period. This amount was increased to R932 million in the preceding financial year. The massive investments into these projects come with its own impact on the local GDP (City of Johannesburg, 2016).

Gauteng Department's vision to develop "mega cities" was intended to address the spatial inequalities of the apartheid city. The realization of the department's vision, towards transforming settlements and cities into productive, inclusive and sustainable centers, depended upon the spatial reconfiguration of urban peripheries; where most mega projects are developed. These "mega cities" would be completely self-sufficient in providing for the housing, economic and social needs of the community and would be strategically located along the five development corridors of the province. Through the use of a more clustered method of housing delivery, the department targeted to build 520 000 housing units by the end of the current term in 2019. The department also believed that this housing delivery approach would contribute to the eradication of informal settlements (Gauteng Partnership Fund, 2018).

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1.10 Overview of the chapters

There are seven chapters that formulate the research. The primary purpose of each chapter is outlined below

Chapter 1: Introduction and background

The chapter covers the introduction of the study. This comprises of the background of the study; which looks at recent events taking place in terms of housing delivery in the country. This has led to the formulation of the study's main aim and objectives. The chapter also outlines the research methods used in meeting the objectives of the study. It also places the study in context; and explains the significance of the research and the chosen case study.

Chapter 2: Literature review

The primary purpose of the chapter is to locate the new housing policy approach in the literature. This not only provides the theoretical framework for the study; but also describes other findings from other research studies and point out any gaps in the literature. The chapter looks at the ideologies informing the new housing policy approach in South Africa. These were mega projects, mixed use and mixed income developments, satellite towns and city development, and catalytic projects.

Chapter 3: Context of the study

The chapter outlines how the new housing policy approach has been articulated at different levels of the state. It also traces how the approach has shifted over time. The chapter also presents the location background of the study area; as well as locates the case study in the context of the different approaches adopted by the state.

Chapter 4: Research methods

The chapter explains the importance of the research methodology and research design. It also discusses the tools and techniques used to sample, collect and analyze the data. This chapter is

critical in guiding the research findings; which will be used answer the research question. The chapter also highlights the shortcomings experienced during the data collection process.

Chapter 5: Findings and analysis of the data collected from state officials

This chapter, along with chapter 6, presents both the findings of the research; as well as the analysis. Chapter 5 and 6 are empirical chapters, which discuss the views of the respondents with regards to the research topic. The views from the state officials have addressed the objectives of the research.

Chapter 6: Findings and analysis of the data collected from the residents of Savanna City

This chapter presents findings from the study area (Savanna City). These findings comprised of the views of the residents' lived experiences; and were used to compare and contrast with the state's intentions for the Savanna City. The analysis was used to derive conclusions about the new housing delivery approach.

Chapter 7: Conclusion and recommendations

The chapter summarizes the key findings of the research and presents the final conclusions derived from the case study of Savanna City. The chapter also provides recommendations in response to the objectives of the study; as well as areas that require further research (which were not particularly covered by this research).

1.11 Conclusion

The primary purpose of this research was to present the general overview of the study. The chapter emphasized on the background of the study, rationale of the study and study area; and presented the research question and objectives. It also provided the research methodology for the study, as well as the outline of the research chapters in order to provide a good understanding on the framework of the study. The flowing chapter will build on the literature review.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The chapter has reviewed the literature through the lens of mega projects, mixed income housing development, mixed used housing development, satellite towns and cities developments, and catalytic projects. The elements found in these ideologies are found in South Africa's mega housing project approach and a conceptual framework presented in the conclusion highlights how these are seen in the new approach. Firstly the chapter outlines the nature of these ideas; as well as their various intentions and how these are adopted and implemented by the public and private sector. Secondly, the chapter outlines how these ideologies have been used in South Africa's public service delivery initiatives; for example: the chapter argued that the escalation of human settlement developments to large scale projects in South Africa, has primarily been driven by political, economic and social pressures confronting a government in post democracy on the housing issue. In South Africa, mega housing projects have also been perceived by the state as leveraging tools that would catalyze private sector investment. The literature has also discussed the traditional neighborhoods design concept, as well as the transit orientated development concepts have been used in the conceptualization of Gauteng's mega cities. A key factor that was common in all the ideologies presented was that they have all come about with the intent of tackling more than one major problem at a time. The chapter also discussed the various outcomes observed by the use of these interventions. These include both the benefits and challenges.

2.2 The ideology of mega projects and the elements found in South Africa's mega housing projects

Altshuler and Luberoff (2003) defined mega projects as projects which occur physically in the form of major construction projects; while Harrok (2015:3) also adds that some mega projects are orientated towards examining scientific problems i.e. The Square Kilometer Array. Fainstein (2009) defined mega projects as large development projects. Flyvbjerg (2014) defined the term 'mega' from an economic approach; stating that the difference between mega, giga and tera projects are dependent on the investment amounts projects require. This meant that mega projects are million dollar projects, while giga referred to billion dollar projects and tera referred to trillion dollar projects. It has been argued that megaprojects have evolved overtime to become more financially demanding, and thus mega projects are referred to as projects that cost more than USD 1 billion (Söderlund et.al., 2017). According to Altshuler and Luberoff (2003), these projects are public; meaning that most are government funded and only a small number are funded by the private sector. Flyvbjerg (2014) states that mega projects are known to consist of public-private partnerships which often have been state initiated. Other defining characteristics of mega projects include their extreme complexity; engagement of multiple developers and long development periods. They have also been perceived to present high levels of ambition and risk, partly due to their technical and economic uncertainty (Steinberg, 1987; Fainstein, 2009; Suderland, 2014; Flyvbjerg, 2014; Söderlund, 2017). In addition, they have been highly endorsed with ambitious visions and project output (Flyvbjerg, 2014:3). In order to see the fruition of these projects, exceptions are often made in their adherence to policy and

planning. In addition, project output is seen in the transformation of land use in one contiguous area (Swyngedouw et al., 2002; Suderland, 2014).

Flyvbjerg (2014) defines the four drivers that contribute to the scale of such projects; stating that mega projects are technologically, politically and economically driven while some are also driven by aesthetics. This means that mega projects can be driven by the excitement of engineers and technologists in developing innovative projects that are globally competitive. alternatively, political mandates can drive mega project development: whereby megaprojects become political symbols that hold great prestige for governments (Harrok, 2015). One example in South Africa is the Gautrain mega project; which has been argued to project South Africa as a preeminent modern African state (Westhuizen, 2007). Economically, mega projects can be propelled by entrepreneurial urbanism where business people are motivated by the potential return on investments in these projects as well as their ability to create employment for citizens. Mega projects, such as the Golden Gate Bridge in San Francisco, were also influenced by designers who were driven by the need to develop something that is iconic in the city. Often however, and as Harrok (2015) notes, mega projects come about in order to tackle more than one major problem at a time. This means that there can be more than one driver influencing mega projects. Hannan and Sutherland (2015: 205) agree and mention that the aim of mega-projects is often to re-image a city, enhance its attractiveness and global competitiveness whilst promoting development and economic growth.

In European and American cities mega projects have also been viewed as schemes which promote either a pro-growth or a pro-poor agenda (Sutherland et.al., 2014:186). In London and New York during the 1990's local government, in partnership with the private sector, embarked on office building schemes in Canary Wharf and Times Square (Manhattan). These projects focused on revitalizing and completing office buildings with the intention to catalyze entrepreneurial property development in the cities as a way of reviving the cities' property markets. Through a different approach, private-public partnerships in Amsterdam focused on increasing the housing stock on the urban peripheries as office development was increasing on its own in the same areas (Fainstein, 2009). The pro-growth agenda has also been promoted in countries such as India; where mega projects are imposed over informal spaces, as a way of formalizing the city and creating world class infrastructure and projects (Sutherland et.al. 2014:187).

In South Africa, mega projects are used to promote a pro-growth and pro poor development agenda. This is evident in how mega projects are packaged and promoted as having the potential to drive economic growth, create employment opportunities, restructure the space economy of apartheid and ensure that the benefits trickle down to the poor and disadvantaged while private-public partnerships are used to negotiate and implement global economic and local redistribution objectives (Sunderland, 2011:186). Mega projects have also been utilized as urban regeneration strategies that form part of a broader urban development agenda. An example was the upgrading and construction of new stadiums and infrastructure in preparation for the 2010 World Cup. These mega projects formed part of a national development agenda focused on fast tracking development, stimulating economic growth and creating jobs (Hannan and Sutherland, 2015). These were also prioritized over other large scale development projects as they were more immediate and appealing. This ultimately increased South Africa's major cities' competitiveness both locally and globally.

Sutherland (2014:185) argues that mega projects have transformed and that they have emerged in cities globally as a reflection of state-supported neoliberalism, due to investments are channeled into specific locations in cities. This has also been seen in American and European cities whereby large scale projects were developed as a response to global and economic pressures in the 1990s. Emphasis was placed on development of large scale, mixed use developments that would attract multinational businesses. Two major types of large scale projects that have been identified by Sutherland et.al. (2014) are economic projects; such as industrial estate developments and shopping mall developments; and infrastructure projects which include transport infrastructure airports; dams and tunnels. The Gauteng Freeway Improvement Project (GFIP) is one example of an infrastructure mega project that reflects state-supported neoliberalism, through the implementation of the e-tolling system (Harrok, 2015; Lin, 2015). This is because the e-tolling system rests on the user pay principle, which requires users to pay for their use of public goods (roads). This was a way for state to recovery the full costs of the highway upgrade projects in Gauteng (Lin, 2015:52). This paragraph has shown the different ways in mega projects reflecting state-supported neoliberalism can be initiated. It has also been noted that large scale infrastructure projects can also be bureaucratically driven. This is seen when an interest group or political party's reasoning focuses more on the influence of special interest groups in getting state to undertake a major infrastructure project. Examples are the Gautrain mega projects which invariably seems to be an elitist project that has also been politically driven (Van Der Westhuizen, 2007: 335, 349).

Fainstein (2008:768), argued that private-public driven mega projects in American cities in the 1990s, were primarily focused on profitability, and the public benefits were seen through the trickle down gains from the development.

Literature by Ilesanmi (2010) highlighted how mega housing projects in developing countries were used to create new cities. One example is the Lagos Mega City Project which focused on prioritizing infrastructure development; providing mass housing; and developing tourism within the Lagos region. Housing, as a key component of the project, focused on slum upgrading, site and service programs, mortgage-based home ownership schemes; and also increasing housing stock through private sector estate development. Urban policies also promoted high rise residential development and neighborhood renewal. The rationale for the Lagos Mega City Project was based on the severe infrastructure neglect for many decades in the area as well as rising urban migration projections for the Lagos region. Some of the key priority areas in the project's infrastructure plan included provision of affordable and adequate housing; redesign, construction and upgrading of roads; development of integrated transport systems and transport management; greening and landscaping as well as health care delivery. In summary, the mega project was used to create a new city that would address a range of problems prevailing in Lagos region.

In South Africa, the development of human settlements has also been escalated to large scale projects that often reflect mega project developments and often involve the three levels of government. This is due to the political, economic and social pressures that confronted a government in post democracy on the housing issues. These housing issues were mainly shortage of housing for urban poor as well as persistent socio-economic polarization. Large scale human settlement projects, which emerged from the BNG policy, aimed towards delivering housing-led developments that were well integrated into South African cities and

provided adequate housing for the poor (Sutherland et.al., 2011:185). Reference has also been made to the Lufhereng development, which has been envisioned as a prototype of a sustainable and functional mega human settlement that would form part of a conglomeration of residential areas in the south of Johannesburg (Charlton, 2017). The development would accommodate one third of the low income population and these residents were projected to come from a range of destitute localities including backyard dwellers from Soweto as well as people that have been on the subsidized housing list since 1996 within greater Soweto. The Lufhereng development was also envisioned to attract informal settlements dwellers near Protea South, military veterans, former occupants of the farmland incorporated into Lufhereng as well as residents who wish to buy into the bonded housing. The initial projected housing units in the settlement was 26 000 with a minimum population of 65000 residents upon completion in 2023 (Charlton, 2017: 87; 89; 90; 96).

The Gauteng Provincial Government's plan on mega housing projects is to transition from sporadic 'legacy projects' (which are characterized as micro projects, sporadic planning and limited coordination). These would be clustered together within their respective geographical locations to form clustered projects which are centrally coordinated and monitored. These would eventually transition to mega projects which focus on nodal, precinct and city developments that are delivered in sequence and adhere to the initial planning strategies (Gauteng Province, 2015).

2.3 The challenges associated with mega project development

Mega projects have mostly been critiqued as capital investment growth driven projects that demonstrate overly optimistic targets and objectives which are set out of rigorous risk adjustments, therefore alluding wishful projections (Robbins, 2015). Poor project management by mega project planners and managers, as well as the lack of effective project management systems in place within organizations, has been among the major causes of mega project development failures (Flyvbjerg, 2014). This is because thorough front-end planning is often compromised for acceleration in the implementation rate of projects; thus resulting in a waste of resource allocation to projects. The waste in resource allocation can be seen in a range of ways; firstly through funding projects that are economically inefficient relative to ones that are. This means that funding is often given to projects that are costly but yield lower returns than those that present higher returns. Another way that resources get misallocated is through funding mega projects that are later abandoned or stopped as they are regarded as 'bad projects' at a later stage. These are seen to be projects that become financial demanding over time and do not promise to yield the initial value that was expected. The third way in which resource misallocation occurs is through the re-financing of projects in an attempt to address the problems which were overlooked in the initial assessment of the project. Lastly, resource misallocation is also seen through the postponement of project's expected benefits and revenue proceeds to an unknown time in the future. This is particularly detrimental to debt-financed projects as the lack of revenue stream results in the non-payment of interest payments and growth in project debt (Flyvbjerg, 2014)

The Channel tunnel (also known as the Eurotunnel) illustrates these possible outcomes. Although at face value, the mega project appeared to a technological success; it was considered as a financial failure as the project cost was 140% more than the estimated figure; while the cost

overruns were more than 80% (the initial amount estimated for cost overruns was 10%). In terms of benefit, revenues yielded were half of those that had been expected with a -14.5% internal rate of return on the amount invested into the project. This brought a loss of 17.8 billion dollars to the British economy (Flyvbjerg et.al. 2010: 6).

Mega projects have also often failed to meet their intended visions as these are often altered by the how the final product has been utilized. In South Africa, Gauteng Provincial Government's attempt to create 'post-apartheid' settlements has been challenged by residents' lived experiences. The Lufhereng mega housing project highlights how invented co-production by residents in the settlements alters state objectives on mega housing projects. These have often been perceived as a threat to the concept of urbanism whereby state attempts to eradicate informal settlements and informal economic activity often get reproduced in these settlements (through the establishment of spaza shops by the residents on their property). Charlton (2017) states reason for the phenomena as lack of acknowledgement by the city on the prevailing economic conditions in these settlements. Given that the settlements comprise of low income and unemployed residents, the informal economic market becomes a source for income generation. This form of economic activity has also been perceived as a threat to the market bonded houses offered in the area as this form of economic activity does not fit in with a more formerly accepted way of urban living (Charlton, 2017: 106)

Given that mega projects often require new multi-scalar government arrangements (as projects do not go through the normal channels established); literature often shows a lack of coordination in urban governance processes in these projects. In Delhi, key instruments deployed in the Transit Oriented Development included land based value capture as well as international norms and standards (Suzuki et.al. 2015). This was done in order to guarantee international investment; involving intergovernmental lending agencies in the project; as well as ensuring international development cooperation as these were the key elements that would ensure the project would materialize (Kennedy et.al. 2014). These decisions had implications on urban land management as the involvement of international sponsors influenced the technology, instruments as well as techniques that would be used in the process. This was evident in the bidding process for consultants and contractors as well as in the rezoning of land that was not intended to be used for proposed purposes.

In the case of the King Shaka International Airport-Dube Trade Port development, a key feature of the institutional conflict between Ethekewini Municipality and the Dube Trade Port Corporation was the debate on water and infrastructure. Given that the development was located on the outer edge of the municipality's service networks, provision of bulk infrastructure was a challenge and would require less investment in infrastructure needs elsewhere in the city. In addition, there were also pressures exerted on state decision makers to extend the municipal boundaries of Ilembe District in order to accommodate the new development as the district showed more compliance with the Dube Trade Port development objectives (Robbins, 2015). This highlights Kennedy's (et.al. 2014:2) conclusion; that city development is a strategic issue that places more decision making powers in higher tiers of state than the local state.

Another challenge associated with mega project developments is the difficulty in determining the value of the mega project output. This is because the promises of economic growth and

employment opportunities often have hidden agendas as the question of equity is not addressed. As a way of formalizing the city, mega projects in India have been imposed by the state over informal spaces, resulting in the displacement of the urban poor as well as homelessness (Sutherland et.al. 2015). In South Africa, Mega projects constructed in preparation of the 2010 world cup event were highlighted to enrich the interest of property developers; while simultaneously displacing and marginalizing informal traders and homeless people in order to improve the image of the city (Ngonyama, 2010)..Similar to Germany 2006 World Cup experience; public debate on the price South Africa paid for hosting the world cup highlighted that contractual agreements between FIFA and the host nation had been signed. These were focused on regulating the flow of benefits associated with the tournament. One of the obligations stipulated in the contract restricted advertising within one kilometer of the stadiums and along all major access roads to FIFA endorsed enterprises; with all the profits channeled to FIFA (Czeglédy, 2009; Maening and Du Plessis, 2007). Another obligation, which was also a source of public discontent, was the need for the host country to provide dedicated lanes on highways for FIFA officials and teams as well as unlimited telephone and internet services, as well as catering services. It was also the host country's responsibility to provide security, which was done with public funds. From an opportunity cost perspective, it has also been argued that the event had no significant impact on regional income and employment, In addition, local states have been exposed to financial risks as operating subsidies had to be allocated to the developed stadiums because of insufficient revenue to cover the construction cost from the project (Du Plessis and Maennig, 2009; Kennedy et.al., 2014). The 2008/9 budget cut for the department of education in Kwa-Zulu Natal is one example (Ngonyama, 2010:173).

Mega projects have also been critiqued to lack in community participation. In terms of the urban renewal projects that were linked to the 2010 FIFA World Cup, local communities were unable to be involved in the development programs; particularly in the relocation processes (Czeglédy, 2009; Du Plessis and Maennig, 2009; Benit-Gbaffou, 2009). In the Ellis Park development project, lack of information was provided to residents of Bertrams and Doornfontein on which buildings would be demolished. The once off community participation processes were handled by consultants, who had limited knowledge and expertise on the problems existing in the area as well as the community structures. The workshops offered no accountability mechanisms on the issues that were raised by the community and questions were passed onto the Johannesburg Development Agency (JDA) with no feedback provided. Secondly, the fragmented development plans drafted by consultants and the JDA made it difficult for residents to access information on beneficiaries of construction activities and socio-economic surveys conducted in the area overlooked the existing community initiatives (such as the informal car guard initiative) (Benit-Gbaffou, 2009). The Cornubia case study in Durban also reflects the top down processes of mega projects, even though technical planning practices leaned more towards achieving social justice (Sutherland et.al. 2015). The project sought to serve the interest of the marginalized informal settlement residents and although concerns raised by middle income and high income residents was not addressed; the AbM grassroots movement and the community of Blackburn have also challenged the lack of participation in the project planning. This was because residents in informal settlements favored settlement upgrade over relocation to housing in Cornubia (Al-Bulushi, 2014)).

Mega projects often face administration complexities, which ultimately impacts community organization structures (Kennedy et.al. 2014). The N2 Gateway project presented eviction and

relocation processes to residents in the Joe Slovo informal settlement and this was tied to a need for redeveloping the settlement into a more densified community (Jordhus-Lier, 2015). Secondly, issues on housing allocation (once the project has been completed) were met with resistance from community social movements. This is because the proposed settlement vision sought to provide mixed income housing and this limited the output of state housing stock whilst introducing gap housing. This meant that only 22 000 units at the inception phase would be available to a community that demonstrated a need for 400 000 state housing units. In addition, selection workshops that were held with prospective tenants for rental housing has not been fruitful as many low income families were not able to register for rental units due to insufficient and unstable income. These units were also not attractive to backyard dwellers as rental rates would increase over time. Lastly, employment opportunities were also contested. Given that large scale infrastructure projects would also benefit local communities through income generation activities has been embedded in South Africa, many residents in low income communities look to such projects as a source of income and those who could not access the casual income in the construction process were in conflict with those who could (Jordhus-Lier, 2015; Kennedy et.al., 2014).

2.4 The ideology of mixed income housing developments as well as their influence in mega housing projects

Mixed income housing development lacks a universal definition in the field of housing and this is because scholars and practitioners have defined the term from various lenses. Briggs (1997) speaks of mixed income housing as housing mobility programs which enable disadvantaged families to relocate to better resourced neighbourhoods; while Brophy and Smith (1997) perceives it as a multifamily housing development which offers a variety of residential units. From a perspective where mixed income developments do not occur organically, the term is defined as a deliberate effort to construct and own a multifamily development that offers a mixing of different income groups as part of its financial and operational plans. The ratio of income levels is usually determined by the market and the availability of financial resources (Brophy and Smith, 1997:5). The term is also perceived as a project based subsidy that is tied to a unit than a tenant (Ellickson, 2009). To some, a mixed income development should include market rate units; for others it implies a mix of incomes without strict definitions on the income ranges of residents. Other authors focus on the tenure options properties offer while some focus on the composition of the households that reside in the properties. Factors that are considered include employment status of family members, age as well as number (Smith, 2002).

Schwartz and Tajbakhsh (1997) categorize mixed income housing developments based on various factors such as the level at which the development is mixed (property level or neighbourhood level). Another factor focuses on the various funding mechanisms that were used to develop the residential units in the different properties. Other factors include the amount of mixing that occurs in the development and the quality of housing offered to the different income groups. There are four different mixed income housing categories. The first includes state fostered mixed income housing. This is done through inclusionary zoning ordinances and enforcing land use regulations that require developers to include mixed income housing in their proposed development (Schwartz et.al, 2012). The second category includes the revitalisation of public housing, by public housing authorities, into mixed income housing. This is done through state housing programmes. Thirdly, some state programmes offer incentives to

developers who wish to revitalize dilapidated public housing into mixed income housing. The last category comprises of mixed income housing development through private-public partnerships which are initiated by NGOs, communities or private developers (Schwartz and Tajbakhsh, 1997; Brophy and Smith, 1997). In South Africa, various housing programmes and land laws have been used to ensure the development of mixed income housing. These include the inclusionary housing policy, and social housing programmes.

Smith (2002) has provided five groups of mixed income properties. Moderate income inclusion properties are characterized as properties that predominantly offer market rate units and accommodate a small amount of moderate income households. Low income inclusion properties offer more market rate units and few units for low income households. Affordable mix properties offer moderate to low income units as well as units for extremely low income households; while market rare inclusion properties are low income developments that offer a few market rate units. Lastly, developments that accommodate a broad range of incomes are seen to offer units that cater to all income groups equally. The mix of incomes served in these developments is dependent on market forces as well as development agendas of government funding programs.

Sturtevant and McClain (2010) mentioned that deliberate mixed income housing development's primary objective was to address urban poverty and racial discrimination as it would dissolve the socio-economic isolation of marginalized black communities. Joseph et.al. (2007) mentioned that there are two primary objectives which have driven mixed income housing developments. The first objective was to address urban poverty; which scholars and practitioners have utilized as a means of rationalizing mixed income housing developments. The second objective focuses on urban redevelopment, whereby policy makers perceived mixed income housing as a strategy to catalyze inner city redevelopment that would be economically lucrative and politically viable. Smith (2002) has also highlighted that mixed income housing development in America has also been driven by the shortage of affordable housing. These three objectives have been the drivers of mixed income developments and have also provided the rationale for mixed income housing in America

The migration of the middle class white families from urban areas to the suburbs resulted in rapid increases of extremely poor African-American families into public housing in urban areas. These, coupled with racial and socio-economic segregation have been identified as the critical causes of concentrated urban poverty in American cities (Smith, 2002; Joseph et.al, 2007). During the 1970s and 1980s, America's five largest cities experienced a 182 per cent growth in the number of poor families migrating to neighbourhoods that already had high concentrations of poverty and studies done in these neighbourhoods indicated a direct correlation with poor school performance; low employment levels; high crime and pregnancy levels.

There are four proposed propositions at which mixed income housing serves as a poverty alleviation strategy (Smith, 2002). The first proposition is embedded in the theories of social capital. It states that mixed income housing would provide low income households with new social networks that would provide access to new networks of employment. Given that the social networks of the lower income tend to be more localized than those with higher income levels, social networks become a valuable asset to the low income in terms of increasing employment opportunities as they would be able to strengthen the weak ties they have with

affluent neighbours (Granovetter, 1995 as cited in Joseph 2006). Secondly, the social control argument posits that the presence of high income residents will call for increased levels of accountability around particular rules and norms in the neighbourhood; thus yielding more order and safety. It has been argued that higher levels of socioeconomic status, residential stability, and homeownership lead to increased social organization. This ultimately led to reduced levels of crime and delinquency (Sampson and Groves, 1989 as cited in Joseph, 2006).

The third proposition is that mixing incomes in housing developments would also aid in managing negative behaviour as a 'culture of work' would break a 'culture of poverty' that was attributed to socio-economic isolation of poor neighbourhoods (Smith, 2002). This is because higher income residents would serve as role models for low income residents around home ownership, work ethic and other individual actions. Role modeling could occur through observation of the behavioural actions of affluent residents going to work and school. Role modeling could also occur through direct interaction with affluent residents through advice given as an example. The fourth proposition suggests that mixed income developments would also assist in rebuilding better communities as the presence of higher income residents would automatically bring in additional and higher quality services and amenities that were not previously accessible in low income neighbourhoods due to market forces and limited political power (Joseph, 2006:213-216). This rationale also speaks to inner city redevelopment. The social stigma attached to public housing would be eroded as the presence of higher quality units would become incentives for property owners to maintain their developments in order to attract and retain middle income tenants. In addition, the development of new upmarket residential property in neglected areas in the city would catalyze investment and further development in the neighbourhood (Smith 2002:9). It has been noted that two approaches to mixed income housing development have been used in America. The first approach focused on revitalizing original developments in the inner city in order to attract middle income households to metropolitan areas. The second approach focused on integrating marginalized black households within housing markets in the suburbs. This was done through dispersal programs such as the national Moving to Opportunity for Fair Housing Demonstration Program as well as the Gautreaux Assisted Housing Program in Chicago whereby housing vouchers were issued by the state to qualifying beneficiaries in order to enable housing mobility for the extremely low income households (Joseph et.al. 2007: 371).

Smith (2002) highlights that 12.1 million households in America, use more than half their income for rent. The limited resources available for housing production programs has also resulted in state housing programs not being able to meet the demand of affordable housing in the cities. In addition, the lack of public support to public housing development, due to factors such as NIMBYism and other stigmas, has also affected the construction of new public housing even with adequate funding. Mixed income housing developments promised the alleviation of political and financial barriers in meeting the need for affordable housing. Apart from improved quality and design of residential units that mixed income housing developments promised; leveraging off private sector resources to produce and preserve affordable housing stock would enable state to develop more affordable housing units with less state subsidies. This would be done through providing incentives as well as imposing development requirements on private sector. Secondly, broadening the net of eligible public housing beneficiaries to low and moderate income families; instead of only the extremely low income families; would increase public support for such developments and funding (Smith, 2002).

It has also been argued that the proposed mega housing projects in South Africa have adopted a mixed income neighbourhood development approach, comprising of clustered islands of similar income groups within a development (Charlton 2017: 97). The reason why mega housing projects are not solely mixed income housing development is because of the different objectives pursued. Mega housing projects are focused on creating a new development with its own economic node that will be sustainable for the neighbourhood. A mixed housing development approach has been preconceived whereby the product output includes serviced residential stands that can be developed by property owners; low and high end bonded and rental housing units; social and affordable housing units; and social and economic amenities in one mega housing settlement (Gauteng Province, 2015). Both mega housing projects and mixed income housing are seen as catalytic projects which aim to attract private sector investment in developments either through increasing property stock or attracting private businesses into the area.

2.5 Critiques of the mixed income housing approach

Literature has highlighted that mixed income approaches could yield positive outcomes and these include increasing affordable housing stock, delivering high quality housing as well as de-concentrating poverty. Literature has also highlighted the danger in utilizing the approach as a rationale to address poverty in low income neighbourhoods. This is because the mixed income housing approach has mostly been proposed through dissatisfaction with previous thrusts of low income housing outcomes (Joseph, 2007). Some of the rationales of a mixed income housing approach have been scrutinized. These included an increase in social capital for the poor; creation of safer and better neighbourhood and promoting a culture of work; developing and maintaining high quality housing; and catalyzing further investment into the neighbourhood (Ceraso, 1995). Evidence from literature has critiqued the objectives of mixed income housing. Firstly, there seems to be very limited evidence tied to mixed income housing approach in reducing negative behaviors. Smith (2002) highlights that although there have been some case studies in America that conform to the theory (such as Lake Parc Place); reports argued that good and active management of public housing was able to curb negative social behaviors. This entailed a process of screening possible tenants, conducting interviews with tenants and enforcing strict rules in the residences. The theory has also been critiqued to presume negative behaviour on the part of low income tenants and in cases where crime activity (such as drug dealing) had decreased has been due to relocation of crime to other neighborhoods.

Secondly, an inconsistent pattern of interaction between tenants was recorded and instances where neighbouring activity occurred was assisted by cultural and racial hegemony as well as strong efforts by property management (Smith, 2002). Few employment opportunities attributed to interaction between low and high middle income household interaction was also highlighted; instead low income tenants attributed temporary employment opportunities to the construction of the project developments. Other temporary employment opportunities created included babysitting and beautician services; although this was tied to interaction amongst tenants in the same racial and cultural groups. It has also been highlighted that interaction amongst tenants had also been limited and more complex interaction amongst tenants (such as having a meal with a neighbor) were not evident. In worse cases (such as Habor Point development in Boston), tension existed between low and high income tenants and transfer of

negative values from well off children to poor children was seen in schools. This was noted as arrogance, disrespect for authority and self-centered attitudes. These outcomes suggest that meaningful interactions as well as a transfer of positive influences amongst tenants in mixed income developments is limited. Furthermore, it has been argued that the notion of a culture of poverty needs to be criticized as it fails to distinguish between cultural patterns and external conditions. This means that care needs to be applied so that the marginalized are not held accountable for conditions that are beyond their control.

The critiques raised have highlighted the challenges faced by low income families in overcoming poverty in mixed income developments. The broader impacts mixed income developments have within a neighbourhood in terms of urban regeneration vary. Although high income residents have been able to exert power to improve municipal services, the strategy used to attract high income residents was through the integration of mixed uses (which have presented their own set of challenges). Attempts to also serve two goals in one development have also compromised the overall needs of the neighbourhood. An example has been seen in western Washington State whereby a group of South Eastern Asian immigrants wanted affordable housing units that would reflect their cultural tradition in both the architectural style and the uses allowed in the property. This was compromised for traditional amenities and design which was able to retain the attraction of high income tenants. It has also been argued that in North Carolina, there are ample low cost rental units available; however the community needs more home ownership opportunities especially when new investment into the area increased property prices and rentals (Smith, 2002). Concerns on the sustainability of increasing affordable housing stock using less public subsidies have been raised. Given that one of the key mechanisms to ensure this was through cross-subsidization, this strategy was dependent upon the strength of the local housing markets. Even in tight markets, only developers with low return thresholds were likely to utilize rent markets to cross subsidized low income units. Smith (2002) also highlights that in certain markets, public subsidies for mixed income developments could also be higher.

2.6 The ideology of mixed use development

Although mixed use has been a planning principle since the late 20th century, the definition in theory and in practice is ambiguous and this is because it comprises of multiple concepts. Grant (2002) highlights three conceptual levels which influence the objectives and strategies of mixing uses. The first conceptual level focuses on increasing the intensity of land use and this could be through mixing forms and tenures of housing. The second conceptual level entails increasing the diversity of land uses through mixing two or more types of land uses. The third level entails integrating segregated land uses through transport infrastructure, as an example. This highlights that mixed use can be found in various contexts and in take form in different ways. Entry into the theory of mixed use has been provided by Jane Jacobs (1961) whereby she talks about the elements which make up a vibrant and successful neighbourhood. Jacobs (1961) argues that fine grain mixing of working, services and living activities create a vibrant, stimulating and safe public realm. She also introduces and makes distinctions between the concepts of mixed primary uses and secondary primary uses. According to Jacobs (1961), primary uses (which are land uses that generate high volumes of people into the area) produce the demand for secondary uses. Primary uses include residential and major employment and service functions; while secondary uses comprise of small scale facilities (such as shops, restaurants and bars). According to Jacobs (1961), movements between these uses creates better distribution over the day and add to local diversity compared to a hegemonic land use

that would only be used during times of the day. The term has been developed further and incorporates aspects of function, scale and time.

According to the Urban Land Institute (1987), projects that are regarded as mixed use entail of two and more functionally and physically revenue-producing uses. These could be housing, employment, recreation and transport; which according to the CIAM town planning, are the main functions of cities. Examples of such projects include the Marina City in Chicago; which was a mixed use residential commercial building complex; and Scotia Square in Halifax; which offered a mixture of office, retail, hotel and leisure uses within a pedestrian oriented setting (Grant, 2002:73). At a geographical scale, Jacobs (1961) refers to mixed use at a neighbourhood scale; Coupland (1997), defines mixed use development from a scale of a building complex; and Grant (2002) defines mixed use at a local scale. This means that urban functions can be mixed at various spatial levels. In addition, space can also be used sequentially in time. This can be seen by the use of a particular space for two or more functions at different time periods. One example is the use of a school as a theatre or community center at night. Grant (2002) also adds that mixed use also entails a compatibility factor. Compatible mixes amongst functions suppresses conflict of land uses as well as encourages diversity of uses within the urban fabric.

The definition of mixed use development has broadened over time to not only be applicable in an urban context, but also in a rural context. Mixed use is also perceived as intense land use when it is not monofunctional (Hoppenbrouwer and Louw, 2005: 971). It can also be perceived as multiple land use or multifunctional land use. The difference between multiple land use and mixed land use is that multiple land use can be used in an urban and rural context while mixed land use can only be applied in an urban context (Lagendijk, 2001). This is another typology of mixed use development which adds to the definition of mixed use.

Rowley's (1996) comprehensive conceptual model of mixed land use and mixed use development has been mainly focused on the internal texture of a settlement at different scales. Key features of the model focus on the grain, density and permeability of a settlement's texture. The grain of a settlement refers to the way in which various elements in settlements are mixed in space. Distinctions between a fine grain and coarse grain in a settlement are determined by whether there is an abrupt or gradual transition between clusters of elements within settlement. Density, which interlinks with the grain of a settlement, is dependent upon the number of users as well as a mix of uses. According to Rowley's (1996) model, a mixed use urban development provides a variety of choices in pedestrian movement which is determined by the layout of street patterns. This model presents another key concept to mixed use which focuses on the personal experiences of people in space. In addition, Rowley (1996) also presents four types of locations where mixed use development is found or promoted. This includes city center, inner urban areas, suburban areas and greenfield areas. He further mentions three approaches which promote and maintain mixed use settings. These include conserving and establishing mixed use spaces; gradual revitalization and incremental restructuring of urban areas; and comprehensive development or redevelopment of larger developed or undeveloped sites.

In terms of closing the theoretical gaps in mixed use concepts, Hoppenbrouwer and Louw (2005) have focused on the aspect of dimensions. They argued that although Rowley's (1996) model provided a basis in conceptualizing mixed use development; it only focused on one

particular form of mixed use within a horizontal dimension. This has been the mixed use between buildings on a flat surface. One other form of mixing which has been highlighted entails a shared premises dimension which focuses on private and informal forms of mixing, for example, housing and employment in one space. This has been seen by family members who work from home and this is perceived as a multifunctional use of space at a particular point in time and the personal use of the space is determined by the occupants. Hoppenbrouwer and Louw (2005) have also mentioned a vertical dimension of mixing which includes underground and multi-level building; which is also perceived as multifunctional use of space. Grant (2002) mentioned that industrial activities, including light industry, has often been excluded from the discussion on mixed use as they are seen to be incompatible with other uses in the post industrial city.

According to Hoppenbrouwer and Louw (2005), mixed use in counties in the north has been used to promote good urban form and sustainable development. In Europe mixed use is used as a strategy towards achieving urban renaissance as well as promoting the compact city design concept. British policy documents state that the reasons for promoting urban living is to increase competitiveness of cities as well as prevent urban sprawl and reduce development pressure on the countryside (Stead and Hoppenbrouwer, 2004); therefore, the government's intention to make urban areas more attractive has been captured in the Urban White Paper published in 2000. The vision encompasses urban living (towns; cities; and suburbs) which offers a high quality of life and opportunities for all and this vision has been elaborated under five main concepts (Lees, 2003:68). In addition, the Dutch policy documents highlight that lack of space in urban areas has been one of the reasons for promoting mixed use development (Stead and Hoppenbrouwer, 2004:122). In North America, the concept of mixed use is seen as part of the New Urbanism movement; which has two main streams at which mixed use can be implemented. The first approach is based on the traditional neighbourhood development (TND) which focuses on developing a new neighbourhood using traditional town planning principles of mixing and intensifying compatible mixed uses. This model has been argued to work better with green field developments. The second approach focuses on transport orientated development whereby mixing uses is intensified along transit stations. In this approach, the development of commercial, offices, entertainment as well as high density residential is concentrated along transport nodes while low density residential disperses towards the edges of the node and within a five walking distance from the node. This approach has been a popular rationale for urban redevelopment as it also presented an opportunity to revitalize urban transport systems (Duany and Plater-Zyberk, 1994; Grant, 2002).

In Gauteng province, the new mega city paradigm utilizes the two approaches in delivering mixed use settlements. It firstly places focus on five development corridors in the region, namely, the northern, southern, eastern, western and central corridor and each corridor would have a specialized economic hubs. Each of the development corridors would comprise of projects that entail development of nodes and new cities, as well as infill development projects. The southern development corridor comprises of the Sedibeng development nodes and projects in this area would focus on creating four new cities and part of this includes SavannaSavanna City. Projects also include the regeneration of Vaal River City and the economic hubs in this development corridor would be based on agro-processing, hydroponics, manufacturing, logistics as well as tourism (Gauteng Province, 2015.).

Proponents of mixed use suggest that the development concept presented many benefits. Given that the objectives of mixed use development are economic vitality; social equity; and enhanced environmental quality, mixed use would reduce car dependency while simultaneously promoting pedestrian and transit oriented cities. This would reduce the environmental impacts caused by automobile use. The provision of intensive, multiple land uses in close proximity to one another would enhance urban diversity and vitality as urban environments would be more active during the day and night. This would also enhance security and reduce crime; enhance the quality and attractiveness of cities as well as increase affordable housing opportunities that are of high quality (Van der Ryn & Calthorpe, 1986; Coupland, 1997; Grant, 2002; Stead and Hoppenbrouwer, 2004; Shi and Yang, 2015).

2.7 Is mixed use achievable?

Rowley (1996) states that the process of city building is initiated by three main interests namely profit seeking developers; public authorities; and citizens. Planners often underestimate the development process in translating the balance of visions and needs into the physical realm; therefore results of initiated mixed use developments often achieve the mixing of land uses, but not the objectives of these mixed use developments. Literature has highlighted that the translation of citizen needs, goals and objectives as well as the decisions taken by private developers in the development processes has often resulted in the gentrification of urban spaces. Results generated by Grant (2002) in Canada also highlighted that mixed used development had trouble taking off as these were perceived to be risky by private developers. This is because such developments often required places that presented high consumption lifestyle and high population growth; which also led to developments of privileged enclaves, particularly on the urban peripheries where bigger residential yards and less traffic noise attracted the high income citizens. In the urban centers, households which had limited economic and social resources were at risk of social exclusion as their daily needs would not be supported over time. This was seen in London's mixed use neighbourhood located in the urban center (Foord, 2010).

The case study of Clerkenwell in London presented the problems of implementing and delivering mixed used developments and neighbourhoods as well as the compromises and trade-offs that residents and businesses made in sustaining mixed uses. Most residents living in Clerkenwell have been presented with advantages that have been traded off for disadvantages of living in the mixed use and mixed tenure neighbourhood. Residents highlighted that they tolerated, rather than enjoyed the mixed use environment as Clerkenwell's good location and permeability were traded off for the noise, disturbances, litter, limited open spaces, inconvenient parking restrictions and low levels of local community cohesion. Foord (2010) argued that the extreme points of these trade-offs would become unsustainable at the cost borne by the residents as the spatial dominance of certain land uses would alter the levels of vitality in the area. Residents that could afford to travel outside Clerkenwell were able to live in this dense mixed use environment; however residents who could not afford to travel, found themselves trapped in an area with limited resources and a declining quality of life. In addition, low levels of social cohesion limited the establishment of shared understanding on daily practices (such as where to put out the litter) amongst residents. Later developments in the area also tended to encourage a new transient population whom compact mixed use urban living was a temporary lifestyle choice while the socially excluded communities found in Clerkenwell saw

no benefit of living in these mixed use locations. This was due to the erosion of their vital and daily services and utilities that were altered by the nature and spatial form of mixed use. These socially excluded communities comprised of families with children and the elderly. Based on this, Clerkenwell was seen to not be mixed enough.

In contrast, local businesses do acknowledge the presence of street animation (such as cafes and vibrancy in the urban realm); however the permeability of Clerkenwell was central to its economic success. Neither is the local residential population a contributing factor in sustaining local businesses as evidence indicated little use of services even by local employees. Local businesses attraction and retention in the neighbourhood has primarily been driven by low costs of operating in the area as well as its prime location; however affordability seemed to be undermined. A third of local business owners mentioned that they would be leaving in the next three years and this was because of rising rental costs and lease renegotiations. The use of local suppliers has also been limited to immediate service needs while markets remain regional and international. The major sentiment shared amongst business owners were that their satisfaction in their geographical location has been traded off with poor parking for customers; problems with overloading and unloading; and security and crime (Foord, 2010). Clerkenwell has demonstrated that the dynamic processes that generate diversity and mixed use neighbourhoods could also destabilize them. The case study has also highlighted the need to understand the processes and points at which mixed use neighbourhoods no longer offer the potential for sustainability.

2.8 The ideology of new town development and satellite cities

The creation of new towns and satellite cities can be traced back to the post World War 2 era in Europe whereby policies focused on new town satellite development along the edges of major cities and this emerged as a response to rapid urban growth and high densities in inner city slums. This approach to urban development was influenced by Garden City and modernist planning ideas where the urban form was prioritized with an intention to develop better living environments for residents as well as provide an alternative to city living (Gaborit, 2010, Ward, 1993 as cited in Harrison and Todes, 2017; Abubakar and Doan, 2017). A critical element to the concept of new towns is the delivery of large scale housing projects that are built around the principles of sustainable development (Gaborit, 2010:25; Harrison and Todes, 2017). These large scale housing projects had to be self-contained and self-balanced. Self-balanced refers to settlements that offer ample economic and employment opportunities to residents in order to limit the need for commuting (Cervero, 1996). Self-contained, which focuses on the activities and flow of people, refers to a settlement that provides a live, work, shop and recreate environment for its community (Cervero, 1995). The idea of satellite cities rests on these settlements becoming centers which are linked to the broader city region through extensive commuting even when these settlements offer employment to the residents (Cervero, 1995, Gaborit, 2010 as cited in Harrison and Todes, 2017).

According to Harrison and Todes (2017:35), the conceptualization and development of new towns varied according to settlement size, population and their distance from the city. This has been evident in the United Kingdom whereby the policy programme on satellite new towns went through three generations. In the first generation, these developments were located 20-30 miles from the center of London. In the following generations, new satellite towns have

increased in settlement size as well as in distance from the inner city of London. In the third generation of the policy, new towns were located on the urban peripheries and with minimum populations of 150 000. Earlier towns focused on developing rental housing for low skilled families working in industries that were located on the periphery. This has gradually changed towards providing for a mix in housing tenure, type and occupation (Alexander, 2009, Ward, 1993 as cited in Harrison and Todes, 2017). In contrast to the traditional neighborhood design approach adopted in cities in the United Kingdom, Stockholm new towns reflected a transit oriented development design whereby new towns were planned around mass transit routes and stations. These settlements were planned to provide some level of local employment, while also promoting extensive commuting within the city region. Transport nodal developments were also reflected in French towns; which were expected to be larger in settlement size than in the UK and offer 80% local employment opportunities. Gaborit (2010:25) has also highlighted that new town developments have also emerged from the process of per-urbanization. As a way of containing urban sprawl, piecemeal citification took place in peripheral towns as well as in suburbs and rural areas that were located close and far from the cities

From a finance perspective, new satellite towns can either be state led or private sector led, with some instances where they are initiated by the private sector which partners with the state. A welfarist approach or a neo-liberal approach can be adopted in state led developments. It has been highlighted that in the post-World War 2 era, several eastern European countries had financed and developed new towns as part of welfarist policies (Gaborit, 2010). The approach had been influential in several and former colonies in this period in places such as Hong Kong, India, Singapore and Egypt whereby much effort went into the development of economic activity, employment and a social mix of housing (particularly affordable housing) in these settlements (Harrison and Todes, 2017: 35). In Hong Kong, new towns were initially developed around public housing and industrial development in the 1950s, 1970s and 1980s with private housing being introduced thereafter (Hills and Yeh, 1983; Ching, 2007). In the urban parts of China a Danwei system was also used to match industrial jobs to workers. The system offered a comprehensive package of welfare and social services that also included housing; daily life facilities; shops; educational recreational and medical facilities This ensured a strong focus on self-balance in state planned satellite towns which was successful in limiting commuting until the 1980s'. (Wang and Chai, 2009; Harrison and Todes, 2017:36). In the 1970s, India's developmental state undertook an extensive programme of developing new towns centered mainly on steel and other industries. This programme also included the development of satellite cities, as a way of decongesting large cities such as Mumbai (Levien 2013, Shaw 2004, Vedula 2007 as cited in Harrison and Todes, 2017).

Since the 1990s, the development of satellite towns emerged in the context of neo-liberalization whereby financial deregulation, economic liberalization and free market capitalism emerged. The mutation of the socialist government system promoted privatization and this was evident through foreign and local investments penetrating into the real estate market. Since then, socialist governments' approach to new satellite developments has shifted to accommodate the neo-liberal agenda and supported private sector led developments. It has been highlighted by Harrison and Todes (2017:37) that more satellite town developments are driven mostly by the private sector, with an intention to make profit and in some instances, partnerships with the state emerge around new economic activities; special economic zones; or around middle and high income residential developments. India provides two examples where state has supported

private sector development. The designation of special economic zones has been effective in attracting foreign investment in industries such as software services. Another example is the IT corridor in Chennai, whereby services located along the urban peripheries were followed by supporting services from the state (Levien, 2011; Levien, 2013). In China, entrepreneurial driven local governments in cities, such as Shanghai and Beijing, have driven major satellite city developments with the intention of increasing cities' global competitiveness. This is done by providing space for development of thriving sectors, such as IT, and also through the relocation of old industry. Satellite city developments have also been seen as revenue generators through capturing increases in property values (Jie, 2015 as cited in Harrison and Todes, 2017).

According to Abubakar and Doan (2017: 549), new town development in Africa was adopted after independence as part of national planning policies. New town developments were driven by the need to establish post-colonial new capital cities and such examples included Abuja, Dodoma, Gaborone, Lilongwe and Yamoussoukro. These were symbols of new found political power that were embedded in modernist designs. The capital cities were also established to serve new administrative functions; decongest colonial capitals; remove colonial imprints on older capitals; provide adequate housing and basic services to growing urban population; and to also encourage regional development. The re-emergence of new town developments has been through the ideas of satellite towns. This has been driven by the rapid urban growth taking place African cities. Planning of new towns has been done in order to attract and accommodate the growing middle income class as well as to escape the perceived chaos in the city (Watson, 2013). Some versions of these satellite developments have been identified on the peripheries of Luanda; one example being Kilamba (Buire, 2014 as cited in Harrison and Todes, 2017). It has also been argued that the aggressive promotion of new town developments by property developers; consultants and international agencies has also contributed to this phenomenon (UN-Habitat, 2009).

In Gauteng, a history of state led and private sector led satellite town development in the peripheries has also been evident and this initially included the expansion of the mining sector. This was followed by the development of towns focused on heavy industry such as steel and petrochemicals as well as displaced developments of displaced urban settlements in the apartheid era (Harrison and Todes, 2017). Another example was the spatial restructuring processes that occurred in the 1970s and 1980s on the urban peripheries. This was done through the politically driven Regional Industrial Development Programme in order to create industrial decentralization points as a way of reviving the declining urban economy (Hart and Todes, 1997; Beall et.al, 2000).

The current re-emergence of satellite towns in the region is driven by the need to escape the challenges prevailing in the existing city. This has also been the rationale in Russia and Egypt whereby the appeal of new satellite towns with several millions of people and economic activities are proposed as a way of addressing congestion in the capital cities (Argenbright, 2011; Guardian March 16, 2015 as cited in Harrison and Todes, 2017). The new proposed satellite towns have been conceived as mega cities that would form part of the Johannesburg, Sedibeng, West Rand and Tshwane development nodes. Savanna City forms part of the mega city developments in the Sedibeng development nodes which is led by the private sector. These new cities would be anchored by four elements that constitute a new paradigm on future cities; namely inclusivity, production, sustainability and good governance. In order for these cities to

be inclusive, pro-poor services and infrastructure would be delivered to the poor, while policy places a strong emphasis on the economic development of the settlements in order for the cities to be productive. One of the ways this would be achieved is through the re-industrialization of the region (Gauteng Province, 2015). It is also imperative that the local economies of the new cities are stable over time and also continue to provide employment opportunities for the residents as this affects the sustainability of the settlements (Harrison and Todes, 2017).

2.9 The challenges of creating and sustaining local economies in new town development and satellite cities

It has been argued that although earlier towns tended to avoid dormitory style settlements, towns developed in the second generations often became 'bedroom communities' (Cervero, 1995; Dinić and Mitković, 2016). Although precedence of these new cities has been taken from new town developments in Asia, Gauteng's cities are relatively smaller in scale as well as the urban growth projections.

International and local case studies have indicated the difficulty of creating and sustaining local economies and this is caused by their volatile nature to market changes. In the UK, new town developments became more self-sufficient and self-contained in the first two decades where new town programmes placed more focus on economic development and job creation in these settlements during the 1950s and 1960s; however the new towns faced economic decline from the 1970s and this was during a recession and economic restructuring that occurred in the country. The erosion of the local economies continued with deindustrialization and globalization in the 1980s and 1990s (ward, 1993; Cervero, 1995). It has been highlighted that their initial growth was attributed to rapid economic expansion, particularly in the industrial sector. Towns that were most affected were those that were dependent on a single major employer or sector (Alexander, 2009).

The new towns in Hong Kong have also highlighted another major challenge facing self-contained settlements. Economic restructuring from secondary to tertiary sector in the 1970s favoured more growth in urban centers, and even with policy attempts to decentralize offices, many remained in the urban centers. In addition, the new towns provided a mismatch between the growing job opportunities available and the level of skills the working population possessed. This resulted in considerable cross-commuting characterized by residents traveling to tertiary institutions located in the urban while new firms brought in their own workers (Ching, 2007). Hong Kong and UK towns have also reflected many instances where satellite cities have become dormitory towns or operate as part of a larger city with extensive cross commuting. Some of the reasons for this entail, the vulnerability of the local economies to shift in market trends, inability of these new towns to attract the targeted population numbers and new businesses. The poor location and image of the new towns as well as the lack of appropriate skilled and educated workforce found in the area have been unattractive features that discouraged new businesses to locate there; while the image, as well as the lack of amenities in the towns weakened the towns' ability to attract the middle income households. It has also been highlighted that it is difficult to perceive these new towns as autonomous entities as the provision of good transport infrastructure and networks had enabled commuting; therefore making new towns an extension of the main urban center. The absence of good transport networks only added to traffic congestion.

New town development has also been susceptible to poor predictions. Such was the case in Paris, whereby the 1960s population predictions in France were experienced to reach 15 million by 2000, which rationalized the demand for new town developments; however population growth was less than 11 million at that time and these towns became dormitory towns which relied on extensive commuting (Cevero, 1995). The city had also depended on industrial growth to boost the local economies for the new towns, however, industrial decline in the 1970s resulted in some new towns not being able to attract economic activities; instead much economic activity was supported by offices, which were more concentrated in the urban centers (Tupen, 1979). A worst case scenario as a result of poor predictions and understanding of local dynamics could lead to long term negative consequences that cannot be solved by later developments (Stewart, 1996 as cited in Harrison and Todes, 2017). New towns planned around Cairo in the 1970s eventually faced reverse commuting due to the inadequacy of the towns to provide sufficient services and social environment services as well as the high cost of housing for workers. Private initiatives taken to revive the towns were unsuccessful as poor transport infrastructure and high housing prices were also unattractive for high income groups (Gaborit, 2013). Even though considerable public funds have been invested into the developments; only three per cent of the population lives in these settlements, while 60 per cent of the population still lives in informal settlements (Gaborit, 2013). In China, new towns development in Shanghai between 1950s and 1970s had also managed to attract less than a third of the planned population of 2.1 million and instead of emptying out the crowded inner city, the towns attracted mostly immigrants from surrounding regions. Recent satellite towns developed in Shanghai have also performed differently. Towns that were able to attract reasonable population sizes, such as Songaiang, enjoyed good locations and had strong economic foundations. Those that were more remotely located and offered poor services and facilities were unattractive to residents and investors (Jie, 2015).

It has also been noted that older European towns attempt at creating social balance were successful for some time, however they now feature high concentrations of lower income populations and immigrants (Gaborit, 2010); while new private developments in Asia have little access for the poor even with attempts taken to create socially mixed environment, the result is mostly segmented enclaves (Bhattacharya and Sanyal, 2011).

2.10 The experience of Gauteng region in creating sustainable local economies in satellite towns

In the late 1940s, satellite mining towns, such as Carletonville, had a thriving economy that attracted residential development as well as the manufacturing sector. However, environmental degradation (sinkholes), followed by a decline in the mining sector, threatened the sustainability of Carletonville (Ruhiiga, 2017; Harrison and Todes, 2017). Local attempts to revive the local economy were seen with the development of an industrial park in the 1980s, but the recession, coupled with political instability in the 1990s made it challenging for this to happen. Carletonville initially was the fastest growing town in South Africa in the 1960s, with potential of becoming the core of Johannesburg and this was due to the economic growth attributed to mainly to mining activity. Today, it is seen as a branch economy to the greater Johannesburg; although, it has been speculated that employment in mining has dropped. The 2001 census indicated that 82.9 per cent of employment in the area has been attributed to the

municipality and job seekers in the area have chosen to reside in the area in the hope of new employment in the future. The Carletonville case study provides an example of how satellite towns, as self-contained settlements fail to address the question of resilience.

The Vaal triangle is also another example of how satellite towns that had been developed around thriving industrial economic projects at that time, have also crumbled when these industries were no longer performing. The Vaal triangle, as a heavy industrial satellite complex, had been established along provincial economic projects in order to enhance the efficiency of these economies. This began with the development of Vereeniging in 1982 and was a coal mining town (Trapido, 1984). Further investments around the area included the development of the steel industry in 1943; which was catalyzed by the wartime demand for steel and a specialized steel mill was constructed. A lot of public investment went into the construction of railways, dams and power in order to support the industrialization in the area. Public investment also went into the development of Vanderbijlpark town and townships of Bophelong and Boipatong in order to house the high skilled technical white workers as well as the unskilled semi-black workers (Bos, 1994). The later development of Sasolburg began as a state-led mega project that established an oil plant in the area and the town of Sasolburg was planned and built for the white workers while Zamdela was for the black employees. The performance of these settlements has been susceptible to the changes occurring in these industries. While Vanderbijlpark thrived in the 1950s and 1960s due to the economic boom, domestic demand for steel and state support in the area; the town had faced economic decline since the economic restructuring in the 1990s when import steel tariffs reduced from 30 percent to 5 percent. This resulted in the workforce in the area as well as 7.29 percent population decline. Further global financial crisis in 2008 and market changes in 2014, made it challenging for the steel industry to recover. Currently Sasolburg is the only town that is still providing local economic opportunities. Vanderbijlpark's local employment opportunity is attributed to the local municipality, which accounts for 50 per cent of employment in the area. Many locals might have to leave the area or face extensive commuting in order to access economic opportunities in other parts of the region (Harrison and Todes, 2017).

2.11 The ideology of catalytic projects

Catalytic projects are often coined as various terms. Monclus (2003) uses the term 'strategic urban projects'. These strategic urban projects often emerge from strategic urban plans and are used as leveraging tools in urban development. This is because they are often initiated by state with hope of attracting private sector investment. Strategic urban projects have also been described as selective urban interventions that manifest into large urban projects or infrastructure in order to realize the strategic urban visions of a city. Garcia (2008), uses the term 'strategic devices' and describes them as collective visions, missions and plans that attempt to settle or stimulate specific joint courses through individual actions. These strategic devices may contain contractual conditions or could just be indicative and not legally binding.

According to Monclus (2008) strategic urban projects were used to revive economic and urban decline in European cities in the 1970s. In later years, large urban projects were used as mechanisms to relaunch cities (through city branding and marketing) as well as to improve competitiveness of cities globally. This has also been evident in Johannesburg with Urban Regeneration Projects (such as Newtown Cultural Precinct and Maboneng Precinct) being used

as tools to catalyze urban regeneration, local economic growth and increase tourism flows in the inner city (Mbhiza, 2013; Murtagh). It has also been evident with the branding of Johannesburg as a World Class African City. In some cases, strategic urban projects have been linked to mega events as a way of rationalizing their need. This has been the case with Barcelona, whereby the winning of the 1992 Olympic event was used to rationalize the need to regenerate the nuclei city and also guarantee further economic growth. In South Africa, the Cape Town Olympic bid was conceptualized as providing a catalyst for improving the lives of the previously disadvantaged citizens as well as restructuring the apartheid city through developing an integrated public transport system (Pillay et.al. 2009.). the hosting of the 2010 FIFA World Cup had also influenced the need for urban regeneration initiatives prior to the event. This entailed upgrading of facilities and infrastructure as well as construction of new stadiums and public transport systems (Hannan and Sutherland, 2015).

Former minister Lindiwe Sisulu's interpretation of the proposed catalytic projects is that they would utilize R90 billions of state resources in order to trigger R150 billion private sector investment within a period of five years. They would also have huge economic spin offs whereby thousands of jobs would be created and sustained (Sisulu, 2016 as cited in Ballard, 2017). According to the Housing Development Agency (HDA), human settlement catalytic projects are spatially targeted interventions that aim to change the way state provides infrastructure by restructuring settlements patterns. Therefore, project proposals that were submitted by municipalities and developers had to be compliant with the principles of intervention, integration, and impact in order to be considered. This meant that project interventions needed to be on well-located land that also offers access to social infrastructure; support the ideas of compact city development as well as as well as lead to social and spatial transformation. The perceived benefits of these catalytic projects include increased economic opportunities created by project construction as well as small medium and micro enterprise (SMME) job creation in the settlement once the project has been completed. The new settlement will also provide new business opportunities in the manufacturing sector; as well as mixed integrated development and communities (Housing Development Agency, 2015).

The City of Cape Town's interpretation of catalytic projects has been drawn from the 2015/16-2017/18 Built Environment Performance Plan (BEPP) guidelines. The city defines catalytic urban development projects as land development initiatives that are integrated into the city and offer intensified and mixed land uses, with residential land offering a variety of densified mixed income housing opportunities that would be able to support viable public transport systems. These land development initiatives should be strategically located within integration zones in cities and possess the ability to significantly impact on the current spatial forms. They require major infrastructure investment as well as specific skills across a number of professions and multiple stakeholders. They also require a blend of finance whereby public funds are able to leverage private sector investments and unlock household investments (Marks, 2015).

In the Gauteng Provincial Government and the Western Cape Provincial Government, there is an overlap between catalytic projects and priority projects. Gauteng Premier, David Makhura, perceived catalytic mega housing projects as national priority human settlements projects (or mega cities) that would yield a minimum of 15 000 housing units. It has also been mentioned that 15 of the 48 national priority human settlements projects would be located in Gauteng (Makhura, 2014; Gauteng Partnership Fund, n.d; Ballard, 2017). The Western Cape Department

of Human Settlements outlines three objectives of catalytic and priority projects in the province. This includes providing settlements that offer good basic and social services; providing multiple tenure options for different income groups; and developing improved settlements through private sector contributions as well as government efforts (Western Cape Government, 2018).

2.12 Conclusion

The literature explored has helped in understanding the new housing delivery approach as form large scale housing developments in South Africa. This form of housing approach has reflected the ideologies found in five concepts; namely mega projects, mixed income housing development, mixed used development, satellite towns and cities development, as well as catalytic projects. The new housing policy direction has also appeared as a form of mega project associated with the ideas of new town development that portray a fantasy of modern urbanism.

A key factor that was common in all the ideologies presented, was that they have all come about with the intent of tackling more than one major problem at a time; meaning that there can be more than one driver influencing the need for mega projects, mixed income housing and mixed use development; as well as catalytic projects. The conceptual framework below provides a consolidated picture of this at various state levels.

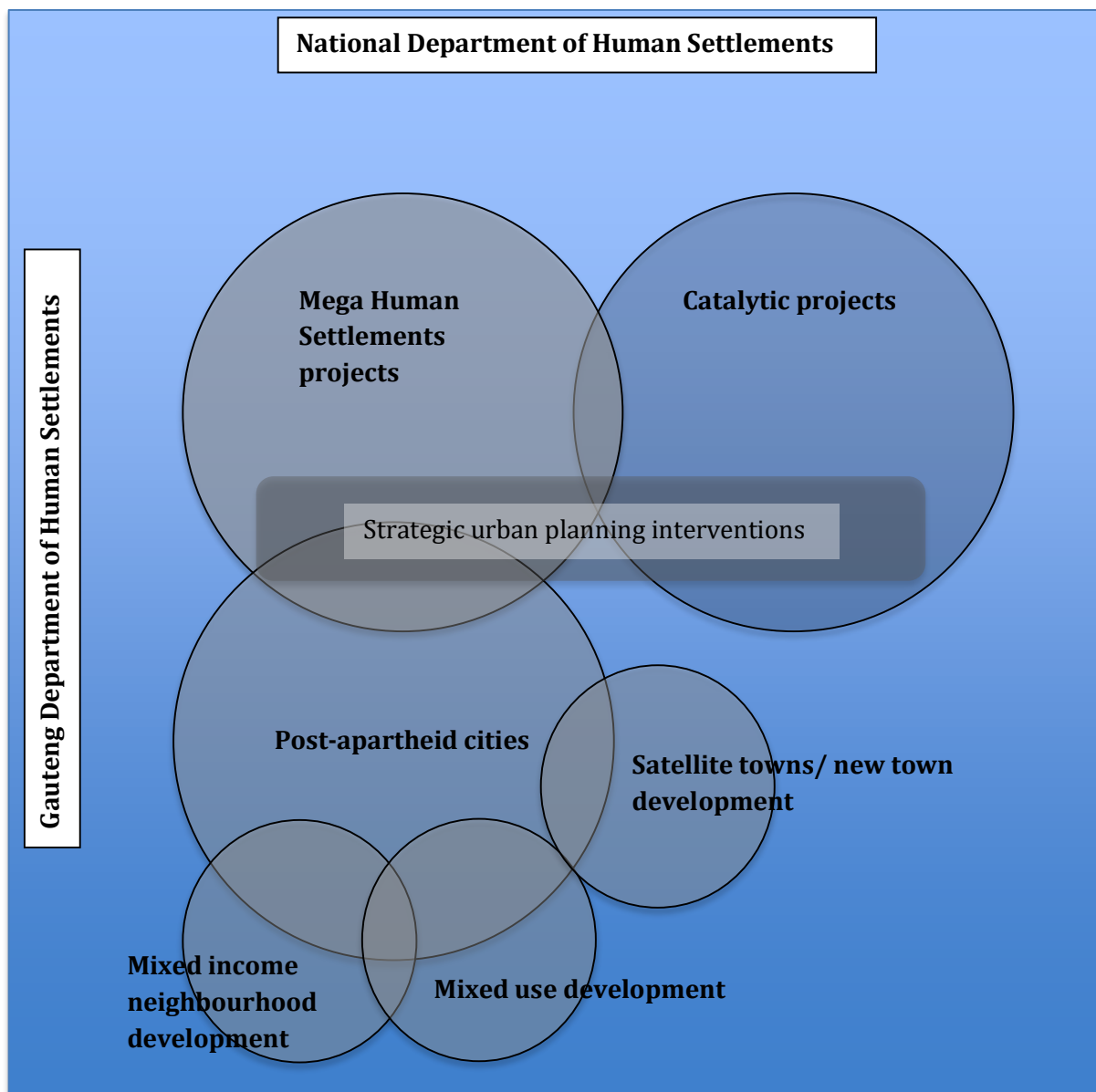


Figure 13: Conceptual framework

In South Africa, the mega housing projects approach seems to have been politically driven. Literature by Ballard and Rubin (2017) has indicated how the approach quickly moved from an announcement towards documentation and implementation processes that have included only few state officials and politicians. At national level, the mega housing project approach has been perceived by the state as leveraging tools that would catalyse private sector investment; as state's R 90 billion initiation was expected to trigger R150 billion in private sector investment regarding human settlement developments (Sisulu, 2016 as cited in Ballard, 2017). It has also been evident that the use of mega projects in the housing was intended to re-instate political powers of the ruling party, as these projects tend to bypass current planning and policy regulations. In addition, their scale also allows for the ruling party to demonstrate their ability to effectively meet service delivery demands in projects that were attention grabbing.

At provincial level, the mega housing project approach has also been perceived as strategic urban interventions tools that sought to create new 'post-apartheid cities' that are not only integrated to the broader city but, are self-contained and self-balanced humans settlements. As highlighted in the literature; self-balanced refers to settlements that offer ample economic and employment opportunities to residents in order to limit the need for commuting (Cervero, 1996). Self-contained, focuses on the activities and flow of people; interpreted as a settlement that provides a live, work, shop and recreate environment for its community (Cervero, 1995). The approach towards achieving this would be done through the provision of intensified mixed land uses and a variety of mixed income housing opportunities in one development. In South Africa, this has been done through a mixed income neighbourhood approach, whereby settlements consist of clustered islands of similar income groups in one development (Charlton, 2017:97). The literature review has also presented the variances between the ideologies on new towns and satellite city development. Unlike new town development (which makes use of the traditional neighbourhood concept design), the idea of satellite cities rests on these settlements becoming centres which are linked to the broader city region through extensive commuting even when these settlements offer employment to the residents (Cervero, 1995, Gaborit, 2010 as cited in Harrison and Todes, 2017). This means that satellite towns make use of the transit-oriented development concept approach in terms of settlement development.

The literature discussed how in South Africa; the traditional neighbourhoods design concept, as well as the transit orientated development concept have been used in the conceptualization of Gauteng's mega cities. As noted in the chapter (and elaborated in the context chapter), Gauteng Province's 30 mega human settlements would be spread across the province's five economic corridor developments (which are each anchored by the existing major local economies). Major investments will be allocated to prioritized public transport networks which will link these settlements to the economic corridors. In addition to this, the new settlements would also provide a mixture of various land uses such as worship sites, hospital sites, recreational sites, municipal sites and educational institutions (Gauteng Department of Human Settlements, 2015). Lastly, the literature has also argued that in African cities, the re-emergence of satellite towns has been driven by the need to accommodate the growing urban middle class, as well as the need to escape the perceived challenges prevailing in the existing city (Watson, 2013). South Africa has not been any different, as Gauteng Province's interest in mega projects has been framed by the idea of starting afresh (Argenbright, 2011; Guardian March 16, 2015 as cited in Harrison and Todes, 2017). The literature also intended to highlight that in the context of South Africa, cities could be created through a decision (Ballard and Rubin, 2017: 15).

The chapter has also outlined some of the issues that could emerge for the state when using these ideologies to form the new housing policy. The following chapter presents how the mega projects policy has been articulated and further developed at various state levels and urban contexts of South Africa.

CHAPTER 3: CONTEXT OF THE STUDY

3.1 Introduction

The chapter sought to provide context for this research, as well as provide guidance for the lens the study will be approached and analyzed. Thus, the chapter outlines the key aspects of the mega projects approach, as well the state's anticipated outcomes of the approach. This includes how the approach has been interpreted in the state through the various housing programmes adopted at national, provincial and local levels of government; as well as the various aims of each programme adopted. The chapter also traces the development of the approach since the announcement by Minister Sisulu in 2014; as well as how it has transpired spatially. Policy documents, as well as a literature on mega projects, were used to analyze the new housing approach. The chapter highlights that there is a shift in the mega projects approach at national level that is moving towards a Priority Human Settlements and Housing Development Areas programme (PHSHDAs). This is not perceived as the development of the catalytic projects programme; rather a complete transformation of the mega projects approach. It also seems that the mega projects approach has been interpreted differently at the different tiers of government. At national government, the mega projects approach was articulated through catalytic projects; which showed no linkages with Gauteng's mega human settlement programme. Each level of government derived their own autonomous list of mega projects, which at times seem to overlap. The PHSHDAs approach has started to be partially interpreted in spatial plans of the local government (such as the district municipality, but not at local municipality). The chapter also locates Savanna City spatially in Gauteng region, as well as in the national and provincial programmes, in order to observe how the policy has been articulated spatially.

3.2 The interpretation of the mega projects approach at national level of government

As mentioned in the introduction, the megaprojects policy turn began with the announcement by Minister Lindiwe Sisulu in the 2014 National Department of Human Settlements Budget Vote Speech (Sisulu, 2014; cited in Ballard and Rubin, 2017). This was two months after her return to the portfolio (as she was previously the Minister of Housing during 2004-2009). In her speech, the minister raised concern on the slowing housing delivery rate (of 25%) since her original tenure; and proposed a turn to large scale projects, called megaprojects or catalytic projects, as a solution that would increase housing delivery. It has been noted that the turn to megaproject was announced as the only way of housing delivery by the minister; as a minimum of 10 000 housing units will be delivered in one project (Sisulu, 2014; cited in Ballard and Rubin, 2017). The Housing Development Agency was then appointed to draft a Master Spatial Plan (MSP) for human settlement development (South Africa, Housing Development Agency, 2017). This was a concept document that would be used in order to ground the megaprojects idea within the established national development principles (i.e.: the NDP vision 2030 and the 2015-2019 Medium Term Strategic Framework) (Department of Human Settlements, 2014:8). The significance of the MSP was that it intended to provide the National Department of Human Settlements with the ability to guide spatial planning in the country through a single national project pipeline (South Africa, Housing Development Agency, 2015).

It has not been clearly visible to trace the connection between the process used in deriving the final list of catalytic projects and the assessment criteria drafted by the HDA. As mentioned by Ballard and Rubin (2017:7) that shortly after the concept note was completed; the National Department of Human Settlements organized a National Human Settlements Indaba in October, 2014 that sought to generate a buy-in into the policy. At the event, a Social Contract for the Development of Sustainable Human Settlements was signed by 68 stakeholders; committing themselves towards creating 1.5 million housing opportunities by 2019 (South Africa, Department of Human Settlements, 2014:22). The minister also provided an email address for municipalities and developers to submit their proposals for catalytic projects. In order to bring procedural order to the process, the HDA developed a questionnaire that required project proposals to explain the settlement's proposed density, mix of housing typologies, property market supply and demand, funding models, potential for home enterprises, integration with existing bulk infrastructure, and plans for social services (stakeholder interview, 2015; cited in Ballard and Rubin, 2017). The questionnaire was intended to be used to assess whether the local authorities had the capacity to host the large scale projects for a long period of time. The HDA also developed a criteria (which is provided in the MSP document) aimed to identify areas of spatial targeting for catalytic projects. The criterion was focused on the identification of local municipalities that presented the greatest housing need; as well as the greatest potential for economic growth. A total of 117 municipalities, which had both need and potential, were identified and these constituted half the municipalities in the country (South Africa, Department of Human Settlements, 2014:11). The questionnaires, as well as the spatial targeting assessment criteria were intended to be used, by the HDA, to formulate a list of catalytic projects. However, this was not the case. In August 2017, the HDA announced that the National Department of Human Settlements, together with the Human Settlements Ministers and Members of Executive Councils meeting (MINMEC) approved for delivery a pipeline of 48 government-led projects as national priority human settlements projects. These form part of the catalytic projects programme (HDA, 2017; cited in Ballard and Rubin, 2017). This was three years after the policy was announced, and two years before the 2019 target (of delivering 1.5 million housing opportunities).

The catalytic projects programme is a state-led programme that aims to redirect investment from all state departments, and state-owned companies, into prioritized human settlements environments. The programme also intends to catalyze private sector investment in the delivery of these human settlements. The catalytic projects presented state with the ability to, not only upscale housing delivery, but to also restructure the spatial patterns of the former apartheid settlements patterns by redirecting state investments into areas that would yield the greatest housing impact and economic impact (South Africa, Housing Development Agency, 2015). The HDA has been appointed as the entity that will assist the provincial departments and municipalities with the implementation of these catalytic projects; as well as play the role of a programme manager for catalytic projects. Over and above, the role of the HDA will also consist of repackaging of some projects to that of a developer and an implementer of the entire project (South Africa, Housing Development Agency, 2017). Out of the 48 catalytic projects that have been approved, 15 of these are located in Gauteng Province. The updated list of catalytic projects show that in Gauteng, the number has increased to 18; with Savanna City forming one of the projects incorporated into the list (refer to table 1). Funding for the projects is obtained mostly through the Human Settlements Development Grant (HSDG) (South Africa, Department of Human Settlements, 2018).

3.3 Shift in the mega projects policy approach

On the 15th of May 2020, the Minister of Human Settlements, Water and Sanitation (Lindiwe Sisulu) declared 136 priority human settlements and housing development areas (PHSHDAs) across the country (Devdiscourse News Desk, 2020). This is a new housing programme adopted by the National Department of Human Settlements that has been developed through the proposed Priority Housing Development Areas initially announced by the former Minister of Human Settlements (Mfeketo) in May 2019 (South Africa, Department of Human Settlements, 2019). These were intended to advance Human Settlements Spatial Transformation and Consolidation by ensuring that the delivery of housing is used to restructure and revitalize towns and cities, strengthen the livelihood prospects of households and overcome apartheid spatial patterns by fostering integrated urban forms (SabinetLaw, 2019). Just like the PHDAs, the 136 PHSHDAs are designed to address specific housing needs to achieve sustainable human settlements by means of intergovernmental cooperation, integrated planning and coordinated programmed implementation aimed at fast tracking housing delivery (SabinetLaw, 2019). Principles underpinning the PHSHDAs include spatial justice, spatial efficiency, access to connectivity, economic and social infrastructure, access to adequate accommodation and provision of quality housing options and national housing programmes are synchronized within the PHSHDAs in order to direct a significant portion of public funding to PHSHDAs with the intention of attracting private sector investments (South Africa, Department of Human Settlements, 2020; Business Insider SA, 2020). Although not much has been written about how the PHSHDAs programme has unfolded and the criteria that has been used to derive the list of PHSHDAs; the programme is already being integrated at the local (district) level of government and in this instance, in Sedibeng District Municipality's spatial plans. It has also been noted that one of the intentions of megaproject was to reduce the number of small housing projects. The list of PHSHDAs seems to contract this intention.

Table 2: List of PHSHDAS

**LIST OF PRIORITY HUMAN SETTLEMENTS DEVELOPMENT AND HOUSING DEVELOPMENT AREAS
(PHSHDAs)**

PROVINCE	NUMBER OF PHSHDAs	NUMBER OF DISTRICT MUNICIPALITIES WITH PHSHDAS	NUMBER OF METROPOLITAN MUNICIPALITIES WITH PHSHDAS	NUMBER OF LOCAL MUNICIPALITIES WITH PHSHDAS
Eastern Cape	12	4	2	6
Free State	10	3	1	5
Gauteng	26	2	3	4
Kwa Zulu Natal	22	9	1	9
Limpopo	11	5	-	8
Mpumlanga	16	3	-	10
North West	14	4	-	9
Northern Cape	6	4	-	5
Western Cape	19	4	1	11

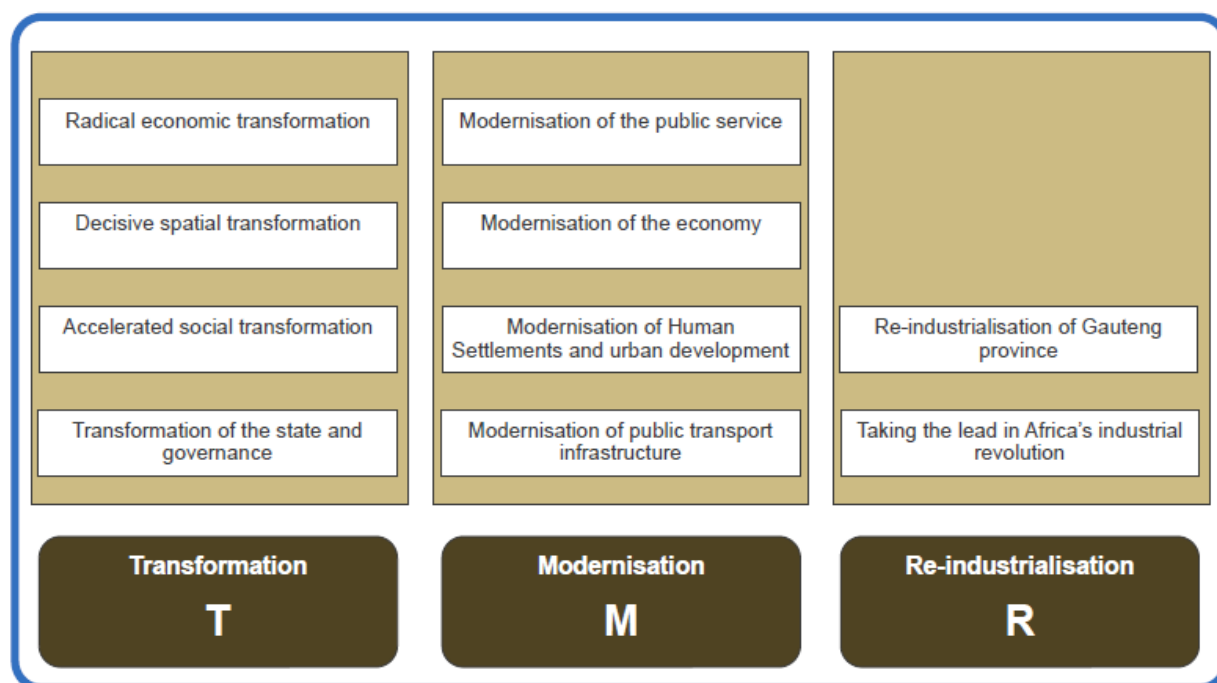
Source: South Africa, Department of Human Settlements, 2020

3.4 Articulation of the megaprojects policy turn at the Gauteng City Region context

The National Development Plan 2030 has acknowledged Gauteng as the province that has enjoyed national dominance, in terms of job creation and growing migration, since 1994. The province is also the 7th biggest economy in Africa accounts for 35% of South Africa's GDP (Africa Check, 2018; Gauteng Provincial Government, 2016). Although it is the smallest province in South Africa; it is home to 14.7 million (25.4%) of the country's population, therefore making it the province with the largest population in the country (Stats SA, 2018). According to the Gauteng Partnership Fund Annual Report (2018), Gauteng has 31% of all the Reconstruction and Development Programme houses in the country. However, the housing backlog in 2016/2017 was estimated to be 600 000 (Msindo, 2016). In addition, the high levels of migration also increase the demand for housing (Gauteng Partnership Fund, 2017).

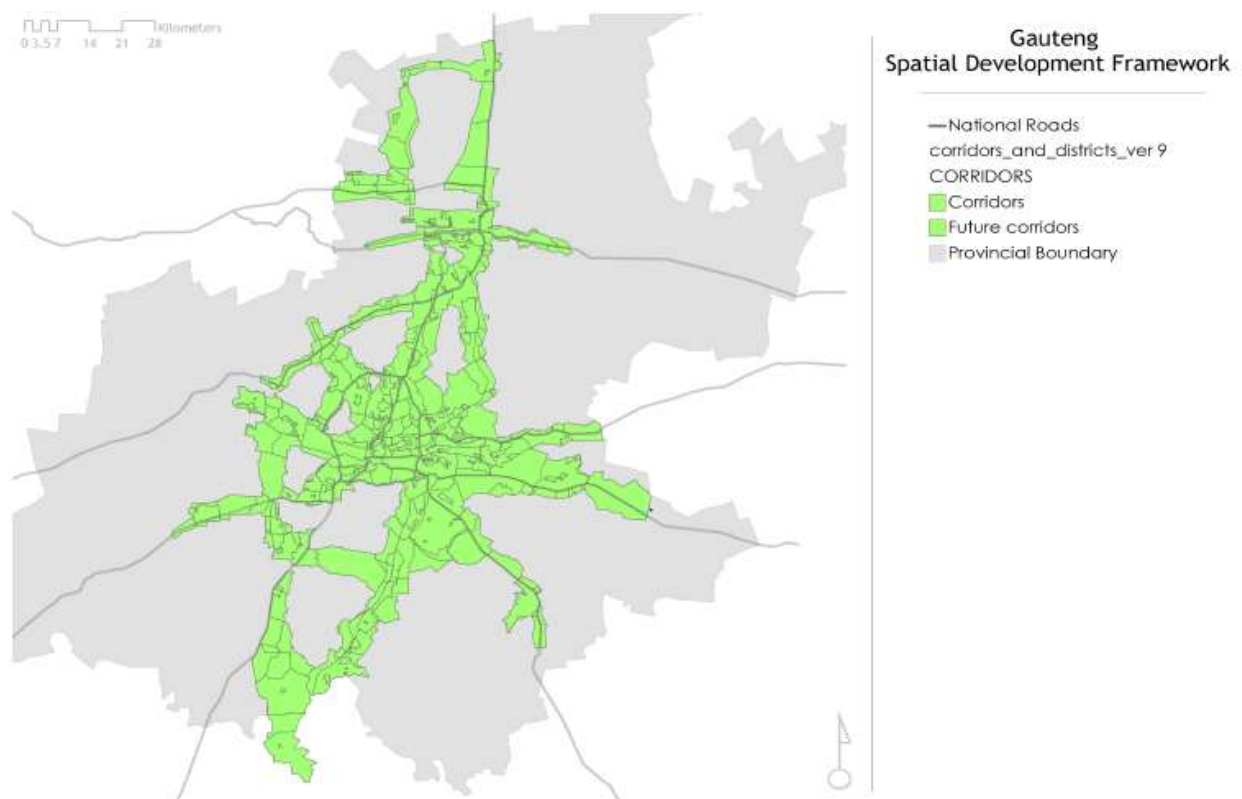
In response to the NDP vision 2030, the programme for transformation, modernization, and re-industrialization (TMR) of the city region was adopted as a strategic roadmap to move Gauteng forward (Gauteng Provincial Government, 2016). The strategy identifies the apartheid space economy and human settlements patterns as key structural challenges that need to be addressed and proposes 10 pillars that will ensure integrated, socially cohesive and economically inclusive development in the city region (Gauteng Provincial Government, 2016). The TMR strategy identifies 5 development corridors, as one of the macro-interventions that will address the triple challenge of unemployment, poverty and inequality in the region (Gauteng Provincial Government, 2015). The 5 development corridors comprise the northern (Tshwane); eastern (Ekurhuleni), central (Johannesburg Metropolitan), western (West Rand) and southern (Sedibeng) corridors; and each corridor has been anchored around the existing major local economies that form part of the region's core cities. Tshwane is the administrative capital of the region and future development of the corridor includes an automotive sector, research and a knowledge based economy. Ekurhuleni's economy comprises manufacturing, logistics and transport hub industries and is mainly anchored by an airport economy. West Rand was primarily a mining economy. Due to decline in mining, a new diverse economy is planned for the area and tourism would be the main anchor. Sedibeng's economy was primarily anchored by the steel industry. Due to decline in the steel industry and the region being hailed as the corridor responsible for food security in Gauteng; diversification of its future economic development includes agriculture, agro-processing, tourism and logistics. An amount of R 100 billion was invested into the economic corridor developments (Gauteng Partnership Fund, 2018). A compact polycentric city development model was proposed for the region; which focuses on concentrating urban development to the region's urban core. This has been outlined through linking the region's core cities to the development corridors in order to channel and enhance economic growth between networks of cities and create multi developmental nodes (Gauteng Provincial Government, 2016; Brand and Geyer, 2017).

Figure 1: Showing the Gauteng's policy and legislative framework



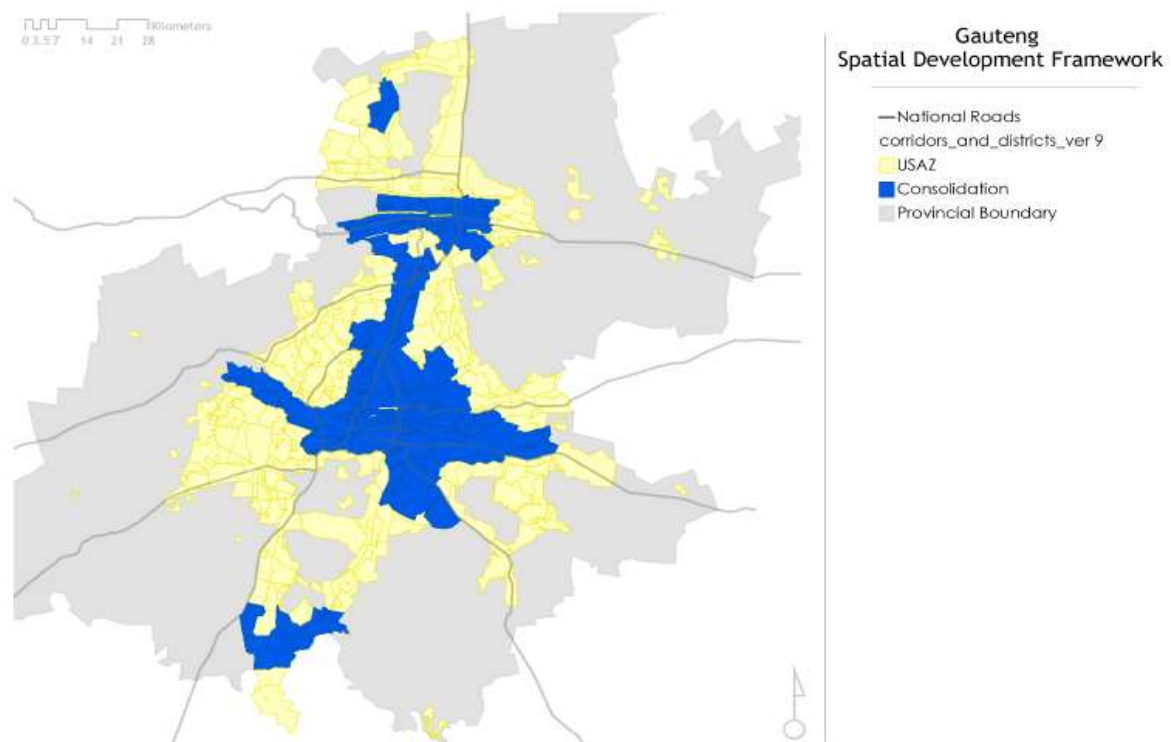
Source: Gauteng Department of Human Settlements, 2015

Figure 2: showing planned corridor development of the Gauteng region



Source: Gauteng Spatial Development Framework, 2016

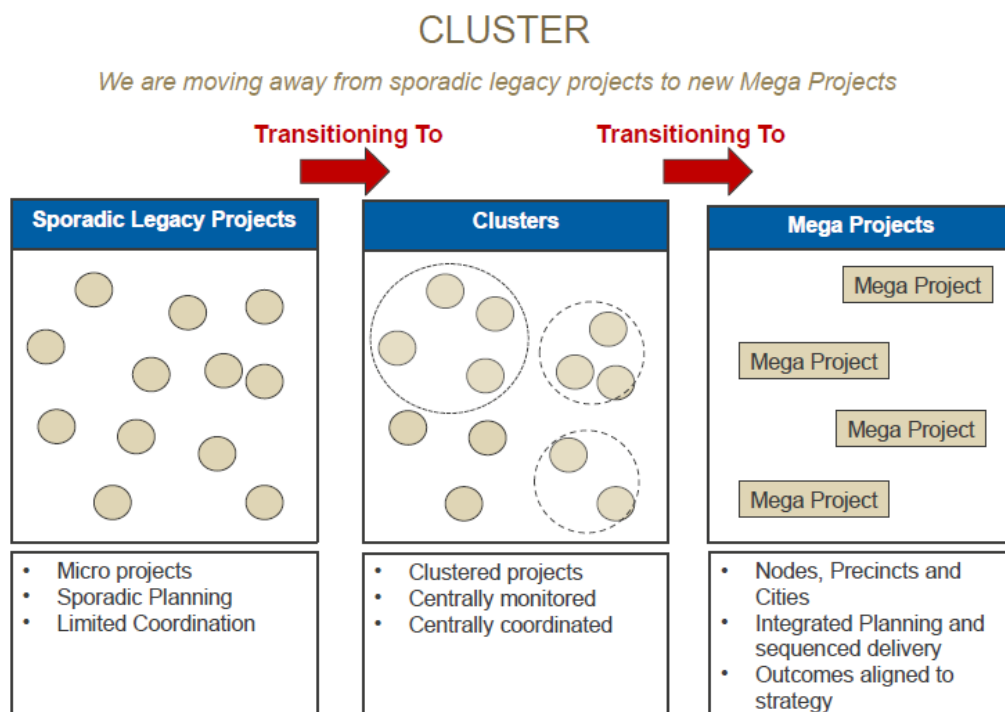
Figure 3: showing the consolidation zone of the Gauteng Region



Source: Gauteng Spatial Development Framework, 2016

In 2015, versions of the new megaprojects policy that were articulated by the Gauteng Provinces, set out an intention of building new ‘mega human settlements’ in the form of ‘self-contained cities’ (Ballard, 2017). Driven by the concern that ‘poor black’ communities are confined to the urban peripheries which were characterized by poverty and unemployment (while wealth and opportunities still remain in urban centers); the province's housing direction echoed the construction of new post-apartheid cities (Ballard and Rubin, 2017: 10). This was reflected in their discussion document titled “Mega Projects: Clusters and New Cities”, which was never developed further (Gauteng Department of Human Settlements, 2015; Ballard, 2017:8). Echoing the national policy, the provincial document also spoke of the need to move away from sporadic micro projects (legacy projects) towards a more clustered approach to housing delivery. Unlike the catalytic projects programme (which completely shifted to megaprojects as the sole housing delivery approach); Gauteng’s ‘mega human settlements’ envisaged a three stage transitioning process that focused on consolidating small legacy projects into megaprojects (Gauteng Department of Human Settlements, 2015).

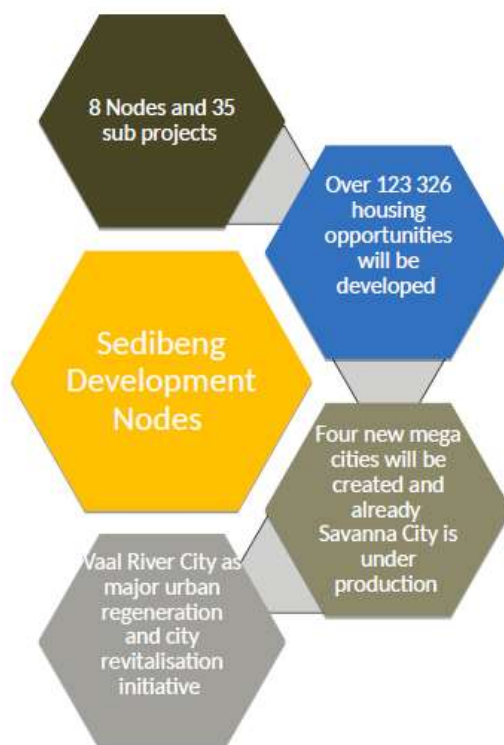
Figure 4: showing the transitioning process to megaprojects in Gauteng



Source: Gauteng Department of Human Settlements, 2015

As shown in the figure, the first stage focuses on locating the micro projects spatially within the region. The second stage focuses on consolidating these micro projects into clusters that would eventually be adopted as the province’s megaprojects (in the third stage) (Gauteng Department of Human Settlements, 2015).

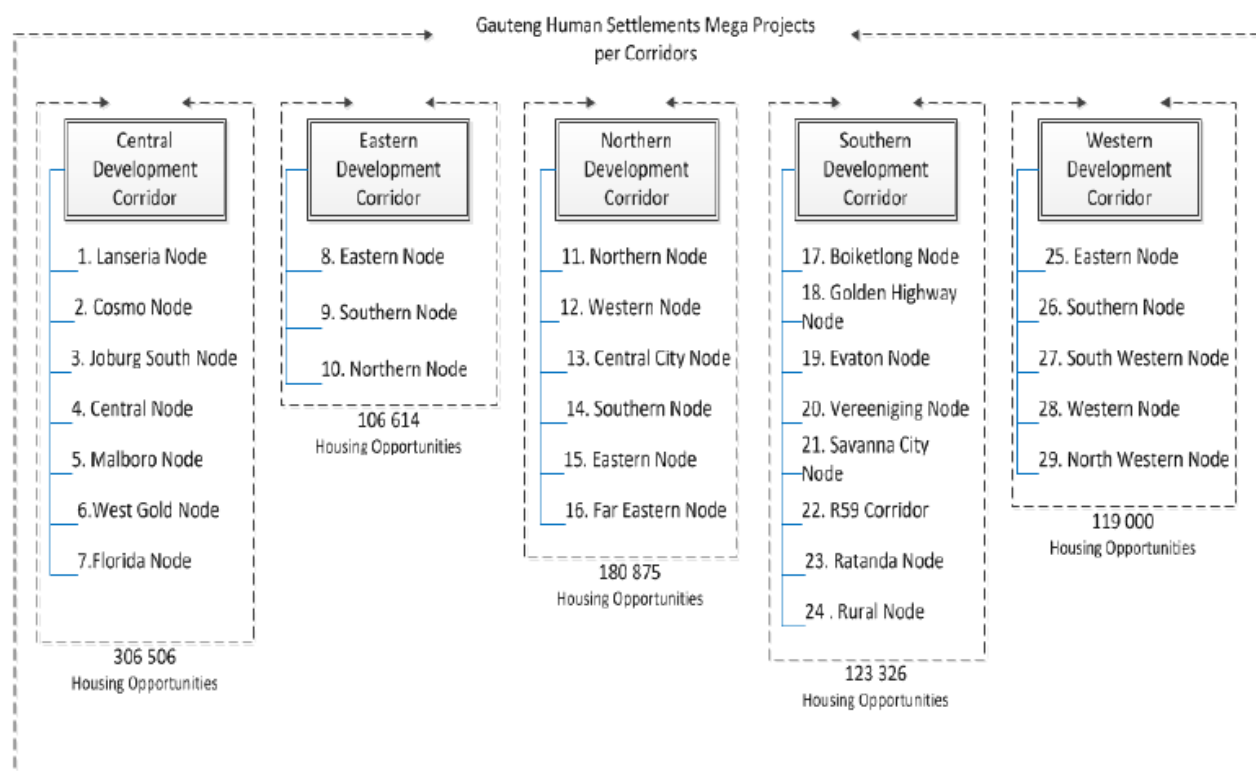
Figure 5: showing Sedibeng's Development nodes



Source: Gauteng Department of Human Settlements, 2015

As a way of achieving the collective visions of the city region, the province's mega human settlements plan has been linked to Gauteng's RSDF 2030. This means that the delivery of Gauteng's mega human settlement projects will be linked to the region's five corridor developments that were stipulated in the Gauteng RSDF (Gauteng Department of Human Settlements, 2015). A total of 800 000 housing opportunities are expected to be yielded from the 30 mega human settlements spread across the five development corridors (Writer, 2019; Gauteng Partnership Fund, 2018). Each residential development would offer a variety of housing typologies; which include fully subsidized housing (RDP), FLISP subsidized housing, bonded housing, and social housing. The residential developments will also offer a range of other land uses; such as worship sites, hospital sites, recreational sites, municipal sites and educational institutions. The funding model for the delivery of mega cities in the Gauteng region comprises the national Department of Human Settlements Development Grant and the Gauteng Partnership Fund (GPF) (Gauteng Partnership Fund, 2018).

Figure 6: showing the Gauteng 30 Human Settlements Megaprojects per corridors



Source: Gauteng Department of Human Settlements, 2015

The figure above shows that there are 8 mega human settlements projects that have been prioritized in Sedibeng District Municipality (as the region's southern development corridor). Amongst these is Savanna City (Gauteng Department of Human Settlements, 2015). It has been noted that Gauteng province developed an autonomous take on the mega projects policy; with the provincial policy making process unfolding with little reference to the national catalytic projects process and resulting in a separate list of human settlements projects. It has been noted that amongst the initial 15 catalytic projects located in Gauteng, only 7 of these overlap with the 29 projects listed by the Gauteng Province. Unlike the national catalytic projects programme, the province's policy also incorporates large private sector projects, even though these were generally for high-end users (see Ballard and Rubin, 2017; Gauteng Department of Human Settlements, 2015; Gauteng Partnership Fund, 2018).

Table 3: List of private driven megaprojects funded by the Gauteng Partnership Fund

No.	Gauteng Megaprojects	No.	Gauteng Megaprojects
1.	Alexandra Megaproject	10.	Leratong City
2.	Boiketlong Mega Housing Development	11.	Mapleton

3.	Cullinan Mega City	12.	Montrose City Mega Development
4.	Daggafontein Mega City	13.	Nelmapius Mega Development
5.	Goudrand Mega City	14.	Park City
6.	Helderwyk Integrated Mega Human Settlement	15.	Stinkwater Mega City
7.	John Dube Mega City	16.	Tswaing Urban Development
8.	Kwazenzele Mega Development	17.	Varkenslaagte Mega Project
9.	Lanseria Airport City	18.	Western Mega Project
		19.	Witpoortjie Mega Project

Source: Gauteng Partnership Fund, 2018

It appears that there are overlaps between the Gauteng's mega project list (both state and private driven projects) and the new national Priority Human Settlements Housing Development Areas (PHSHDAs) (see Gauteng Department of Human Settlements, 2020: 8-21)

3.5 Interpretation of the mega projects approach in Sedibeng District Municipality

Sedibeng District forms the southern development corridor for the Gauteng region. The district's northern borders include the Westrand, City of Johannesburg and Ekurhuleni Metropolitan Municipalities; as well as Nkangala District Municipality. Southern borders include Fezile Dabi and Gert-Sibande District Municipalities (Sedibeng District Municipality Sustainable Human Settlements Plan, 2018). Sedibeng District Municipality comprises 3 local municipalities; namely Emfuleni (west); Midvaal (central); and Lesedi (east). The district has an estimated population of 939 007; which contributes 8.7% to the total population of Gauteng. The district is 88% urbanized; with the highest number of people living in urban areas found in Emfuleni LM and the lowest number of people living in urban areas found in Midvaal LM.

Map 4: Locating Sedibeng District Municipality in the Gauteng region



Source: www.sedibeng.gov.za, 2009

Bulk of urban activity in Sedibeng District occurs along (or in close proximity to) the N1, R59, N3 and N17 routes. This is where one would also find Mittal Steel Plant as well as other significant industrial areas. Human settlements located along the N1 route comprise of Evaton and Sebokeng townships; as well as low income settlements that extend northwards into the City of Johannesburg. These include Orange Farm, Sweetwaters, Ennerdale, Lawley, Unaville and Lehae. The middle and high income residential areas of Vereeniging and Midvaal are located along the R59 route; along with other low income communities such as Sicelo, Tshepiso, Boipatong and Sharpeville. Heidelberg Town and Ratanda low income community are located along the N3 route; while Vischkuil-KwaZenzele node and Devon-Impumelelo node are located in close proximity to the N17. Other areas which offer concentrations of residential and economic activity include the Vaal-Marina, Memello, De-Deur, Eye of Africa Estate, Walkerville-Ohenimuri, and Bantu Boke rural settlement (Sedibeng District Municipality SDF, 2019).

The total housing demand in the district was estimated to 55 698 housing units in 2011 of which 75% were for Emfuleni LM, 16% from Midvaal LM, and 9% for Lesedi LM. Household units living in informal settlements within the district amounted to 14 171 and the largest

informal settlements are located around Bophelong, Polomiet, Sonderwater, Lybia, Waterval, Sicelo and Impumelelo (Sedibeng District Municipality SDF, 2019). Rental housing demand amounted to 58 211 and this is on the basis that 54 920 households were living in backyard units and 3 291 were living in hostels (Sedibeng District Municipality, SDF, 2019:54).

Table 4: showing the 2011 housing demand for Sedibeng District Municipality

LM	Informal Settlement	Hostels	Backyard	Rural	Housing Demand Database
Emfuleni	10 086	3 291	50 029	-	42 025
Midvaal	3 243	-	520	297	8 937
Lesedi	842	-	4 371	-	4 736
TOTAL	14 171	3 291	54 920	297	55 698

Source: Sedibeng District Municipality, SDF, 2019

In response to the policy and legislative parameters established by the national and provincial government, the Sedibeng SDF has begun incorporating the national PSHDAs and Gauteng's Mega Human Settlements plans into the district's spatial plans, but these do not seem to be linked (Sedibeng District Municipality, SDF, 2019). The district has linked Gauteng's mega human settlements projects (prioritized in Sedibeng District) to other mega projects that form part of the southern development corridor (Sedibeng District Municipality, SDF, 2019:41-43). These are described as the district's long term catalytic projects that will address the district's IDP related issues and vision (Sedibeng District Municipality, SDF, 2019: 39). It also seems that the district's spatial plans focus more on the national PSHDAs in terms of the development of human settlements.

This has been emphasized by the 4th development principle in Sedibeng District Municipality's Spatial Development Framework Draft (2019); which focuses on consolidating the district's urban structure around the nodal points by way of infill development and densification in identified Priority Housing Development Areas (PHDAs). This means that land acquisition processes should target land located within the respective PHDAs and that all large scale human settlements projects within the district should be located within the identified PHDAs. There is no clear linkage between the districts identified PHDAs, and the national PSHDAs. In addition, the district makes use of the term PHDAs; while the National Department of Human Settlements makes reference to PSHDAs. The following table presents a list of identified PHDAs within the district; as well as the expected housing unit yielded by each PHDA. There are 15 PHDAs identified in the district. From the list, 5 PHDAs are located in Midvaal Local Municipality; and Savanna City is one of them. It appears that the district's PHDAs are relatively smaller than those proposed by the national department.

Table 5: showing the list of PHDAs in Sedibeng District Municipality

Nr	Name	Location	Area (ha)	Number of Units
Emfuleni LM				
1	Cyferpan	Sebokeng		2,000
1	Golden Gardens	Sebokeng		4,161
1	Johandeo Phase 2	Sebokeng		14,500
1	Westside Park	Sebokeng		1,462
2	Lethabong	Sebokeng		341
2	Lethabong Ext 1	Sebokeng		2,390
2	Lethabong Ext 2	Sebokeng		2,885
3	Sebokeng Ext 28	Sebokeng		4,010
3	Sebokeng Ext 30,31,32	Sebokeng		3,136
4	Powerville Ext 4	Sharpville		189
4	Powerville Ext 5 & 6	Sharpville		856
4	Sharpville Ext 2	Sharpville		n.a.
4	Tsipeso Ext 4,5 & 6	Sharpville		2,528
5	Vaal River City	Vereeniging		n.a.
	Subtotal Emfuleni LM			38,458
Midvaal LM				
6	Savannah City	Midvaal West		5,517
6	Savannah Res 3	Midvaal West		2,635
7	Sicelo Two Blocks	Midvaal Central		842
7	Sicelo Erf 78	Midvaal Central		660
7	Sicelo Erf 72	Midvaal Central		700
7	Sicelo Erf 56	Midvaal Central		700
7	Sicelo Erf 188	Midvaal Central		338
7	Sicelo Erf 175	Midvaal Central		204
7	Sicelo Langkuil	Midvaal Central		9,732
8	Mamello Phase 1	Midvaal South		565
8	Mamello Phase 2	Midvaal South		271
8	Mamello Phase 3	Midvaal South		156
9	Skansdam	Midvaal Central		3,500
10	The Grace	Midvaal Central		850
11	Panfontein Agri Village	Midvaal South		500
	Subtotal Midvaal LM			27,169
Lesedi LM				
12	Obed Nkosi	Heidelberg		6,000
13	Kaydale /Jameson Park	Jameson Park		2,290
14	Impumelelo Phase 3	Devon		1,000
14	Impumelelo Phase 4	Devon		2,400
15	Kwazenzele Phase 2	Vischkuil		2,000
	Subtotal Midvaal LM			13,690
	Total Sedibeng DM			79,317

Source: Sedibeng District SDF, 2019

The district's SDF also outlines that all the local municipal SDFs in Sedibeng are required to be drafted in line with the 4th development principle outlined in the district's SDF; and housing units should be developed in accordance with the local municipal SDFs spatial guidelines. Some of the prioritized housing programmes for the district's PHDAs include Integrated Residential Development Programme (IRDP); Informal Settlement Upgrading; Land Acquisition programmes; Social Housing programme; as well as Peoples Housing Programmes (Sedibeng District SDF, 2019:90). The district's SDF has also linked the expansion of its engineering services; the provision of community facilities; and the prioritized public transport network to the PHDAs. All infrastructure Master Plans should be based on supporting the nodal development concept for the district. The priority public transport network consists of commuter railway lines and stations; as well as the road network. Some of these include the R553 Golden Highway (from Bophelong to Johannesburg); the R 82 (from Vereeniging to De Deur, Savanna City and Walkerville towards Johannesburg); and R549 (between Ratanda and Heidelberg) (Sedibeng SDF, 2019:88). The PHDAs will also be prioritized for funding by the district. This will be through the Capital Investment and Implementation Programme (Sedibeng SDF, 2019:117).

3.6 Key features of Midvaal Local Municipality pertinent to this research

Midvaal Local Municipality (LM) is a category B municipality, according to the Municipal Structures Act (No 117 of 1998) and is located in the center of Sedibeng District Municipality; with Emfuleni LM located on the west and Lesedi LM on the east. The municipality was established in 2000, when the town of Meyerton split from Vereeniging (Emfuleni Local Municipality) and joined five Rural Area Committees to create the new Midvaal Local Municipality. It is bordered by Mpumalanga province (Dipaleseng LM) and Free State Province (Metsimaholo LM) to the south. The spatial layout of the municipality is still predominantly rural; with farming constituting approximately 50% of the total area under jurisdiction. Meyerton is the primary town in the municipal area (MLM IDP 2018/2019).

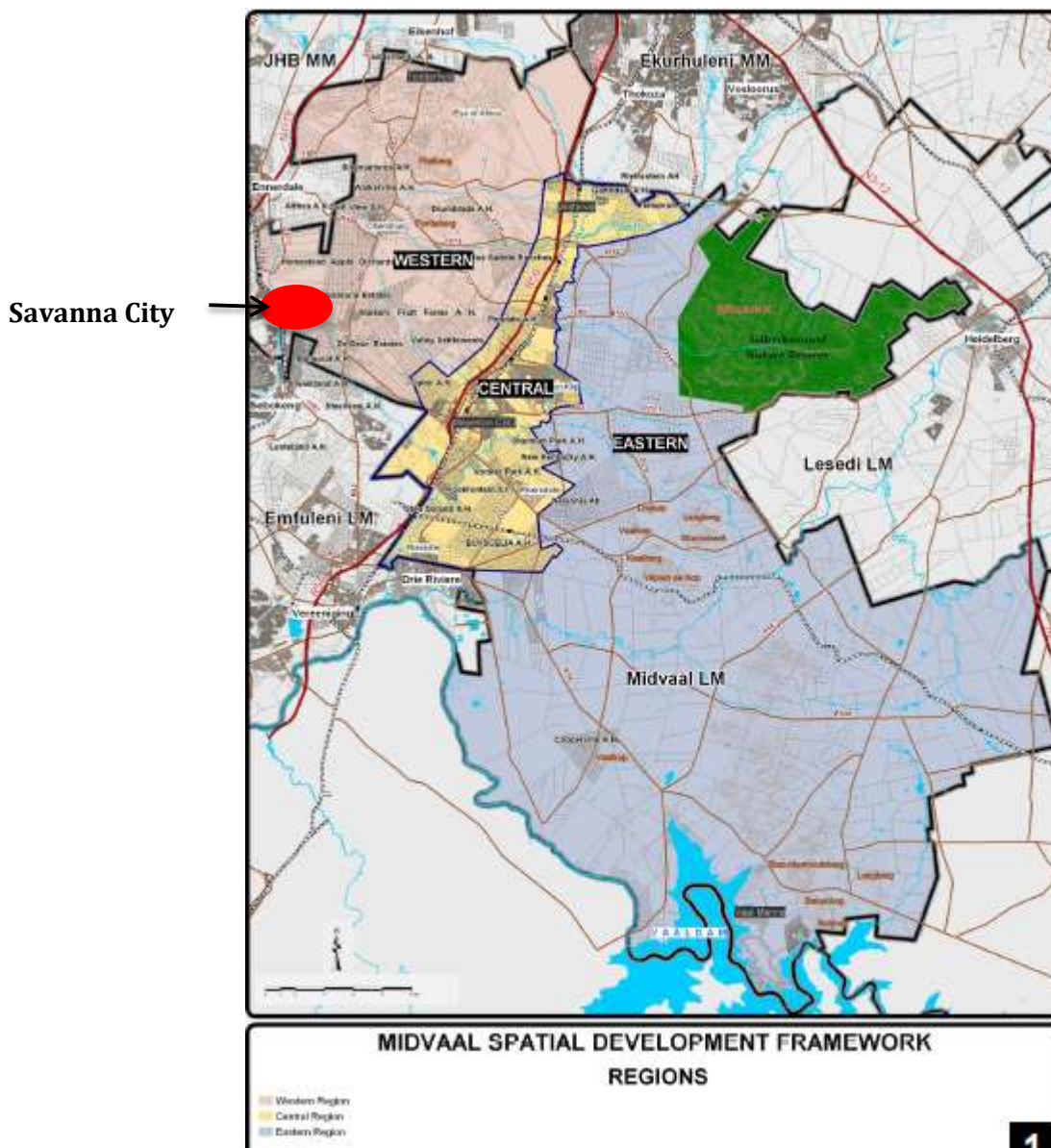
Map 5: Locating Midvaal Local Municipality within Sedibeng District Municipality



Source: www.sedibeng.gov.za, 2009

Midvaal LM has been divided into three regions, namely the western, central and southern region (Midvaal IDP 2018/ 2019: 54). This has been done for the purpose of developing growth and development strategies for each region those present more detailed proposals that are specific to each region (MLM Western region SDF, 2011). Midvaal LM is also divided into 15 wards; with ward 1 comprising mostly of rural land; and ward 4 including the Suikerbosrand Nature Reserve. Agricultural holdings, along with other associated settlements, are mostly found in wards 5, 6, 7 and 11. The remaining wards (2, 3, 8, 9, 10, 12, 13 and 15) comprise of urbanized areas (MLM SDF 2018/2019: 46).

Map 6: Showing the three regions of Midvaal Local Municipality



Source: MLM SDF 2018/2019

The western region represents the north-western parts of the municipal area that borders the City of Johannesburg (north) and Emfuleni LM (south). It represents the hinterland between

Eikenhof and Klip River (north); Ennerdale and Orange Farm-Sebokeng complex (west); and the Midvaal CBD and R59 Corridor (east). It also comprises the rural hinterland between the national N1 freeway which runs to the west of the area, and the R59 freeway which broadly represents the western border of the area. (MLM Western Region SDF, 2011:2). The western region of Midvaal comprises predominantly of a rural environment, with a few isolated urban precincts. The northern part of the region is characterized by a tourism precinct of Midvaal LM (which comprises of Platberg and Perdeberg). The Eye of Africa residential estate development, Ohenimuri Township and Savanna City development are the only three areas in the western region which fall within the Midvaal Urban Development Boundary. The remaining part of the western region falls outside the Urban Development Boundary and is characterized by agricultural holdings that have been largely subdivided (MLM Western Region SDF, 2011).

The central region is considered as the economic heart of Midvaal's local economy; with a 53% contribution to the municipality's economy. It is also the region that comprises of the R 59 development corridor; which been prioritized as an industrial corridor development since the late 1990s. Another major route forming part of the key structural elements in Midvaal is the K83; which has been prioritized as a strategic regional network that connects Evaton to Meyerton (the highest order town in Midvaal LM) through Savanna City (SDM SDF 2018/2019).

Economic profile

The pillars of the local economy in Midvaal still remain as manufacturing (27.6%); Finance, property etc. (24.1%); Government, community and social services (23.6%); wholesale and retail trade (15.1%). They cumulatively contribute 90.4% to the local economy (Midvaal Local Municipality, IDP 2018/2019). Manufacturing, tourism, and construction sectors have been identified to present the municipal area with an advantage to grow and diversify the economy. The municipality has also been identified as a high agricultural potential area in Gauteng Province, with Klipriviersberg (located north in the western region) highlighting the largest concentration of agricultural potential. Part of the municipality's vision is to develop into an agricultural hub for Gauteng Province; and Doornkuil and Homestead Apple Orchards (located north of Savanna City) have been identified as suitable areas to pilot the agricultural hub of Midvaal (Midvaal IDP 2018/2019)

Socio economic demographics of Midvaal LM

The municipality hosts 11.2% of the district's population; ranking it second amongst the three local municipalities in Sedibeng SM (SDM IDP 2018/2019). Population growth in the area has been localized to areas in close proximity to the R59 route and along the borders of Midvaal LM and Emfuleni LM in the western region. The remaining portions in the municipality maintained low densities.

Midvaal LM housing demand and supply profile

It has been noted that in 2016, informal settlements represented 12% of the housing stock in Midvaal Local Municipality. 18 of the largest informal settlements within the municipal area are located along the R 59; with the rest spread across the farmlands in highly rural areas of Midvaal. The total housing backlog amounted to 5546 units; with informal settlements (80%) being the largest contributor to the housing backlog. The housing backlog figure comprised of traditional dwellings (such as huts); backyard shacks; informal dwellings in informal settlements; caravans, tents and containers. The housing demand in Midvaal LM was projected to 14 376 units by the year 2020 (amount was derived from the 5546 unit housing backlog

coupled with the projected population and migration trends). The latest figures provided in the Sedibeng District SDF Draft (2019), allude to 36 incidences of informal settlements that brings a demand of 5269 housing units.

Midvaal LM IDP (2018/2019) projected that the housing supply by 2020 would amount to 23 438 units. This output would comprise of 8858 middle and high income units; as well as 14 580 subsidized units. This amount was based on the current and future housing supply that would be yielded by the prioritized housing development projects within the municipality. The amount indicates that these projects would produce sufficient housing units that would leave a surplus of 9062 housing units. There are 4 housing development projects that have been prioritized in the area. Savanna City is noted as the biggest contributor to housing supply in Midvaal; with the development expected to provide 18 399 housing opportunities. It has been noted that the municipality has not yet made mention to the PHSHDAs plans unfolding in Sedibeng District Municipality.

Table 6: Housing Supply and Demand Summary

Area	Full Ownership			Rental/Sectional Title		Total
	Bonded	FLISP	Subsidised	Bonded	Subsidised	
The Grace (Blue Rose)	1414				850	2264
Pine Valley	52					52
The Grace (Eye of Africa)	28					28
Savanna City	4729	5518	5517	2635		18 399
Mamello X1			465 + 50		50	565
Sicelo Erf 204			430			430
Sicelo Erf 78			700			700
Sicelo (Two Blocks)			1000			1000
Total	6223	5518	8162	2635	900	23 438
Subsidised		5518	8162		900	14 580
Bonded	6223			2635		8858

Note: Total demand up to 2020 = 8830 increment + 5546 backlog = 14 376 units.

Source: MLM IDP 2018/2019

3.7 Locating Savanna City in the local, provincial and national housing development plans

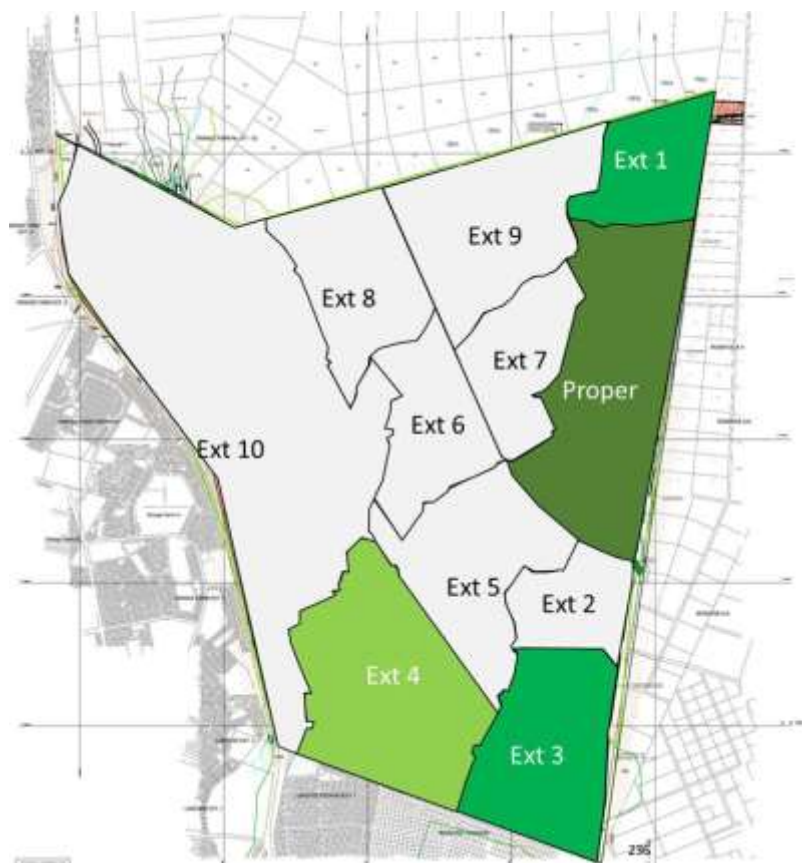
Savanna City is a private-public driven housing project that began in 2007, through the purchasing of the Farm Doornkuil by Basil Read developers; who were looking for new development opportunities upon the completion of Cosmo City in Johannesburg central. Partnership between Basil Read and the Housing Impact Fund of South Africa (HIFSA) was established and development of the settlement began in 2013.

The development is located in ward 11 in the western region of Midvaal Local Municipality. Various terms have been used to interpret the development. In Midvaal, the development has been regarded the first new mega city in the municipality. It has also been regarded as a neighborhood node and a formal town in Midvaal.

The project has been prioritized as a development node in Sedibeng District Municipality and Midvaal Local Municipality. It has also been prioritized as a strategic development area for residential development and densification in Midvaal. The development has also been considered as a significant flagship project that will create densities to support public transport. It also is regarded as a project that promotes social inclusion and densification in areas close to economic activities (MLM SDF, 208/2019).

Savanna City is divided into 11 extensions. Land uses to be developed would be in extension 1 to 9; while extension 10 is a conservation area. Upon completion of the project, 18399 housing opportunity will be provided whereby 5517 units will be subsidized housing; 5518 social housing funded under FLISP; 4729 bonded housing and 2635 units would be provided under residential 3. Guided by the principles of the Breaking New Ground Policy, the development would also comprise of 16 new schools, 400 hectares of conservation areas; public open spaces; clinics, churches and other social facilities; and commercial and retail opportunities (Savanna city website, 2018). In terms of the project's expected contribution to the region, Savanna City would provide 14 new schools; contribute to the population growth in the region, assist in reducing unemployment; increase revenue; and provide improved services. . The development plans for Savanna City also show that the regional cemetery will also be constructed in the settlement; as well as the construction of agricultural training facilities and a regional hospital (MLM SDF, 208/2019).

Map 7: Savanna City extension map



Source: MLM SDF 2018/2019

Map 8: showing the land use layout of Savanna City



Source: MLM SDF 2018/2019

Status of developments in Savanna City that were recorded in the Midvaal Local Municipality IDP (2018/2019) indicate that extensions 1, 3 and 4 have approved development rights, service designs approved, engineering service agreements; while extension 4 has various sections that have procurements processes, contracts awarded, and serviced sites. Residents of Savanna City would access many of the community facilities in Meyerton, Henley-on Klip, De Deur and Vaal Marina. These are the main urban core areas and activity nodes of Midvaal Municipality and are located in the central region of Midvaal Municipality. Some of the community facilities include hospitals, clinics and post offices.

The development has also been linked to the municipality's agricultural development plans; which sought to establish agricultural development hubs in De Deur and Doornkuil (MLM IDP 2018/2019). Savanna City is one of the projects that have also been selected for funding in terms of the Neighbourhood Development Partnership Programmes within Sedibeng District (SDM SDF, 2019:54).

3.8 CONCLUSION

The chapter traces how the megaprojects policy has unfolded in South Africa at a national level, as well as at the provincial level of Gauteng and highlights a 'loose codification' of the policy (which is seen through the different terms used to refer to the policy idea). The chapter has also

highlighted that the new policy has been autonomously articulated in the different spheres of government. This has ultimately led to a formulation of autonomous project lists that show some overlaps. This has also presented challenges in a local government determined to incorporate both programmes. Not only have these been vaguely interpreted in local government spatial plans; they have also presented contrasts and contradictions to the national and provincial programmes. This is seen in the different rubrics used to refer to the new housing approach (Sedibeng's use of the term PHDAs versus the national PSHDAs); as well as the different project list derived between Sedibeng District and the National Department of Human Settlements. The policy idea has also shown low levels of transparency and participation in the policy making process. For example, the process used to derive the final list of catalytic projects has not been clear to follow; and neither was the formulation of the new PSHDAs approach clear to understand. The chapter has highlighted how the new housing policy offers multiple and contradictory meanings that highlight the lack of attention given by the state, to the development of the new housing policy direction. The following chapter outlines the methodology that has been used for the study with the intention of addressing the research question.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The section sought to explain in detail the rationale of the research approach; sampling method; data collection and analysis method. The section also highlights the ethical consideration as well as the limitations of the study.

4.2 Research approach

This research is a qualitative study as it allows the researcher to study and interpret the phenomena based on the meanings people bring to them. It also allows for inquiry and analysis of information conveyed through language and behavior in natural settings (Fishman, 1995:304). In order to answer the research question, the researcher is required to obtain an understanding of how the mega housing project objectives were developed and interpreted by bureaucrats at different spheres of government; as well as identify the instruments used to measure whether the objectives have been met. A qualitative study also enables the researcher to capture expressive information about beliefs, values, feelings and motivations of the research participants (Berkwits, 1998). In order to generate multiple narratives that explain the phenomena, the researcher also needs to obtain an understanding of the lived experiences from the residents of Savanna City.

4.3 Desktop document analysis

A review of documentary data pertaining to the study was done prior to collecting primary source data. The review of secondary data was intended to provide context, rather than an in-depth analysis of the study. The document analysis focused on collecting and analyzing grey literature such as newspaper articles; state presentations and communications; as well as legislation and policy documents. Newspaper articles provided insight on new mega housing projects that have been or would be launched, as well as some of the challenges that were faced in the development of the mega housing projects. Newspaper articles that provided information on the Savanna City mega housing project were given more priority. Information was also obtained from websites such as the National Department of Human Settlements; Gauteng Partnership Fund; and Gauteng Department of Human Settlements. The National Development Plan 2030, National Human Settlements Spatial Plan, along with Sedibeng DM and Midvaal LM IDPs enabled the researcher to understand national, provincial and local municipal plans for human settlements; as well as how the new housing delivery approach has been interpreted at the different spheres of government.

4.4 Case study research

Case study research enables learning more about a situation where little is known through investigating current situations in real life context and using multiple methods (Yin, 1994). This study made use of one case study in order to gain an in-depth understanding of the phenomenon on mega housing projects as a new approach to housing delivery in South Africa.

Although similar studies on prototype mega human settlements in South Africa have been conducted, no study has been conducted on Savanna City. According to Allison (1996), case study research forms part of descriptive research design. This case study was chosen to understand the contemporary issues on housing delivery in South Africa.

4.5 Population and unit of analysis

The target population comprises key stakeholders which have been grouped into four categories. The categories include state officials; Basil Read Project Manager; Estate Agents; and the residents of Savanna City. The sampling frame for state officials includes officials from HDA, Gauteng Human Settlements, Midvaal Local Municipality and Sedibeng District Municipality. The researcher has identified 21 real estate companies that are selling bonded houses in Savanna City and these formed as the sample frame that the researcher used for sampling the estate agents. The sampling frame for the residents of Savanna City included bonded housing owners; FLISP beneficiaries; as well as state fully subsidized housing beneficiaries.

4.6 Sampling method

Expert sampling makes use of an identified selection of experts as the target of study (Bhattacharjee, 2012: 69). This method was used to sample key informants from the state. The researcher purposefully selected officials that were responsible for the implementation and management of the new housing delivery approach. From the HDA, the project manager responsible for the Gauteng Province catalytic projects was contacted as the key informant. From the Gauteng Department of Human Settlements, the project manager responsible for the mega human settlements in Sedibeng District Municipality was contacted. The Human Settlements Manager for Sedibeng District Municipality as well as the Housing Officer for Midvaal Local Municipality were also contacted. The fifth key informant that was contacted was the project manager from Basil Read (Savanna City's development company). In terms of selecting an estate agent, the researcher firstly found 80 properties listed in Savanna City (Property 24, 2020) and identified Cosmopolitan Projects as the real estate company that offered the highest number of bonded houses (15 houses) in Savanna City. Based on this, the researcher contacted one estate agent from Cosmopolitan Projects to interview. Stratified sampling is used when a researcher's target population is heterogeneous. This sampling technique guarantees the researcher that subjects from each population sub-group are represented in the final sample (Jawale, 2012:186). Purposive sampling was employed in selecting the residents that were interviewed. This was because the researcher aimed to conduct interviews with residents living in RDP houses, bonded houses and FLISP-linked housing. Five residents were selected during the site analysis. This comprised of the researcher driving through the section of bonded houses, as well as the section of RDP units in Savanna City. In order to locate FLISP beneficiaries, a snowballing sampling was used and this was because the houses for FLISP beneficiaries have been mixed with residents who were solely responsible for their bond payments. Purposive sampling enabled the researcher to obtain different narratives from the residents in these three categories (Etikan et.al. 2016). A summary of the categories of research participants is provided in the table below. A total of 12 respondents participated in the research interviews.

Table 7: Breakdown of the research participants

Category	Number	Breakdown of Participants	
State officials	5	HDA Officials	2
		Gauteng Human Settlements Official	1
		Sedibeng District Municipality Official	1
		Midvaal Local Municipality official	1
Basil Read Stakeholder	1	Project Manager	1
Cosmopolitan Projects Stakeholder	1	Estate Agent	1
Savanna City residents	5	Bonded housing residents, RDP beneficiaries and FLISP beneficiaries	5

4.7 Data collection method

The researcher used interviews as a basic data collection method. The interviews were guided using semi-structured questionnaires. According to Fossey et al (2002) semi-structured interview guides allow the researcher the possibility of generating spontaneous responses from respondents that are not influenced by the researcher. This avoids the bias that may result from suggested responses to respondents in close ended questionnaires. This form of interview process allows for theory building as they yield more candid information and unique insight for the researcher. The interview guides were structured around a framework of themes and questions that varied according to the stakeholder position of the participant being interviewed. The questionnaire also consisted of structured as well as open ended questions. For the state officials, interview questions and themes were as follows:

Background information:

Can you give a brief description of your occupation?

How long have you been working in the current position?

Questions on the mega housing project approach:

Interpretation of the mega housing project approach

- What do you think are the objectives of the mega housing project approach?

Role in institutional implementation

- With regards to the mega housing project policy, what is your role?
- Since the announcement in 2014 by the Minister of Human Settlements; what work has been done in your department?
- Challenges with implementation?
 - Successes- what works?
 - Failures-what doesn't work/ challenges encountered?
 - What were the reasons for the challenges?
 - How are they being dealt with?

Questions on Savanna City mega project:

Role institutional implementation

- Can you provide a background on the Savanna City development?
- Who are the main key players/actors in the project?
- What is your involvement in the project?
- What are the objectives of Savanna City development?
- What phase is the development currently at?
- Challenges with implementation?
 - Success-what objectives did the project meet?
 - Failures-challenges encountered/and which objectives were not met?
 - What were the reasons for the challenges/failures?
 - How have they been dealt with?
- What lessons can be learnt from the project?
- What is your perspective on mega projects as a housing delivery approach?

Interview guides for the Savanna City residents consisted of two sections. The first section consisted of demographic related questions. These included gender, age, occupation and household background information. The second section consisted of questions that related to the general perceptions of Savanna City; living experiences; general attractions and concerns raised on Savanna City development. Space was provided on the questionnaires to note insightful comments made by respondents through the interview these were noted as general comments on the interview guides.

4.8 Data collection techniques

The researcher made use of email and telephone to set up interviews with the prospective participants. A brief description of the project was included in the emails, along with a copy of the research proposal; interview guides; and permission letters. The rationale of this procedure was to ensure that participants could prepare themselves for the interview and also confirm the appointment. Once a positive response was received, an interview was scheduled. One of the ward councilors was contacted telephonically to schedule an appointment with him at his residence in Savanna City. The researcher was then guided by the ward councilor to different residents living in Savanna City that he thought would be open to being interviewed. This allowed the researcher to access respondents that would be challenging to access when using other sampling techniques (Johnson, 2014). The interviews with the residents were not

scheduled; instead interviews were carried out at the first encounter and upon the request made by the researcher. This was based on time and budget constraints, along with the residents' preference to undertake the interview on the spot.

The researcher began the interview process with the RDP beneficiaries first; this was followed by residents who are FLISP beneficiaries and bonded home owners.

Face-to-face interviews

Face-to-face interview was the main technique that was used to interview the participants. The researcher also made use of a voice tape recorder during the interviews; after receiving consent from the participant. This was done in order to capture everything that was shared by the participants during the interview and to make it easier for the researcher to facilitate the transcription of the conversations at a later stage. All face-to-face interviews were conducted within the office premises of the respective participants and the interviews ranged between 30-90 minutes. This depended on the amount of knowledge each participant had about the phenomena; participant's level of engagement; as well as the interviewer confirming the interpretation of the recorded results with the participants and following up on questions of interest. Interviews with state officials, the project manager and the estate agent were conducted in English and took place during the week. The preferred language used to conduct interviews with Savanna City residents varied between English and Sepedi and interviews were conducted during the weekend. Information given by residents in Sepedi was transcribed by the researcher in English.

Telephone interviews

The advantage of using telephone interviews is that it offers extended access to participants compared to face-to-face interviews. It is also a convenient technique to utilize for hard to reach participants as it enables the researcher to still conduct interviews with respective participants that are difficult to reach for a face-to-face interview (Opdenakker, 2006). The interview with the estate agent was done telephonically, using Whatsapp. The researcher first engaged with the estate agent during a site visit at Savanna City, whereby the agent shared his contact details with the researcher. The researcher then contacted the estate agent telephonically and sent the questionnaire to the agent through Whatsapp. This was the agent's preferred method of conducting the interview. Voice notes were then sent to the researcher and transcribed by the researcher. Follow up questions were also sent to the agent through Whatsapp voice notes.

4.9 Data analysis method

The first phase of the data analysis process entailed a content analysis approach. This involved a detailed and systematic examination of the contents of a particular body of phenomenon (Leedy and Ormrod, 2005). Therefore the data analysis process started with transcribing all the data collected through tape and phone recorders; as well as through written notes. This was followed by carefully reading through the transcribed data in order for the researcher to get a general sense of the studied phenomena and develop a meaningful organizing structure for the data.

For each of the groups of research participants, I undertook a vertical and horizontal analysis (Gaudet and Robert, 2018). For each interview, I considered the key points and general

character of the discussions. I also considered points that re-enforced other interviews; as well as points that offered contradicting views. This formed the vertical analysis process. The second step entailed grouping of information into key themes. Open coding was used for the first stage of data analysis in order to allow for the exploration of emerging data that was not tied to the research objectives. This process entailed labeling content into abstract groups. The process was followed by grouping of the initial coded sections into categories that highlight the relevance to the research topic. This was also assisted with the use of coding that related to the interview questions; in order to frame the analysis according to the research objectives. Once categories were established and key themes were identified in each interview, emerging cross interview themes were used to describe and contrast perspectives between the interviews.

Thick descriptions were used when giving examples of emerging themes from the findings. This was used to enhance clarity if necessary; as well as ensure validation of the data collected for the study. This also helped the researcher present discrepancies in the data in order to highlight that not all perspectives cohere with each other.

4.10 Data collection limitations

Due to the outbreak of COVID 19 and the announcement of the national lockdown, I was not able to interview the estate agent (due to prevailing health conditions of the agent). It was also challenging to get hold of another estate, as a substitute, due them not being comfortable with conducting the interview telephonically. Therefore the researcher had formulated conclusions on the data that was available.

Time constraints also limited the ability of the researcher to find a FLISP beneficiary as the interviews were conducted during the day when residents were at work.

4.11 Limitations of the study to the body of knowledge

The limitations of the study do not imply that a study is incomplete or obsolete; rather, they indicate how external factors contribute a limiting influence to the study. These limitations should be taken into consideration in terms of understanding the holistic context of the study. Delimitations also form part of the limitations of the study as the study ignores other factors that could explain the phenomenon. This is due to the lens and objectives of the study (Price and Murnan, 2004).

A delimitation of the study stems from the use of one case study to analyze a phenomena. This is because of the unique nature of Savanna City mega housing project and the absence of other mega housing projects that are nearing completion. Furthermore, the study can only be limited to South Africa. This is due to the fact that most western countries have adopted a bottom up approach to housing delivery; enabling municipality's power to deliver houses and form their own local policies. In countries, such as Brazil, community organizations are actively involved in the provision of public and low income housing. This means that the conceptualization and implementation of mega housing projects is expected to vary amongst countries.

Since a snowballing approach was used in obtaining key officials to be interviewed, some key, that were not made known to the researcher on time, could be excluded from the study. This could limit the maximization of the collected data. This also applied to the technique used in sampling resident respondents. Given that the researcher was also guided by one of the ward councilors to residents that he thought would be open to participate in the interviews, the sample could exclude some of the residents that come from other wards that the councilor might not know personally. A snowballing approach used referrals from a key respondent to another in a chain format and it is used when potential participants are hard to find (Biernacki and Waldorf, 1981). One of the limitations of this approach was that it does not guarantee a true representation of the sample; particularly of the residents living in Savanna City (Johnson, 2014). It was also challenging to access some senior official and official documents relevant to the study due to busy schedules and confidentiality of the documents.

Residents' lived experience cannot be applied generically to all mega housing projects as lived experiences are relative to individuals and other factors, such as the settlement location and the community influence on one's experience in the settlement. In addition, the small sample of residents, as well as the manner in which they have been chosen, did not allow for a holistic assessment of the resident's lived experience in Savanna City. Lived experiences are also affected by previous experiences and personal expectations of state products

4.12 Ethical considerations

Ethical considerations ensure that social responsibility and human rights are upheld such that the research conducted does not harm the public or contravene with the law, intentionally. Ethical behavior also promotes trust, accountability and respect amongst researchers and participants and guides the researcher on acceptable conduct throughout the research process (Resnik, 2015).

The participants remained anonymous and this was explained to the participants before interviews commence. The researcher also thoroughly explained the purpose of the research conducted, asked permission from the participants to conduct the interviews as well as the participant's freedom to not answer or continue with the interview if they felt they do not want to participate. This was done through a participant information sheet, which was provided to each participant before commencement of the interviews. The participant information sheet was given with particulars of the researcher as well as the supervisor and the name of the institution the researcher and supervisor were located. This process was known as informed consent, which was crucial before undertaking my research (Escobedo et al, 2007).

The Institutional Review Board for Social and Behavioral Sciences provides a list of groups in society that are considered vulnerable. These include people who are educationally or economically disadvantaged, to mention a few. Residents of Savanna City are considered economically disadvantaged as they fall under the category of lower income backgrounds. This is because allocation of housing units have always been a contested issue in South Africa,

therefore exposing beneficiaries might expose them to some of the controversies. This is also because the research does not cover the process of housing allocation; therefore it may unintentionally expose some of these emerging issues. It would be best to speak to a community representative prior to conducting the fieldwork. Thorough explanation on how the information would be used would also be provided to both the community representative(s) as well as the interview participants.

The Institutional Review Board for Social and Behavioral Sciences further states that a provision of this list is only set as a guide and should not be used to stigmatize. Government officials' personal information will be kept anonymous, given the sensitive nature of their positions within government. In order to prevent bias, grey literature will be referenced correctly, such that readers are able to follow up on the material. Only validated sources will be used to inform the research. Due to much of the government documents being available to the public, no form of consent is needed before using the material, however material will be correctly interpreted and referenced.

Role of the researcher

The researcher ensured that the research findings of the study were reported in an honest and complete manner; and without misrepresenting or misleading readers about the nature of the results. The researcher upheld this by giving credit where it was due; and also acknowledged respondents' words and ideas. The researcher also directly quoted some of the stakeholder responses in order to validate the accuracy of the research, and also referenced the participants.

4.13 Conclusion

The section outlined the research approach that was adopted; which was a qualitative approach. The section also outlines the rationale for selecting a case study research design, as well as the strengths and limitations of this research design on the study. The process and methods of data collection were also discussed under the relevant sub-headings in order to outline the procedure that was followed by the researcher. The following chapters cover the findings and interpretation of the results of the study.

CHAPTER 5: FINDINGS FROM THE STATE RESPONDENTS

5.1 Introduction

The following chapter presents the state objectives on mega projects; provides clarity in the different terms used to define the approach; and also shares what the state's perspectives are on this approach and provides findings and a thorough analysis of the findings. What has been evident is that much focus has been given to increasing the rate of housing delivery, as the prime objective. Mixed perspectives have been given on the meaning and use of the different terminologies that are used to define this form of housing delivery approach; with some officials seeing no difference in the various terms used to refer to the approach. This spectrum of officials define the term in terms of scale, where one project is able to deliver a minimum of 10 000 housing units. Other officials argue that the terms used are context-based, but provide no explanation for this.

The chapter also elaborates on the different roles of the respondents as well as their agencies, in the implementation of the new approach. One issue that has emerged is that there is a lack of clear evidence of coordination and connection between the adopted programmes at the different spheres of the state. This is between the national catalytic projects and the Gauteng Provincial's 'mega cities' programme. This has presented challenges in the implementation processes of projects of which have also been evident in the Savanna City development. There is, however, an emerging shift in the approach to mega projects which attempts to address these challenges and this shift is recognized at national level with a new programme called Priority Human Settlements and Housing Development Areas (PHSHDAs). This approach presents a complete shift from the national catalytic projects programme, but it has also not been immune to challenges as the approach presents serious implications to the Gauteng Provincial's 'mega cities' programme. In addition, the chapter also picks up on the emerging points of debates that have been presented by the PHSHDAs programme; and these have been between other state entities (such as CoGTA), as well as with the municipalities. Lastly, the chapter evaluates state's success in meeting its intended objectives of mega projects and the conclusions derived have mentioned to some that have been met; while some have been partially achieved.

5.2 Roles and responsibilities of individuals and agencies

In this research, background information on the respondents sought to provide insight on their functions and responsibilities in their work positions, as well as their roles, responsibilities and objectives in relation to mega housing projects. The table below shows that the respondents comprised of state officials, as well as the developer for Savanna City.

Table 8: State respondents

Pseudonym	Government sphere (N/P/L)	Department/Organisation	Type of work	Date of interview	Place of interview
TM	N	The Housing	Manage and	25/11/2019	HDA

		Development Agency (HDA)	implement national catalytic projects		offices, Killarney, JHB
SP	L	Sedibeng District Municipality (DM)	Manage human settlements within the district	10/12/2019	Parktonia n Hotel, Braamfontein, JHB
KM	P	Gauteng Department of Human Settlements	Project manage some of the housing projects in Midvaal LM and Sedibeng DM	05/02/2020	International House common room, Wits University, Braamfontein, JHB
TH	L	Midvaal Local Municipality (LM)	Administering housing related work		
RP	N	The Housing Development Agency (HDA)	Manage Priority Human Settlements and Housing Development Areas	14/02/2020	HDA offices, Killarney, JHB
DZ	-	Basil Read	Project developer for Savanna City	25/02/2020	Basil Read offices, Savanna City

The Housing Development Agency is a national public sector development entity that is accountable to the Minister of Human Settlements, though the agency's board. The agency was tasked by the Minister of Human Settlements with the responsibility to derive the criteria and list of national catalytic projects in 2014. According to respondent TM, the role of the HDA is responsible for managing and implementing the 35 national catalytic projects that were approved by the Minister of Human Settlements in 2014: "This entails conducting assessments and giving recommendations on which catalytic projects are ready to be implemented and we programme manage them" (TM interview). The respondent's role in the HDA is to project manage the 15 catalytic projects located within Gauteng province. There are two respondents that were interviewed from the HDA. This is because of the emerging shift in approach on mega housing projects at national level; which is moving from catalytic projects to Priority Human Settlements and Housing Development Areas (PHSHDAs). This will be discussed further in the chapter. Respondent RP is responsible for the conceptualization of the new programme that will be adopted at national state level.

At a provincial level, the new paradigm shift (of developing Gauteng's 'mega cities') has found its expression within one of the Gauteng Department of Human Settlement's 4 budget programme areas; namely the Housing Development Programme Area. This programme area is responsible for the implementation of priority projects (new towns) in Gauteng's 5 development corridors

(Gauteng Department of Human Settlements, 2016). Savanna City was one of the projects prioritized in Gauteng's southern development corridor, and respondent KM is the project manager appointed to the development. He mentioned that: "There are other project managers, for other projects, in the department (GHS). But my project is Savanna City only" (KM interview).

From the level of local government, the major roles of Sedibeng District Municipality (SDM) and Midvaal Local Municipality (MLM) have been tied to their Constitutional mandate. This means that the primary roles of SDM and MLM are to administer housing programmes within the national and provincial frameworks. Respondent SP is the manager for the human settlements department in Sedibeng District Municipality (SDM). He explained that the role of his department within the district municipality is to "Coordinate and plays an oversight role on the work that is being done in the district by the local municipalities; as well as national and provincial government. This is in accordance to Section 154 of the Constitution" (SP interview). Respondent SP also mentioned that his department's primary role, in relation to Savanna City Development, was to oversee the delivery of the project by holding the Gauteng Department of Human Settlements and Savanna City developers accountable to all the plans that have been agreed upon (in terms of meeting deadlines and their ultimate goals).

The respondent from Midvaal Local Municipality (MLM) works in the housing administration division. She mentioned that in relation to housing delivery, MLM plays an administrative and facilitation role in housing projects done within their jurisdiction. A project steering committee was established for Savanna City development, which MLM is part of. She expands on the role the municipality plays in the development of Savanna City:

In terms of Savanna City development, we do administrative work, such as consumer education because people have a lot of questions on the project (Savanna City). Most of the time, we meet with other stakeholders in the project steering committee and escalate issues raised by the public to the relevant stakeholders, like the Department of Human Settlements and Basil Read-the developer (TH interview)

The respondent also stated that the municipality has also established a data base for local entrepreneurs and employment opportunities specifically for Savanna City development.

Based on the responses, it appears that the state departments and officials have distinctive functions and responsibilities in aiding the delivery of state housing through mega projects. The HDA and GHS also have distinct mega housing project programmes that they have adopted and implemented; with overlaps being evident in their project lists. As noted by Rubin and Ballard (2018), that from the 15 catalytic projects on the national list that have been situated in Gauteng Province, 7 of these overlap with list of 29 mega cities identified by Gauteng Province. The following sections present findings that address the objectives of this research. This begins with the identification of the objectives for mega housing projects by the state. These will be used in assessing state's ability to meet these objectives in Savanna City.

5.3 Identifying state objectives on mega housing projects

A key point in understanding the mega housing projects is to precisely identify what the state perceives as the objectives of mega projects and findings indicate that primary focus is given to

increasing housing delivery as the main objective that was mentioned by all the officials, as well as the project manager.

“Mega projects are aimed at accommodating as many people as possible. That is number 1” (KM interview)

Respondent SP further added that the other objective of mega projects was to build sustainable communities within the district. At a project level, the main objectives for Savanna City development were to create a sustainable and integrated housing development. According to the project manager from Basil Read, this entailed developing a mixture of housing opportunities that would accommodate both high income and low income residents in the development; as well as offer other amenities such as schools. The official from Midvaal LM shared that the objectives of Savanna City were to provide for a total of 18 000 housing opportunities with mixed tenure; as well as to provide economic opportunities for the locals. She further added that the development would offer 5 517 fully subsidized housing units; 5 518 FLISP housing units; 4729 bonded housing units; and 2 635 for rental units.

There are other objectives which have been noted in the first chapter. These include delivering 1.5 million houses by 2019 through mega projects producing 15000 housing units per development; enhancing vertical and horizontal coordination amongst government spheres and entities in housing delivery; and creating new self-contained and self-sustained cities. Another objective intended by mega projects was to solve a variety of problems that have been experienced with the legacy projects. These will also be included in the evaluation of state’s ability to achieve these. The five logics informing these objectives have been noted in the literature by Ballard and Rubin (2017) and have been outlined in the introduction chapter.

I also sought clarification on the different terminologies used to define the mega projects approach. Findings reveal that there are mixed perspectives about the meaning and interpretation of these terms; as well as the impact this brings in the implementation process. One end of the spectrum (3 out of 5 officials) perceives no differences in the use and effect of the different terminologies as one official mentioned that “even though different terms are used to describe the mega project approach, their meanings are the same” (TM interview). Three officials also felt that the use of different terminologies does not affect the interpretation of the approach by state entities. It appears that the term ‘mega projects’ is mainly understood in terms of scale.

“It simply means it’s more than 10 000 units per project. Hence it’s a mega” (KM interviews). The respondent further adds that “over and above, it needs to have amenities; your schools, your police station if need be, your parks, malls, municipal offices if need be. Ya, so it must be a complete human settlement” (KM interview).

Respondent RP, however, mentions that the use of different terminologies is based on context; but does not provide reasons for this.

“The mega projects, I think you’re referring to, depends what context because there is the Gauteng Provincial Department of Human Settlements that talks about mega projects in relation to housing; but other provinces don’t refer to it as mega projects; they don’t refer to it as catalytic projects” (RP interview)

This indicates that officials are aware of the different terminologies that are used by the state to define the approach; but little attention is given to the reasons behind this. Although the official from Midvaal felt that the terms are similar; they also shared that the different interpretations by the state have an impact on what is happening at ground level. But this is seen as a challenge presented by any new development initiative.

“Remember it’s (Savanna City) a new mega project and then, you know every time when you start something, there are hiccups and challenges and stuff. So I think this is the first project for all three municipalities to learn something” (TH interview).

What has also been seen in Sedibeng District’s 2019 SDF draft, is that it the document interprets the initial PHDA term; instead of the current PSHDA term; in addition there is no consolidation of the province’s Mega Human settlements projects and their PSHDAs (which forms as part of their 4th development principle) (Sedibeng SDF, 2019: 32;88).

5.4 Sentiments shared by officials on the mega housing project approach

The following section reports on the official’s perceptions of the mega housing project approach in terms of its conceptual framework, as well as through experience in the implementation of this approach (through the various state programmes initiated).

All of the officials interviewed, including the developer, were positive about the new housing delivery approach; and also felt that there is a buy-in to this approach by all sectors of the state. One of the reasons provided was that it addressed the housing demand better than legacy projects as “It allocated as many people to houses as we possibly can in one mega project” and also “allowed for a greater number of housing beneficiaries, from different wards and surrounding areas to benefit from one project” (SP interview). The approach was highly supported by the Gauteng Human Settlement official; perceiving it as a “proper method of providing houses for a large number of the communities” as “it doesn’t just come with houses; it comes with all other amenities and services that are required”(KM interview). This promoted the idea of building build sustainable communities (SP interview).

In particular reference to Savanna City mega project; the development provided a good opportunity for Midvaal Local Municipality to eradicate informal settlements as its large subsidized housing unit output would be able to accommodate beneficiaries from other wards that have not been prioritized (TH interview). It has been noted in the interview with respondent TH that there are only two housing projects that are currently being developed within Midvaal Local Municipality; namely Savanna City and Sicelo. While Sicelo housing project would only provide for 380 fully subsidised housing units; Savanna City is expected to yield 5 517 fully subsidized housing units; including 5 518 FLISP funded units. This was also seen to promote inclusivity in housing delivery as it sought to integrate different income group residents in one development (DZ interview). This meant that “those who don’t qualify for bonded, they can qualify for FLISP; if they don’t qualify for FLISP because you get a lesser salary, you still have an opportunity to apply for fully subsidised so it is a great opportunity” (TH interview).

Mega projects were also seen to provide an opportunity for the formation of inter-relationships amongst the private sector; public sector; the rest of the government and relevant stakeholders (TH interview). This has been mentioned by the various stakeholders involved in Savanna City’s

project steering committee (which include Midvaal Local Municipality, Emfuleni Local Municipality and the CoJ Metropolitan Municipality) who “are facilitators in the project and also provide bulk services for the project” (SP interview). The committee also includes the councillors from the prioritized wards in these respective municipalities; as well as the Gauteng Department of Human Settlements-funding the project with the developer (TH interview). Respondent TM, from the HDA, also shared that the approach provided government the opportunity to address multiple problems in one project-such as housing and local economic development related issues (TM interview). According to the respondent, mega housing projects brought a greater impact in terms of job creation. This was because these projects were able to employ and train more local people than the small scaled ‘legacy’ projects; and for a longer time period.

So with the legacy projects, we have a shorter time to do that training and maybe within one year, they were just doing the business part of training and they are starting to do the brick-laying. Before they get to carpentry and other things, your project is complete and then they (the community) have not completed the whole training. But you see, when you have a mega or catalytic project, you have multiple years-3 years or more. So people can start doing training now and still continue with it next year and the other years after. So this allows for proper planning on LED activities (TM interview)

What was also noted was that mega projects also presented some advantages for the state in private-public driven projects. Respondent KM shared that one of the advantages of partnerships between the state and private sector, was that it reduced the amount of work that had to be done (by the state) in these projects; and the Gauteng Department of Human Settlements saw benefits of this in the initial project planning process.

By the time partnerships are formed between the department and the developers, you usually find that a lot of studies would have already been done by the developer. Your feasibility study would have been done, your geo-tech study would have been done. Socio-economic studies would have been done. The designs-initial preliminary engineering designs would have been done. So that is the advantage. It takes away these studies that the department would have had to do if the developer was not there (KM interview).

Although all the officials, and the developer, shared positive sentiments about the new housing direction; there have been concerns raised in the interviews. These were regarded, by the respondents, as issues and improvements that needed to be made in order to improve the new housing delivery direction. The following statement provided by the official from the HDA encapsulated the main challenges underlying the mega housing project approach:

“The challenges with mega projects are that we are addressing regular issues we had in legacy projects but now on a bigger scale” (TM interview). The official highlighted one of the challenges facing the mega housing project approach as project readiness.

“Even though evaluations were done before putting projects on the list, in reality, they were not ready for implementation. Sometimes you find the entire project not really ready or maybe a section that was planned for 1000 houses. A portion of it which was ready, but the other sections we still have to do complete planning work.” (TM interview). The respondent further mentioned that “You will also find that the bulk can only accommodate 2000 for now, but we

want to push and get 5000” (TM interview). Such a limitation resulted in funding being re-allocated to legacy projects. This was also highlighted by the official

“You must remember that we have a budget that must be used to deliver housing in that financial year. So if catalytic projects are not ready, the annual budget allocated to catalytic projects gets used on projects that are ready; of which are legacy projects. So lack of project readiness makes it easier for us to fall back to legacy projects” (TM interview)

This confirms the critiques by Flyvbjerg (2014) in that the lack of front-end planning in mega project management results in the misallocation of resources to projects that are not economically viable. The slow implementation rate of the mega projects and the lower housing units delivered was also cited as a clear challenge that was mentioned by the official from Gauteng Department of Human Settlements (GHS).

“The rate at which projects are being implemented is always slower. It’s always slower. So maybe instead of a project starting now, maybe it will start in the next year or two or three year. And if you say we were going to build 20 00 houses in a one year, we always build less. So the completion date is always being moved forward. That is a problem” (KM interview)

Given that the causes for this is similar to the challenges experienced in Savanna City project, these will be discussed in detail in the sections that follow. One of the causes raised, which has also been perceived as an issue, is that mega housing projects require a lot of bulk service provision from the state. The respondent from the GHS highlighted that one of the disadvantages of mega housing projects is that “they require a large number of bulk services; of which most of the time municipalities don’t have” (KM interview).

Mixed responses were presented concerning the impact these projects had within communities. In terms of the housing benefit issue, the official from Midvaal LM argued that mega projects needed to have the greatest impact in municipalities which they are located in. Given that the CoJ and Emfuleni Local Municipality hosts a number of large scale residential developments (in the case of Johannesburg), and given that Savanna City is the first large scale residential development in Midvaal Local Municipality; the official felt that 90% of the project should benefit Midvaal residents (TH interview). Not all the officials concur with this perspective, as the official from the GHS felt that a mega housing project is meant to serve a large number of municipalities “given that it yields more than 10 000 units; it’s always unfair to restrict it to one municipality” (KM interview).

In terms the economic impact these projects presented, the respondent from Midvaal LM raised concerns on jobs creation through the project. This was because of the temporary nature of these economic opportunities as these were dependent on the existence of the project. This was noted in her comment that “once the project ends, what happens to these people?”(TH interview).

Some improvements that need to be made have also been highlighted by the officials; who have also made reference to Savanna City project. The state officials mentioned that mega projects required greater stakeholder engagements in order to ensure a more efficient execution of the project. This was interpreted as “the need to establish all relevant structures and 100% consultation with all the role players” (SP interview). Engagement with the community in every stage of the project was also important for respondent KM, while respondent TH also mentioned that “More education needs to be provided to communities regarding “Mega housing projects:

what their benefits are; who will be benefiting and what the state's rationale was in terms of beneficiary allocations" (TH interview). Respondent TH also shared that planning committees should also be formed at the initial phases of the projects. In addition to this, the respondent mentioned the need to include National Treasury in the committees in order to provide more support on the funding spectrum. The improvements mentioned were seen as pivotal factors that would enhance the success of this form of housing delivery approach.

One major issue that has been noted, however, was the lack of clear evidence of coordination and connection amongst state housing programmes in the new housing approach. As noted in chapter 3 (as well as in section 5.2 of this chapter), the HDA has adopted the national catalytic project programme; while the GHS has adopted their own mega human settlements programme. Although there have been some overlaps in the project lists; a lack of coordination and connection has prevailed between the two programmes. Not only has this been noted in the project lists, but has also been highlighted by the respondents. Respondent TM has mentioned that the HDA is not much involved in the GHS mega human settlements projects programme because the HDA is responsible for programme managing the catalytic projects. The official from the GHS has also mentioned that because the HDA and GHS are not the same entity, the mega project programmes will not be the same.

One of the reasons that seemed to account for the variances in the formulated lists is due to different processes and criteria used for deriving the catalytic projects and mega human settlements. The mechanism used by the HDA was to identify municipalities that would be prioritised. This was focused on "areas that would yield the highest investment potential in terms of housing opportunities and job creation" (TM interview). As outlined in chapter 3, this included identifying the location of housing need alongside areas with a potential for economic opportunities within municipalities (National Human Settlements Plan, 2014, Rubin and Ballard, 2017). At the Gauteng Provincial level, the 'mega cities' programme was aligned to the Gauteng Spatial Development Framework 2040 vision of developing the region into a compact polycentric city. This was interpreted as consolidation of the urban core within the region; through harmonizing development plans with the broader urban system (City of Johannesburg SDF, 2016). In essence, "they wanted to make sure that every region has got a mega project so that this program covers the whole of Gauteng; not just one or two regions and that's how they got to come up with the list" (KM interview). This resulted in a list of 15 approved catalytic projects from the HDA, and 29 identified 'mega cities' (from the GHS) that would be spread across the Gauteng region.

It has also been evident that the mega human settlements list from the GHS comprised mostly of private driven projects. This was mentioned by the official from the GHS; who shared that: "Most of our mega projects are initiated by developers. The land belongs to the developer and they come to an agreement with the department to provide or to build those houses in the department's place" (KM interview). This process was also followed by Basil Read as respondent DZ explained that: "Basil Read approached Midvaal Local Municipality for the land agreements and Savanna City was established as a mega housing project from the onset". The HDA catalytic projects however, consist solely of state driven projects. This was stated by respondent TM, who also explained that all the catalytic projects were state-led and the HDA was appointed to implement them.

"So in essence the HDA is appointed to assess those catalytic projects which have been approved by the Minister; and recommend which projects can be implemented. So we have our head

office checking all these projects and make recommendations to which ones can be implemented; we then also programme manage the ones that are implemented” (TM interview)

The general sentiments shared by the officials have provided an overall understanding of the effectiveness of this approach in assisting the state meet its intended housing delivery objectives. This is because of the exposure some of the officials have had in the implementation of other mega housing projects, apart from Savanna City. What has also been evident is that the issues raised reflect those which have been raised in the literature chapter. This includes the complexities the approach presents to state structures, as well as the demands the approach presents in terms of planning and bulk service provisions. The implications experienced as a result in the lack of coordination in the state mega project programmes has been discussed in the following section.

5.5 Challenges presented by uncoordinated state mega project programmes

Although private driven have enjoyed support in the mega human settlements programme; these are still debated at national level. This was highlighted by respondent TM that while a list of private sector driven catalytic projects has been drafted, these have still yet to be approved by the minister. The process however, appears to be taking too long as the respondent highlighted that the list had been drafted since 2017. The respondent further added the following statement:

“We were expecting to get the private-led ones (projects) to get approved quickly so that they are part of us, but that has not yet happened” (TM interview)

It has also been noted in the interview with respondent TM that although the HDA acknowledged the development of Savanna City, it does not form part of the approved catalytic projects list.

A major implication presented by the varying housing programmes was deciding on whether the HDA should provide funding and support for projects that were not included in the catalytic projects list. Respondent RP also mentioned the challenges experienced with the catalytic projects programme.

“Firstly, part of the programme included private-public initiatives that were partly public funded. Secondly, the implementation of these projects did not move fast enough and so they weren’t able to secure enough funding to start up” (RP interview)

Savanna City development was also affected as the official from Midvaal LM mentioned that the development has not been able to acquire adequate support from the state because it is a private driven project. Respondent DZ also adds to this, stating that “The biggest issue that we’re having in the project is on bulk service funding. The Department of Human Settlements have to give us 70% of funding towards bulk funding each and every financial year. For the past three financial years, we have not been receiving bulk funding from the department or from treasury. This has resulted in continuous extension on the project timeline for Savanna City.

The implications and challenges outlined have also formed part of the reasons for the shift in the mega housing project approach that has occurred at national level.

5.6 Emerging shifts in the mega projects approach

As already mentioned there has been a transition in how mega projects have been understood, termed and thought about over the years. This has been picked up in the HDA; which is currently moving from the catalytic projects programme towards Priority Human Settlements and Housing Development Areas (PHSHDAs). Published gazettes on PHSHDAs, state that this programme is intended to address particular housing needs in order to achieve sustainable human settlements. This will be through means of intergovernmental cooperation, integrated planning, and coordinated programme implementation in order to fast track housing delivery. The respondent has highlighted that the PHSHDA programme would be driven by a new policy framework called the Human Settlements Spatial Transformation and Consolidation Framework. This is a draft policy framework which was written by the respondent and is now being considered at NHS for approval (RP interview). The respondent also provides a brief history on PHSHDAs.

Respondent RP, mentioned that the idea of PHSHDAs came from the development of the Priority Housing Development Areas programme document; which they had initially been appointed to draft (for the HDA) in 2008. This was during the time that the HDA was established, as an entity by the National Department of Human Settlements (NHS). In the Act of the HDA, section 7.3 refers to Priority Housing Development Areas programme (RP interview). This initial document (PHDAs) was shelved between 2012 and 2014; simultaneously at the time of her departure from the HDA. During this period, there had been lot of shift and change of focus in the HDA and the NHS. While the Gauteng Department of Human Settlements was developing a 'mega cities' programme; the HDA was pursuing the catalytic projects programme. The challenges that have been experienced between and within these programmes are what led to the development of the PHSHDAs and the re-appointment of the respondent back to the HDA in 2018.

There are several challenges which were pointed out by the respondent regarding the catalytic projects initiative. Firstly, there was an issue pertaining to private public driven initiatives at national level. As mentioned in this chapter, that there have been discussions (at national state level) around public-private partnership in projects on the list of private driven projects that had not yet been approved. However, given the current status, what has happened is that private driven projects had been receiving state funding and support. In addition, the implementation of these projects did not move fast enough; and some weren't able to secure enough funding to start. Project management issues and capacity were also other challenges briefly mentioned by the respondent. Another issue that was pointed out was the disjunction occurring between the HDA and the NHS implementation programmes; as well as the process, at which the catalytic projects list was concluded,

Some of the focus in the past was lost in respect of our implementation program at the HDA- was that the relationship between the department (national) and the agency (HDA). A lot of the projects (catalytic) that we have identified were not finding expression in some of the national department's funding in terms of priorities. Also, there is a disjunction between the catalytic list and the spatial analysis done by Johan and Hadley (RP interview)

The main concern that was raised regarding the catalytic projects programme; was the difficulty in understanding the impact catalytic projects make at an area-based level. The following statement expands on this issue

“So we are talking projects but what impact does a catalytic project make on a region like Gauteng? This was challenging given also that the fiscal was also shrinking and we had to make very bold decisions about what compromises do we want to make in terms of the housing ground; bulk infrastructure grounds” (RP interview)

Lastly, catalytic projects were criticized for their poor locations-on the peripheries and away from economic opportunities.

The challenges mentioned regarding the catalytic projects programme, have confirmed the critiques on mega projects in the following ways. Firstly, such projects often show lack of coordination in urban governance processes. Secondly, it is difficult to determine the value of the mega project output. Distinctions between the catalytic projects programme and the PSHDAs programme; as well as the implications presented by the shifting housing approach; have been discussed in the following section.

5.7 Differences between catalytic projects and Priority Human Settlements and Housing Development Areas (PSHDAs)

According to respondent RP, the difference between the catalytic projects programme and PSHDAs is that “The catalytic projects programme is project focused; while PSHDAs are areas-based focused” (RP interview). This means that the catalytic projects programme focused on assessing housing need within a municipality; and projects were allocated to the municipalities showing the greatest housing need. The PSHDAs, however, assess housing need within an area, rather than a municipality. According to the respondent, the rationale for the PSHDAs approach is that because projects are developed in space, PSHDAs do not focus on municipalities where projects should be located rather; they look at areas where high (and growing) numbers of informal settlements exist, and areas which present high demand for affordable rental housing. This has meant that one PSHDA can include more than one municipality; and in some instances it includes municipalities that are not within the same province. In terms of scale; this also meant that a PSHDA includes more than one catalytic project within it, as PSHDAs are not municipal bound (RP interview).

The entry point taken in developing the PSHDAs idea began with a spatial analysis of areas that presented a high potential of addressing housing need and providing access to basic services. Indicators that were used to identify these priority areas not only included access to basic services, unemployment rate, and levels of deprivation; but also focused on where current settlement growth is occurring and if the settlement supports future settlement development. This was another major difference between the catalytic projects programme and the PSHDAs.

“In the past we looked at only housing needs and so we put projects there. But now we are looking at well located in terms of settlement growth; settlement development for the future; what’s existing there versus if we have to invest, and does it make sense to support growth in the future” (RP interview)

This form of spatial analysis was seen to address the question on where the NHS and HDA wanted to have the biggest impact in addressing the housing need (RP interview). The respondent mentioned that the spatial assessment done by Johan and Hadley (for the catalytic projects programme) was taken and developed further to identify priority spaces, rather than priority municipalities.

A total of 58 PSHDAs were initially listed. This amount has since increased to a total of 136 PSHDAs that would be implemented across the country. A reason for this increase was that the identified areas had to be broken into smaller areas as “these were quite big areas” (RP interview). Also, the inputs given in the consultations that were held with province and municipalities also contributed to the increase in the number of PSHDAs (RP interview). It has been emphasized that the list of PSHDAs should not be taken as a development of the catalytic project list.

“We put aside the catalytic program, we said let’s start with the spatial analysis of what areas would make sense for us to want to invest in; and so we looked at housing need using our developed criteria, and set aside the catalytic. Once the areas were identified, we then overlaid the identified areas with the catalytic projects” (RP interview).

There are overlaps that exist; as some of the catalytic projects and Gauteng’s ‘mega cities’ projects fall within the PSHDAs. The criteria used to determine if catalytic projects and mega projects should be prioritized in PSHDAs will be explained in the following section. The existence of these overlaps was used to further rationalize the catalytic projects. This was captured in the respondent’s statement that “Most of them do fall within the priority areas. So thank god for that, we have rationale for some of these catalytic projects” (RP interview). It should also be noted, however, that the fortunate circumstances brought by these overlaps, does not imply that there are strong linkages that exists between the catalytic projects programme and PSHDAs and this has presented certain implications on the current mega projects programmes

5.8 Implications presented by the new housing delivery approach

The implications of adopting the PSHDAs programme can be summarized by the following statement by the respondent:

“PSHDAs change the way we plan for human settlements; the way we invest and make decisions; the way we would design what our projects pipelines look like. It puts a lot of pressure on capacity because we need focused capacity in those areas” (RP interview)

The implications presented in the adoption of the new mega housing approach have been noted in four ways. Firstly, the PSHDAs programme excludes some areas which have been prioritized at a provincial and local level.

“There are some places where we had to negotiate with municipalities and provinces-that not every town can be a priority area; not every community can be a priority area. We had to look at the feasibility of these areas in relation to future settlement development and honestly, some of the areas didn’t meet those criteria so we had to say no. It was very difficult,” (RP interview)

The respondent mentioned four criteria used in considering catalytic and mega cities projects that would form part of PSHDAs. Projects that would have the biggest impact in addressing housing need; offered mixed housing typologies; have access to basic services and bulk infrastructure; and offer strong links to economic opportunities were considered. It was highlighted that even though most of the catalytic and mega cities projects aligned to this criteria; decisions still had to be taken on whether these would be supported or not as this was based on the investment potential presented by the projects (RP interview).

A major implication of this was that catalytic and mega cities projects that fall outside the PSHDAs will not be given the same level of support as those that form part of the PSHDAs. This is because 60% of bulk services and funding would be directed into these priority areas, which is considered as a “big shift from what was done previously where money used to go everywhere and we couldn’t really say what percentage of the fund was going to a particular municipality and for what reason” (RP interview).

In relation to Savanna City, the respondent did not see any impact that the PSHDAs programme would have on the development; stating that “the project has already been implemented; therefore funding committed to the project would still be provided” (RP interview). Thirdly, gradual phasing out of the catalytic projects programme will take place, as catalytic projects in the development phase would be supported until completion. The rest which did not fall under PSHDAs and are not in the planning phase would be ruled out (RP interview). Lastly, PSHDAs had to ensure alignment with the Housing Code and its key programmes; as well as to municipal SDFs and IDPs.

“We had to make sure that the PSHDAs programme supports informal settlements upgrading, social housing, affordable rental housing, um and then gap housing or the FLISP program; and channel the funding from these programmes these areas” (RP interview).

Noted in the Priority Human Settlements and Housing Development Areas gazette that had recently been published (NHS, 2020); PSHDAs also aimed to synchronize other national housing programmes (such as the Integrated Residential Development Programme, The Special Presidential Package Programme on Revitalisation of Distressed Mining Communities; Enhanced People’s Housing Process) and funding from these programmes would also be channelled to the PSHDAs.

The key finding in this section was that the primary objectives of the PSHDAs are to improve the alignment of mandates of all spheres of state that play a role in human settlements development; as well as to improve intergovernmental and multi-sectorial collaboration in planning and budgeting for the prioritized development areas. This could also be seen as an attempt to address issues that have been experienced with the catalytic projects programme. There are, however, points of debate on the new approach’s effectiveness on linking with other state entity plans and programmes.

5.9 Emerging points of debate

There are two major points of debates that the respondent highlighted in the interview. Firstly, CoGTA questioned if there is a link between PSHDAs and CoGTA’s newly launched district-based model. The respondent explains that CoGTA’s district-based model is a governance driven mechanism to ensure that we are supporting municipalities that don’t have capacity” (RP interview). In response to the question posed, the respondent feels that there is a strong link between CoGTA’s district-based model and the PSHDA programme on the following basis:

Within a district there’s a space which is important for human settlements development. Therefore, if a space falls within a district; and within a municipality that doesn’t have capacity, what kind of institutional arrangements do we put in place between the district, the municipality, private sector, civil society, community, to ensure that that space is managed

appropriately? So there is a strong link between the district-based model and PSHDAs (RP interview)

The second critique emerges from the point on well-located human settlement development. The respondent mentioned that there has been a debate around PSHDAs with the City of Johannesburg Metropolitan Municipality over the last year (RP interview). The CoJ argued that PSHDAs support peripheral development; which goes against the municipality's attempts on consolidating the urban core. This was pointed in the CoJ's SDF through their inverted polycentric development model. The respondent mentions one example of this point of contestation.

"Because one of it was Johannesburg south; this was Soweto, Secoria Park, Orange Farm, Ennedale and Lenasia. And the CoJ refused to support that as priority areas and their logic was that it's on the periphery of Johannesburg" (RP interview)

The respondent highlights that there is always a play between well-located development and land that is available. In doing so, the respondent was providing reasons for PSHDA's peripheral locations and how these respond to the critiques on well-located settlement development.

So we then ask the question: How do you balance communities and settlements that are evolving there, I mean you go down to Johannesburg south, there's two new informal settlements, right on the edge of Ennedale, Orange Farm-somewhere around there. How do you balance the fact that there's growth happening, whether you like it or not-informally- versus the city's (CoJ) approach of saying we only want to consolidate within the core-which is the inner city, Randburg, Sandton- these are the urban nodes (RP interview)

What I'm trying to tell you is that it's very difficult to say we don't support peripheral development because on the periphery, there are communities. Lanseria is a typical example of why we should be supporting and investing in Diepsloot, in Cosmo City, and what's happening around Lanseria airport-all of the private developments, um, estate developments. So it's on the periphery of Johannesburg but we can't ignore it. We have to do something to consolidate the growth there, otherwise it's just going to sprawl further (RP interview)

These statements present conflicting rationalities amongst state programmes; and present mixed views on peripheral development.

The following section unpacks the objectives of these mega projects from the perspectives of state officials.

5.10 Evaluating state's success in meeting the intended objectives of mega projects

In evaluating the state's success in achieving its objectives for mega housing projects, the researcher asked respondents questions that focused particularly on Savanna City as the chosen case study.

The progress made on the development has been perceived as a success factor; with the delivery of the housing units constituting as a key measure of success for all the officials. Respondent TH mentioned that "Out of 5 117 fully subsidized units, we have got roundabout 2 183 units built. And then with bonded and FLISP, we have done like 3000 or above 3000 housing units".

Adherence and commitment to the initial project plans was also seen as a success factor by respondent KM, who expressed that “There have not been any deviations from the initial plans set out for the development”. The agreement with Eskom, to amend their policy regarding the provision of electricity to housing units was also seen as a key success criterion in terms of enhancing coordination amongst state entities. This has been captured by the statement given by the official from Sedibeng DM

“Based on the shared understanding that basic services majorly contribute towards creating sustainable communities, we have also managed to convince the Department of Energy, NERSA and Eskom to electrify even before 80% accommodation has been reached. This is according to their policy. And as we speak the electrification process has started” (SP interview).

Other factors that constituted as success were mentioned as business opportunities; job opportunities and skills development opportunities that have been created through the project. As mentioned by the official from Midvaal LM that: “There are a lot of sub-contractors; there are a lot of people providing local labour that are working now on the project that have gained a lot of skills” (TH interview)

The responses provided by the officials have also indicated that there has been a partial meeting of some of the objectives for the development; with officials providing reasons that the meeting of these objectives is work in progress and that the project has also not yet been completed.

“At the moment, we have achieved some of the objectives because we have the RDPs; we have your FLISP and bonded side. And equally so, we are also building your private schools” (DZ interview).

You must remember that it's a work in progress. Because this is a development of a township in progress, it is not an event. We already have CURRO which has come on board with the building of a primary school. Municipalities have also come on board for the building of clinics. And we have had business persons that are coming on board for the establishment of businesses in that area. So the project is on a positive path in terms of building sustainable communities (SP interview)

Respondent KM also added that the development of sustainable communities is a process that needs time as he states that: “These things happen slowly because no one can control this”. This sentiment was also shared by respondent DZ; who mentioned that “What matters most is that the portions of land have been reserved for those things” and further mentioned that two pieces of land have already been sold to the Department of Education to build public schools (DZ interview).

The officials, as well as the developer, are optimistic that the development will achieve all its intended objectives once the project has been completed. Despite the shared optimism regarding the future of Savanna City; a number of challenges have been raised by the officials who perceive these as limitations to state's ability in meeting its objectives for the project and other mega housing projects. Some of the challenges have already been briefly mentioned in section 5.4 of this chapter (which covered the general sentiments shared by the officials about the mega housing project approach).

The challenges presented can be concluded with the statement given by the official from Midvaal Local Municipality that: “There is nothing wrong with the mega project approach; the

objectives and everything is perfect. The idea is perfect but the problem is the implementation” (TH interview).

All the officials agreed that the indefinite extension on project timelines has been a major challenge for Savanna City, which has also proven to be costly for the developer. The lack of coordination in project activities has been highlighted by two officials as one of the causes for this.

“So that alignment between different departments to make sure that there is enough bulk water, bulk sewer for treatment and electricity-those things, some of them are not aligned and the project gets stuck.” (TH interview)

“You will find that the Department of Human Settlements will come and finish building the RDP units; but then water and electricity take longer to connect” (KM interview)

The official from Sedibeng District Municipality explained that the delay in the electrification of housing units in the initial phases of the development was presented by Eskom’s policy; which dictated that any newly established township will be electrified when it is occupied at 80%. “This meant that if we are building 100 houses, that area will only be electrified only when 80 of those (100 houses) would have been occupied” (SP interview). This resulted in burning incidences taking place as beneficiaries living in houses without electricity resorted to using primer stoves (TH interview).

The developer has also highlighted that limited sewer capacity was another possible challenge that could cause further project delays in the future.

“Currently were we stand in the project; we are also going to hit a dead end on sewer capacity if we exceed 8 500 stands” (DZ interview).

As noted in section 5.4 of this chapter; that the three year delay in bulk funding from the GHS has also majorly contributed to project delays for Savanna City. In addition, the lack of coordination in state’s mega housing project programmes has also limited the projects ability to receive support from state entities in terms of funding, such as the HDA and the National Treasury.

“We also need the National Treasury to form part of the planning committee in order to provide more support to the project” (TH interview)

The developer also concurs with the views shared by the official however; his statement was directed to local municipalities. This was because the respondent perceived the municipality to act as the link between developers and other state entities.

As a developer, I can’t approach the Department of Energy or Water and Sanitation alone; I need the support of the municipality. I need the municipality to ensure that all the service level and funding agreements are adhered to by other state departments. I need them to support the project so that I can also get assistance from the Department of Energy or Water and Sanitation. The municipalities need to also support mega projects through the provision of bulk services; construction and maintenance of roads that are needed in the development (DZ interview).

This statement also provides a view of the municipality playing a pivotal role in aiding the successful delivery of a mega housing project, even though housing delivery in the country has primarily been the responsibility of the province.

Another cause for project delays experienced by Savanna City development has been noted as the state's inability to effectively manage the project, as well as the mega housing project programme. Respondent DZ mentioned that non commitment to funding agreements between the state and developer was an issue that Savanna City experience.

"Even though there were service level agreements that have been signed by all the three municipalities, somewhere in the middle of the project one municipality made some changes in the provisions of the contract at our disadvantage" (DZ interview).

The official from the HDA has also mentioned the difficulty in coordinating and managing state involvement in projects as an issue. In catalytic projects; respondent TM mentioned to the difficulties presented in managing funding programmes of mega projects. Referring to Savanna City, the respondent also shared that "it is not easy to ensure that all three municipalities are contributing towards funding the project, and if they are benefiting equally"

All the officials agreed that the employment of incompetent sub-contractors was another issue; with two officials also acknowledging the state's failure on making timely payments to the sub-contractors.

"Payments to sub-contractors are usually delayed, you see. It's normally supposed to be 30 days but um, most of the time they (contractors) are paid after 60 days, or 90 days. It's a problem because contractors won't continue with the project and this increases the amount of time it will take for the project to be completed" (KM interview)

The extended project timeline has seen to cause further challenges for the developer in the following ways:

Because of timelines are not met; there are houses that are not complete. This has resulted in houses being invaded. And while the house is not completed and handed over to the client (which is the Department of Human Settlements); the house is still a responsibility of the developer, so which means the developer will have to go do court orders. It takes time and a lot of money. And after the evictions, the developer must go back and spend more money to like fix the house again (TH interview). These issues threaten further private-public partnership establishments in future mega housing projects.

Respondent TH mentioned to the current micro-economic factors that are affecting the construction industry to also play a role in project delays. The respondent explained that the increase in the cost of construction materials has forced contractors to cut down the number of employees working on the contract in order to deliver the project within the given tender budget. This has slowed the rate of productivity for Savanna City project. This finding is similar to the one presented by Du Plessis and Maennig, 2009; Kennedy et.al, 2014 on the challenges with mega project developments

Issues of mega projects contributing to local economic development were also highlighted by the official from Midvaal LM. The official felt that the community members were not able to benefit much economically from Savanna City project. This is because many community members lacked the skills needed to work on the project. This resulted in a lot of outsourcing of sub-contractors and labourers by the developer.

Remember they recommend that you must employ the locals in terms of SMEs; in terms of local labour. So now you find that you're coming here and you want to install electricity, and the

people in the ward or the people in the area who are supposed to benefit in terms of job opportunities, they don't have enough technical skills in terms of plumbing, you know such skills. So now the developer has to outsource sub-contractors (TH interview)

The limited economic benefits presented by the project, coupled with the slow delivery rate of housing, and the delay of payments to contractors, has resulted in the project experiencing a high number of community riots. The following statements captured from the officials elaborate on this.

"The challenges that we have; number one- is the stoppage of projects, which is caused by the non-payment of subcontractors to local labourers. This is because sub-contractors would have not been paid by the main contractors; and the main contractors experience such cash flow problems as a result of non-payment to them by the Gauteng Human Settlements" (SP interview)

"Currently, a lot of the times its protests that disturb the project's progress. People wanting houses and services now" (KM interview)

"There were protests in one case where the community came to learn that a contractor was outsourced to do the electrification but the community burnt down the electricity poles. The community does not understand that they do not have the skills required to do the work and so they keep interfering with the work the developer has to do" (TH interview)

Respondent TM mentioned that: "Due to the large scale impact the project sought to achieve within communities, community engagement processes have been perceived as a limitation". One other reason for community riots was noted as the contestations amongst the different wards for housing and economic opportunities in the project. The official from Midvaal Local Municipality highlights that: "There has been too much political interferences by ward councillors and community business forums in the project on who should be benefiting from the project" (TH interview). Respondent SP also mentioned factors such as "The misinterpretations of the Savanna City mega project objectives by the communities, along with the unmet community aspirations" causing an entitlement mentality amongst communities. Similar sentiments were shared by the developer who also felt that the community viewed Savanna City as a poverty eradication project.

One thing that we learnt when we came to this area was that the Midvaal or Sedibeng region as a whole was an area that had a high unemployment rate; and getting the project running and accommodating everyone proved to be difficult because everyone wanted to be part of Savanna City. People wanted jobs, people wanted all sorts of things from the development and we found ourselves being disturbed from progressing with the project. Because of the fact that this was a mega project and people looked at this thing as something that was going to eradicate poverty in the area then tend to want to put unnecessary pressure on it. That was a major challenge (DZ interview)

The lack of coordination by state entities in the project activities has also limited the benefit that beneficiaries could derive from the development. Respondent TH mentioned that "The lack of health and social services within Savanna; as well as the provision of Curro (a private school) does not seem to address the socio-economic disparities gap" (TH interview).

I don't think it's fair on the community as such because you are supposed to assist them. You are saying I must move households from informal settlements to Savanna, whilst there are no public schools where their children can attend to. There is no library; there are no sporting activities; there is no clinic; there is no hospital. Do you understand what I mean? There are no shopping centres (TH interview)

The official also highlighted that "The list of project activities need to be done at the same time to ensure that it's an integrated sustainable development. All government stakeholders must come together to build schools and clinics while the houses are constructed" (TH interview)

There has also been a lack of buy-in from the private sector in providing bond options to FLISP beneficiaries; as one official explained that "The private sector is threshold dependent and they are only interested in profit and numbers" (TH interview). Given that FLISP is somehow government subsidized, so it has not been easy to get private sector buy-in (TH interview). Respondent TM also mentioned that "It has not been easy to attract middle income households to buy bonded houses in Savanna City". Although reasons for this were not provided; the respondent felt that this can be addressed through proper marketing of these houses.

This, however, threatens the project's objective of becoming a mixed income housing development. The conclusion provides a summary of the chapter, and also provides a summary of the key findings from the interviews with the state officials, in response to the objectives of the research.

5.11 Conclusion

The findings in this chapter have indicated that mega projects success has been uneven; with some goals like delivering high number of housing unit output; and providing mixed income housing being met; while others (such as greater coordination in state programmes, and project funding) have not been achieved. These have been presented in the table below. It has also been evident that the inconsistency in the lists between the national catalytic projects and the Gauteng provincial 'mega cities' list has also impacted which projects receive financial support from national government. In this instance, it affected Savanna City project from receiving support from the HDA (even though it was a priority project for Gauteng Province). This threatens the objective on establishing private-public partnerships in housing delivery. The officials perceive that the establishment of self-contained and self-sustained human settlements (such as Savanna City) as a partially achieved objective, although this is based on the contextual assumption that the delivery of complementary and supporting infrastructure (such as schools, clinics, and retail facilities) would support the daily lives of the residents. Thus as an intervention that is trying to achieve the following things on the SA landscape, I can say that like many large projects and big ideas it has been partially successful. What happens in the future may be depended on how well the new PHSHDAs address the challenges it presents; as well as the challenges presented by the phased out catalytic projects. State and private sector are, however, optimistic about the turn to mega projects; sharing common sentiments on its effectiveness in creating relatively better human settlements than the legacy projects initiative.

Table 9: Assessment of state's ability to meet its objectives in Savanna City mega housing project

Objectives	Objectives that have	Objectives that have	Mixed responses
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	been achieved	not been achieved	
Increasing the rate of housing delivery	The delivery of housing 2183 RDP units and more than 3000 FLISP and bonded units	Indefinite extensions on project timelines led to housing invasions and increased project costs for the developer who had to refurbish the RDP units again Caused by the employment of incompetent sub-contractors and GHS's late payments to sub-contractors On-going community protests were another contributing factor	
Enhancing coordination amongst government spheres and entities in housing delivery	The ability to establish a service agreement with Eskom on the provision of electricity to the project , even before 80% occupancy rate is achieved The formation of Savanna City's project steering committee This included Midvaal Local Municipality, Emfuleni Local Municipality and the CoJ Metropolitan Municipality, and Gauteng Department of Human Settlements who are facilitators in the project	Lack of coordination in project activities (i.e.: sewer capacity limitations) Lack of coordination with other state departments (such as the department of health and education) in establishment of schools and clinics concurrently with housing development Lack of funding support given to private-led projects by the HDA Inability of the state to manage contributions made by each beneficiary municipality in the project	Beneficiary allocation questions amongst state officials One state official felt that the project should have benefited Midvaal LM locals more than the other municipalities, but another official felt that due to the size of the project, this would be unfair

Creating sustainable communities (self-contained and self-sustained cities)	Creation of job and business opportunities for the locals through the project	Current lack in public school availability, libraries, parks and clinics widening socio-economic disparities Inability of the project to be able to attract businesses and middle income residents into the area as these were considered as micro-economic factors Inability of the project to benefit all the locals in the beneficiary wards, given that there are 3 municipalities that had to benefit from the project	Meeting all the objectives is seen as a work in progress as the project is not yet complete State departments are now coming on board to build schools, clinics and businesses are also coming on board to provide for basic necessities Project is able to employ more people than legacy projects and for a longer period of time; however once the project ends, many people also lose their jobs The lack of skills available in the local community needed for the project resulted in the outsourcing of sub-contractors
Creating a mixed income and mixed use housing development			Partial meeting of objectives Availability of Curro private primary school currently in Savanna City Even though businesses and clinics and public schools have not yet been built, portions of land have been allocated to these land uses
Solving a variety of problems	Partnerships between the provincial		

experienced with legacy projects	government and private sector, reduced the amount of work that had to be done for the state in the initial project planning process		
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CHAPTER 6: FINDINGS FROM RESIDENTS RESPONDENTS

6.1 Introduction

The chapter discusses the perceptions and experiences of 5 residents living in Savanna City. It was imperative for this research to capture the residents' lived experiences in the new settlement in order to holistically assess the state's success in achieving their objective of creating a self-sustained and self-contained human settlement. Research questions focused on obtaining data on the social and economic impacts the development has presented to the residents; as well as on their housing satisfaction in the mega human settlement. It should be noted that this is a small part of the study and will not have the same emphasis as chapter 5. The chapter begins with a brief outline on what the state and developer wanted the residents to experience from the Savanna City project. It then presents the views of the ward councillor from Lakeside (as one of the beneficiary wards), who was also interviewed in order to obtain further information about the development and the beneficiaries. This is followed by the residents' perspectives; which have been divided into subsections in order to outline the main findings derived from the interviews. These were portrayed as the positive and negative aspects shared by the residents living in the development. Lastly an analysis is given; which determines if the state's intentions are what is actually being experienced by the residents in the settlement. This data does not seek to represent all the resident's lived experiences in Savanna City rather, it is intended to begin analysing the resident's lived experiences and further study is needed.

6.2 Intentions of state and developer for Savanna City development

This section highlights the intentions of the state and the developer in regards to the project outputs of Savanna City development; as well as with regards to the living experiences it sought to offer the residents of the settlement. The literature by Ballard and Rubin (2017) highlights how the Gauteng Province's interests in mega projects is focused on creating new post-apartheid cities that are linked to economic opportunities and transport corridors. In addition, the post-apartheid cities were intended to offer not only employment and economic opportunities for its communities and migrant workers; but will also become the backbone of economic growth and development for the region. The design layout and architecture of Gauteng's megacities reflected those of so-called world class Asian cities; which featured multi-story glass fronted buildings, mixed use environments and people walking in tree-lined paths (Ballard and Rubin, 2017: 16). In development of this vision, Savanna City was regarded as one of Sedibeng District's catalytic investment projects by Premier Makhura in the 2020 State of the Province Address. In the handover of the first phase of houses in Savanna City in 2016, Minister Lindiwe Sisulu mentioned that upon completion, Savanna City will be a thriving city that comprises all the elements outlined in the Breaking New Ground Policy (Department of Human Settlements, 2016). Some of the promises, features, and living experiences that the development intends to provide its residents have been conveyed in advertising and marketing material found on the developer's website.

"Living in Savanna City gives you the peace of mind that comes with affordable quality living and a suburban lifestyle on a 400 hectares conservation area" (Cosmo.co.za, 2019)

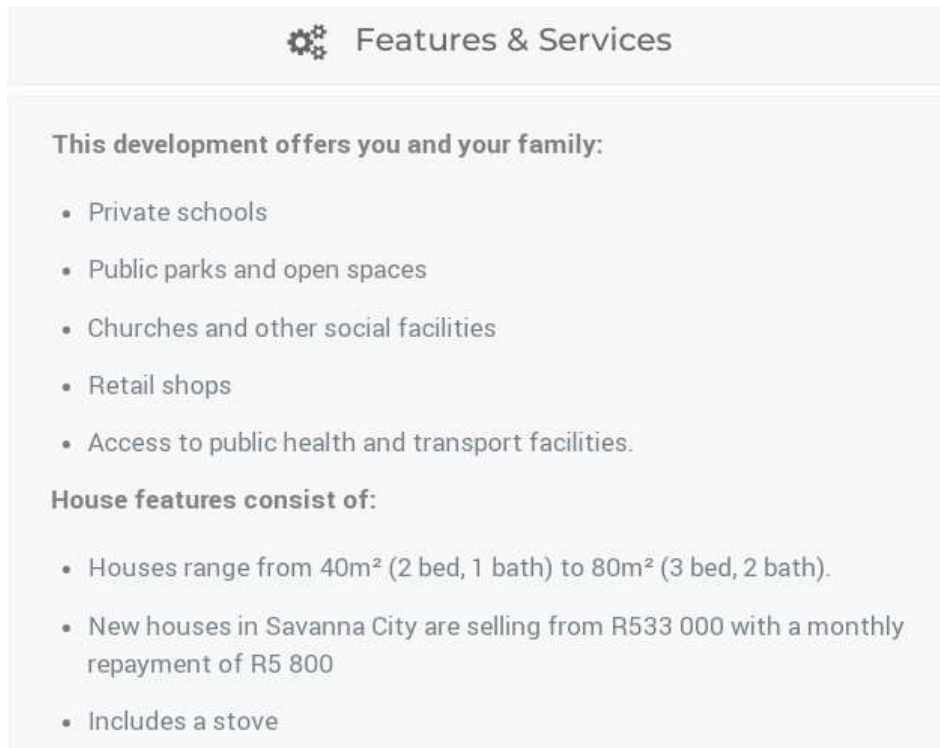
"Peaceful, affordable estate living" (Savannacity.net, 2020)

“The development offers its residents excellent location with easy access to Mall of the South and Southgate and is 20 minutes from Johannesburg CBD” (Cosmo.co.za, 2019).

“Savanna City is a government priority-project which, along with Cosmopolitan Projects will provide more than 18 000 homes in the South West of Johannesburg” (Cosmo.co.za, 2019)

“A City designed to be a fully sustainable community with its own reservoir, parks and business developments” (Savannacity.net, 2020)

Figure 7: highlighting the features and services that will be available in Savanna City



 **Features & Services**

This development offers you and your family:

- Private schools
- Public parks and open spaces
- Churches and other social facilities
- Retail shops
- Access to public health and transport facilities.

House features consist of:

- Houses range from 40m² (2 bed, 1 bath) to 80m² (3 bed, 2 bath).
- New houses in Savanna City are selling from R533 000 with a monthly repayment of R5 800
- Includes a stove

Source: Cosmo.co.za, 2019

Figure 8: showing Savanna City bonded housing advertisement



Source: Cosmo.co.za, 2019

The aspirations for Savanna City reflect state's intentions for all mega human settlements-which are to deliver a mixed income housing development that offers a range of social and economic facilities; as well as a variety of amenities for its residents. Similar to Lufhereng mega project, the current and proposed housing features in Savanna City are characterized by general low-rise formally designed houses configured in an ordered development that reflects an image of neat suburban living; while offering its residents an idyllic lifestyle (Charlton, 2017). It is also noted that the intentions portrayed by the development company for Savanna City (Basil Read), sought to appeal more to the bonded housing market, as little has been mentioned on the benefits that RDP housing residents can look forward to (such as access to public schools and public transport).

6.3 Perceived lived experiences of the beneficiaries by the councillor

As mentioned in the introduction that an interview was conducted the ward councillor for Lakeside, ward 6. The respondent is a male aged 40-49 years and not a housing beneficiary in Savanna City development. The ward falls under Midvaal LM and according to the councillor; his ward is entitled to 30% beneficiary allocation in Savanna City. The councillor shared that subsidized housing applications were opened in 2014 by the previous councillors. Amongst the 7 500 applications that were received in 2014, 2000 applicants had already been approved since 2015. The councillor also mentioned that the project is still yet to yield 4000 more RDP housing units; therefore more applicants are still going to be allocated houses.

The councillor shared his overall perspective on the beneficiaries' lived experience in the development. He shared that beneficiaries find living in Savanna City to be better because people have their own houses that they can live in with their families and no longer have to live in large numbers within one house. The councillor also shared that many people from Lakeside also want to live in the development as the RDP unit designs have been improved from the ones commonly known. Reasons given were that the current RDP units comprise of more rooms, are built with better materials, provide a geyser, and also look similar to bonded houses in terms of the physical appearance (refer to figure 9 and figure 10). The councillor perceived the overall beneficiary experience to be fairly good. Reason was that residents are optimistic that the future developments in Savanna City will provide more benefits for them. The councillor mentioned that the only benefit beneficiaries are currently getting from the development is a housing unit as there are some challenges that are currently facing the residents.

The councillor mentioned that there are no challenges that the beneficiaries are currently facing that they have not been made aware of prior moving into the new settlement. These challenges included the non-availability of schools and clinics in Savanna City. The councillor also mentioned the lack of electricity in the houses as another challenge; which is currently being addressed. It appears that the challenges experienced by the residents are being dealt with incrementally. The councillor highlighted that in this financial year, developments that will be prioritized will be the construction of a primary school and a clinic. In terms of public transport, the councillor mentioned that they have managed to engage the taxi industry to provide public transport in the development and taxis are already assisting in getting residents to schools, clinics and shops. This is because the councillor considered taxis as public transport.

6.4 Respondent profiles

As noted in chapter three, that face-to-face interviews were conducted in the development. Field observations also allowed the researcher to observe the external features of some of the bonded housing units, as well as the RDP units. What was evident was that there was not much difference in the physical structures of the bonded houses and the RDP houses; indicating that there has been an improvement in the quality of the RDP units. Differences that were seen were that the bonded houses were bigger than the RDP units and had bigger stands. All the bonded units were fenced off with either wall or wire fencing; while most RDP units has no fencing therefore allowing for multiple access points to the residents' properties. What has also been noted was that some of the RDP units had car ports, and these units have been allocated to military veterans. In the site analysis, the researcher also observed that the RDP units were located far from the development's main entrance; and were separated from the bonded houses

by considerable undeveloped land. FLISP beneficiary residents lived amongst the residents who stayed in bonded houses.

Figure 9: showing fenced off bonded house in Savanna City



Source: property 24, 2020

Figure 10: structure of an RDP house unit in Savanna City



Source: author's own, 2020

Figure 11: Showing no fencing on RDP properties



Source: author's own, 2020

Figure 12: Picture showing some of the undeveloped land in between the bonded houses and RDP houses



Source: author's own, 2020

The residents' profiles included their biographical information. This comprised of their gender, age group, occupation status and household structure. The following table presents a summary of all the respondents interviewed.

Table 9: Summary of resident beneficiary interviewees

Respondent no.	Age group	Gender	Residence type	Employment status/Source of income
1	30-39	M	Bonded house	Employed
2	30-39	M	RDP house	'Piece jobs'-tiling, ceilings
3	30-39	F	RDP house	Unemployed. Supported by partner
4	40-49	F	RDP house (Military veteran beneficiary)	Unemployed. Supported by partner

5	50-59	F	RDP house	Unemployed. Supported by spouse
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The first respondent interviewed lived in a bonded house. The respondent is a male aged between 30-39 years and currently lives with his mother, sister and son. The respondent and his sister are both employed. His son attends Curro, a private primary school currently available in Savanna City. The family does not own a car. The family previously stayed in Dube, Soweto and have since moved to Savanna City in 2015. The respondent stated that a reasonable bond rate was a primary reason for the family deciding to relocate to Savanna City.

The second respondent interviewed was a beneficiary coming from Lakeside ward 6. The respondent was a male aged between 30-39 years; who was currently living alone in his RDP unit. The respondent, who is currently unemployed, mentioned that piece jobs in carpentry were his source of income.

The last three respondents were female RDP beneficiaries aged between 30-39 years; 40-49 years; and 50-59 years. They currently stay with her children and partners, who were also the sole providers for their households. The three female respondents shared their desire to get jobs in order to support their families. The third female respondent previously stayed in Orange Farm; while the third and fourth female respondents came from Lakeside.

6.5 Residents' lived experience

This section firstly outlines the positive aspects of living in Savanna City before highlighting the main challenges the residents face in the settlement.

Peaceful living environment and convenient location

The first respondent felt that Savanna City provides him with a peaceful and quiet living environment. One major benefit of living in Savanna City which the respondent mentioned was the convenient location of the settlement to his work place. He stated that "Savanna City is much closer to where I work in Vereeniging than when I was living in Soweto" (Respondent 1). This was a major factor that served as a motive for him to stay in the settlement permanently.

Improved living environment and home ownership

All the RDP beneficiaries found living in Savanna City to be an improvement to their previous living arrangements and the main reason was that they had an opportunity to own their own place. One of the respondents mentioned that they are able to save money because they no longer have to rent a place in someone's yard (Respondent 3 interview). Respondent 2 mentioned that: "The benefits of having your own place included having more privacy that was desired", while respondent 5 felt that "Having your own place is a step towards becoming

independent". Respondent 4 also mentioned that the development also provided a housing opportunity to military veterans.

"Many military veterans, like me, have been given shelter. Our houses are the only ones that have car ports. There are close to 200 military veteran houses in Savanna City" (Respondent 4)

RDP beneficiaries also expressed their satisfaction with the material conditions of the house as they shared that the structure and quality of the houses is better than previous RDP housing units they have seen. Other benefits that residents derived from staying in Savanna City included living in a community that has paved roads.

These findings indicate that the state has met its objective of increasing housing opportunities for poor households; as well as improving the living environment for these marginalized communities. This research also notes other factors that influence housing residential satisfaction in the development. These are mentioned in the subsequent sections of this chapter.

Mixed views on living in the settlement permanently

Although RDP beneficiaries were grateful for the housing opportunity they have received from the state, mixed views were given in terms of living in the settlement permanently. The fourth and fifth respondents shared that not only were they grateful for owning a house, they would also encourage their children to work and stay in Savanna City permanently once they finish school so that they can further improve the settlement. Although Respondent 3 expressed her gratitude in owning her own house; she also felt lack of financial resources placed limits on her choice of residence. She mentioned that "I am not staying here because I had a choice. I would love my children finish school so they can stay in better suburbs in Johannesburg". She further mentioned that "The benefit of owning a house came with the expense of having to pay for municipal services" (Respondent 3). This implies that trade-offs had to be made in terms of relocating to Savanna City.

Respondent 1 had mixed views in terms of living in the settlement permanently. The respondent mentioned that he would permanently stay in the settlement because it was closer to where he works than when he was previously living in Soweto; but the lack of access to goods and services could also be a reason why he would relocate to another place. The respondent also stated that he would not encourage his family to live in Savanna City permanently because of poor service delivery and high rates of crime in the settlement. These will be expanded on in the challenges section of this chapter. Another respondent shared that he did not wish to live in Savanna City permanently as he felt that the settlement did not provide him with opportunities to find employment or venture into business; as he mentioned that "One day I would like to own a farm. Where in Savanna City do you see farming opportunities?" (Respondent 2 interview).

The variety of responses given by the residents highlight that their decisions to live in Savanna City permanently are not only determined by the provision of better quality housing, but also by the ability of the settlement to meet their current and future needs. These can be regarded as the other chain of factors (such as access to employment opportunities, lower municipal service bills, and basic convenient goods) that determine if Savanna City can develop into a self-contained human settlement (Onibokun, (1974) as cited in Aigbavboa CO, Thwala, 2013). On this basis, the challenges experienced by the residents of Savanna City have been noted as they present limitations on the development's ability to become a self-contained human settlement.

6.6 Challenges experienced by the residents

There are four challenges that were mentioned by the respondents, regarding their living experiences in Savanna City. These were noted as the lack of transparency in municipal rates and taxes; poor service delivery; lack of access to amenities and services; as well as the high rate of crime. Each one of these will be explored in detail.

Lack of transparency in municipal rates and taxes

All the residents complained about the high water bill. Respondent 1 stated that: "It's like you have a pool inside your yard, but you don't. It's just too much." Respondent 4 also remarked that: "Our municipal rates are also similar to people living in the suburbs, so where am I going to get R 14 000 for a water bill when I am not working?" In addition to this, the respondents also complained about the lack of transparency available in the billing system of the water rates. This was captured by respondent 4's comment that "We can't understand their rates. They will tell you that your water bill is R 6000 and then they state that you owe R 20 000 as other, and we don't understand what that other is. We all moved here at the same time but our municipal service costs are different and so we don't understand how they rated. My neighbour is a 90 year old granny. Where is she going to get the money to pay for her municipal services? There is a lack of transparency there." These statements imply that there is lack of communication in the relationship between the residents and the state regarding service delivery issues.

Poor service delivery

Residents living in RDP units have mentioned that their units have not yet been electrified. This has been another major challenge they experience with living in Savanna City as respondent 4 mentioned that "Some of the houses have burnt down because of using candles and paraffin stoves. Our health is also affected by the use of these paraffin stoves".

Poor waste collection service was another issue raised, as respondent 1 mentioned that "The municipality has provided a community bin for us, however, the bin is always full and it never gets picked up regularly".

Lack of access to amenities and services

The third challenge presenting the residents was the lack of amenities available in Savanna City. These were noted as schools, clinics and shops. These were touted to be crucial for their living experience in the development. Although there is a mobile clinic that comes to Savanna City on a weekly basis, respondent 1 mentioned that: "The mobile clinic doesn't offer everything and you have to travel to De Deur to access a clinic." The lack of an efficient public transport system in the area also meant that residents are also not able to readily access such services, as the respondent further mentioned that "There is no taxi going to De Deur so you have to walk all the way to the R 82 to get a taxi" (respondent 1 interview). This was considered, by the resident, as an hour walk from his house. Respondent 4 also mentioned the physical limitations of providing a mobile clinic to Savanna City; stating that "When it is raining, there is no shelter provided for the people who come to the mobile clinic, it is either that they stand in the rain or they do not come to the clinic at all". Respondent 3 also highlighted that "When you call an ambulance, you wait for hours, you have to really wait. We are concerned for the elderly, especially when they

need medical attention at night". These responses indicate the detrimental effect presented by the lack of adequate transport and health care services available in the settlement.

The lack of convenience shops in the settlement meant that residents have to take public transport to nearby areas in order to access convenient goods. Respondent 1 highlighted that: "I get most of my goods from Johannesburg. Sometimes I have to either walk or take a taxi to Orange Farm, just to get bread". An alternative way of accessing convenient goods was shared by respondent 5, who mentioned that "Sometimes we buy our goods from foreign owned spaza shops. It is not healthy because last time I had bought mealie meal from them, I found worms in it". The lack of such businesses in Savanna City has also been disadvantageous for the elderly, as respondent 4 mentioned that "My neighbour is 92 years old, and because there are no pay points around, she has to take a taxi to De Deur and stand in long queues to get her SASSA grant before she can buy her groceries". These statements highlight how residents have been negatively affected by the lack of access to such amenities. The statements also imply that Savanna City cannot be regarded as a self-sustained settlement yet, as residents have to depend on surrounding areas in order to access basic goods and services that are needed for their survival.

The lack of businesses in the settlement has also been perceived as a factor that has limited residents; access to employment opportunities. Respondent 3 shared that "Almost 90% of the residents living in RDP units are unemployed and there are no job opportunities in Savanna City because there are no businesses that can employ us. I cannot access these job opportunities elsewhere because I do not always have money for transport".

Other supporting infrastructure needed in the settlement was highlighted by respondent 5, as she mentioned that "The residents of Savanna City need a community hall because most of our community meetings are in open spaces. It is hard for the elderly to attend these meetings and when it rains, we have to cancel these meetings".

Lack of schools available; particularly for the residents living in RDP units meant that their children attend schools in places such as Lakeside, Sebokeng, Vereeniging and Orange Farm (Respondent 4). This compelled residents to make transport arrangements in order to get their children to get to school on time (respondent 5 interview); and in some instances where households could not afford to make transport arrangements, their children had to walk to school. Respondent 3 shared her concerns with the following matter.

"It is not safe. Some children have to cross railway lines in order to get to school; while other children have to walk to unsafe places, such as Orange Farm, to attend school" (Respondent 3)

High levels of crime activity

All the respondents mentioned to high crime activity as a problem that they had faced initially when they had moved to the settlement; and these were mostly in the form of 'house-break ins' (respondent 1 interview). The respondents also felt that the situation was worsened by the non-existence of a police station in Savanna City as respondent 4 mentioned that "Our nearest police station is in De Deur. So if I want to report a crime, I have to take a taxi to De Deur. This encourages criminals to break into our houses because they know people do not have money for public transport". Respondent 2 also mentioned to the non-existence of fencing around each RDP units to also contribute to the issue, as he explained that "Our government needs to build walls to fence off our yards so that people can have one entrance and exit to their houses and

not finding people accessing your house from any side. So we are not that much safe without the walls because anybody can just break in when I'm not around. "In dealing with the high levels of crime, the community has since established a community police forum that has ensured that community patrols take place. This has lessened the levels of crime in the settlement.

It has been argued that a house is only one link in a chain of factors, which determine people's relative satisfaction with their accommodation (Onibokun, 1974; cited in Aigbavboa CO, Thwala, 2013). Therefore, the challenges outlined in this section provide the residents' perceptions of inadequacies in their current housing environment. This can be used to direct forthcoming state efforts to improve the current status quo in terms of mega housing projects.

6.7 Conclusion

The findings in this chapter have provided insight into the post-occupancy experiences of residents in Savanna City. The experiences discussed have highlighted the derived benefits and challenges that were accompanied by the residents' relocation to the new settlement. An improved quality of life was the main benefit residents derived from the settlement. This was in the form of home ownership which was enabled by the state's RDP programme (for the urban poor); as well as through the affordable bond prices (for the middle income). The findings also show that residents were also satisfied by the physical attributes of the settlement; which offered them a cleaner, more developed environment (paved roads) that was peaceful. Contrast in the residents' lived experiences has also been evident. Similar to Charlton and Meth's (2013:30) study; these are "tied to the wider patterns of unemployment and location that are a depended on a constellation of associated factors including transport and services". Referring to respondent 1; Savanna City was located relatively closer to his job (compared to where he previously stayed in Soweto) and this was one of the reasons why he moved to the settlement. However, Savanna City's poor location to amenities and public transport network services were factors that would influence his decision to not permanently reside in settlement. This indicates that Savanna City has not been able to successfully meet his crucial housing demands. These findings continue to echo Charlton and Meth's (2013:112) findings in that they "illustrate the variation and contradictions in the residents' experiences, as well as the potential gains and losses, as factors that influence their housing satisfaction".

The challenges and concerns outlined by the residents also highlight some of the dangers that need to be examined in this form of state housing interventions. These were noted as urban management issues, poor service delivery, high levels of crime, as well as the lack of access to amenities, services and employment opportunities. These challenges threaten state's ability to create self-sustained and self-contained human settlements. In summary, the mega project approach to housing delivery has presented both beneficial and contradictory impacts on lives of residents.

Findings in this chapter concur with the critiques raised in literature on the challenges experienced in creating and sustaining local economies in new settlements. Firstly, Savanna City reflects Ching's (2007) views that satellite towns often become dormitory towns that operate as part of a larger city with extensive cross commuting. This has been seen with inexistence of offices and businesses in the area; which has resulted in extensive commuting for goods and services, as well as job opportunities by the residents. It could also be argued that the lack of such amenities has also been a reason why the settlement has not been able to attract bonded

housing residents (referring to respondent 1's motive for relocating). The findings also affirm Charlton's (2017) argument in that there is a lack of attention given to household income generation in South Africa's housing strategies. Currently, the development reflects the long term negative consequences shared by Harrison and Todes (2017) as a result of poor predictions and understanding of local dynamics. These are seen through reverse commuting activity; whereby residents are required to make trips to and from work in the urban centres during the week. This has been caused by the development's inability to provide for sufficient services and social environment services required for daily survival by the residents; coupled with the poor transport network system currently existing in the area. Lack of these amenities and services (such as police stations, public schools and clinics) has also left the residents vulnerable to crime both within and outside the development. It can also be concluded that there are more challenges than benefits experienced by the respondents thus far.

CHAPTER 7: CONCLUSION

7.1 Purpose and orientation of the research

Large scale housing delivery in South Africa is not a new phenomenon. As mentioned in my first chapter; this form of housing delivery can be traced back to the RDP programme. This was developed further by the BNG policy which sought to deliver human settlements. The current approach to South Africa's large scale housing delivery is in the form of mega projects. What is new in this form of housing delivery is how the policy idea has been used as a strategic political tool aimed at spatially transforming the urban spaces; while simultaneously seeking to address the institutional challenges of the state in terms of housing delivery. The success of utilizing this approach would inevitably aid in re-instating the legitimacy of the ruling party, particularly in the metropolitan cities. Given that the turn to mega projects as the only method to deliver housing was met with mixed reactions from the state, as well as from scholars (Turok, 2015; Harrison and Todes, 2017; Ballard and Rubin, 2017, Charlton, 2017); it was thus interesting to determine if the use of the mega project approach was successful in meeting its intended objectives. Savanna City is considered as a pilot project that reflects the outcomes desired for future mega housing projects. It is also located in Gauteng Province, which has also shown a different interpretation of the mega housing project approach (most used to establish satellite towns as a way of transforming apartheid spatial patterns). Therefore, this case study was significant in highlighting the various complexities presented by this approach (in terms of its interpretation within the institutional space). It has also been effective in showing how this approach has manifested spatially within an urban context and what impact it has presented in a contiguous space.

The focus of this research was placed on determining if the approach has been successful in assisting the state to achieve its intended objectives. Therefore, the research explored what the objectives of the approach are; and if these articulate the new direction for housing policy in South Africa. The research also attempts to evaluate if the state was successful in meeting their intended objectives; as well as determine if the results support (or contradict) the critiques this approach has attracted. The research has also highlighted the implications this approach to housing delivery poses on South Africa's housing policy, moving forward (given that mega projects continue to be appealing to the state) (Charlton, 2017).

The literature has highlighted that mega projects cannot be understood generically, as they take multiple forms; involve different players; have different objectives; have different spatial locations and outcomes. But, due to their scale, they are often characterized by their complex and uncertain nature. The literature has also helped to us understand one of the dominant approaches to state-led spatial transformation evident in South Africa's urban spaces. The literature highlights how South Africa's current housing policy discourse continues to utilize a project-focused approach in the intervention of urban spaces. Reasons this approach has been appealing for the state is because it enables the state to exercise its powers and abilities in cities, as they have also been core sites of political contestation. The underlying logic of the approach in South Africa's housing delivery rests on the beliefs that transformation of both the state and urban spaces can be effectively and rapidly achieved through centralized and supply driven mechanisms. This approach; which promotes centralized state master planning; has been primarily driven by the need for quick and material intervention in South Africa's urban landscapes. It has also been driven by the need for government to prove its effectiveness in

delivery and transforming apartheid planning. The key characteristics of the approach are that it entails of large scale, capital intensive projects that are physical and attention grabbing. The South African megaproject approach to housing delivery, concentrates primarily on large capital-intensive state-led projects; which in themselves, alter the urban form. A key aim of the policy was also the delivery of mixed-income and mixed-use settlements (through large scale projects) to encourage social integration. They are also used as strategic spatial planning tools used to target specific places for development of a contiguous area. They have also required the creation of partnerships between national government institutions, parastatal entities and private sector; and often make bold promises that are speculative and imaginative. Usually the outcomes of mega projects interventions vary, and this greatly depends on the broader economic and political urban contexts which they are implemented in.

7.2 The research design

This research required a context specific and context aware case study, which in this instance, had to focus on how a complete change in approach to housing delivery assists the state in realising their urban visions. This research makes use of a project based case study research in order to allow for in-depth investigation into the complexities, subtleties, and particular new ways of understanding the phenomenon on mega projects (as another form of large scale housing delivery in South Africa). This research can be used for comparative studies in future research; where other project based case studies (on mega housing projects) can be done in order to provide for a holistic analysis on this form of housing delivery approach. Further research is also required on the selected case study (Savanna City) once the project has been completed. This would serve to deepen one's understanding on how this housing approach enhances-or possibly diminishes- the settlement's ability to be regarded as a self-sustained and self-contained mega human settlement; along with its long term impacts on the residents' lived experiences. Further research into these topics would assist state in assessing if the current housing approach serves an improvement to former adopted housing approaches; such as the RDP programme and the popular small scale 'legacy projects' (as incremental interventions implemented under the Breaking New Ground Policy). In addition, it will also assist in assessing whether the approach has enhanced efficiency and coordination in state housing programmes and state entities.

Another further important area of investigation would be into the new programme (PHSHDAs) that has been adopted at national government, with the use of a neighbourhood or project based case study research. This would serve to understand how PHSHDAs, as a state improvement programme actually transpires spatially compared to the phased out catalytic projects.

For insights into the state's intentions on the mega housing project approach; how this approach has been translated into the various state programmes adopted at different tiers of government, and implemented spatially; in depth interviews were conducted with 5 key state officials. It was noted that some have been involved in the implementation of the housing programmes while some have been involved in the conceptualisation and reflection of the housing programmes.. Given that the chosen case study is a private driven mega project, the developer was also interviewed. The vertical lens thus focused on uncovering the state's objectives of the mega projects approach; challenges and benefits presented by the approach in aiding housing development; as well as evaluating state's success in meeting their objectives. This was complemented by the insights shared by the residents of Savanna City. In this study, the residents' lived experiences have been utilized as an ad hoc evaluative measure for judging the success of the private-public initiated housing development in terms of creating self-contained and self-sustained satellite cities. Interviews consisted of 5 residents, who lived either

in bonded houses or RDP houses in Savanna City. The interviews focused on exploring the social and economic impacts presented to the residents upon their relocation to the settlement; as well as on their housing satisfaction in the settlement. The two sets of information, from the state and from the residents are considered in the key findings of this research. This has been highlighted in Chapter 4 and Chapter 5 of this research.

7.3 Key findings

State's core objectives on mega housing projects as well as partial achievement of these

The state's objectives have been primarily focused more towards increasing the rate of housing delivery and the mega projects approach is mostly understood in terms of housing unit output per project (10 000 units project).

The research mentions to success in some of the mega project objectives being achieved, whilst some have been partially achieved in Savanna City. Reasons provided by the state officials were that the project has not yet been completed. Optimism is shared by the officials that once the project is completed, it would successfully meet all its objectives. Although the officials perceived the challenges presented by the approach, not as limitations, but as areas of improvement; the challenges confirm the critiques that have been raised on the adoption of this approach.

Uncoordinated state mega project programmes

As the findings mentioned in Chapter 4; there is a lack of coordination in the state mega projects programmes (between the HDA catalytic projects programme and Gauteng's mega cities programme). The lack of coordination in the state mega projects programmes confirms Suzuki's (et.al., 2015) argument- that mega projects often require new multi-scalar government arrangements; which are often lacking. This also confirms Ballard and Rubin's (2017) views that the articulation of the new urban vision has created confusion within the state. The challenge presented by this was that projects prioritized at the provincial level in Gauteng, were not supported financially at the national tier. These were mostly projects that were private-public driven, like Savanna City. Ballard and Rubin (2017) have argued that the lack of coordination in state mega project programmes can be linked to the underdevelopment of the policy; which reflects how planning in South Africa can be a political process and the findings in this research seem to support this argument.

Transformation of the mega projects approach at national level

Chapter 4 has also highlighted the emerging shift in approach to Priority Human Settlements and Housing Development Areas (PHSHDAs). This was influenced by the challenges experienced by the state using the catalytic projects programme. The first main challenge was that the national catalytic projects programme was not coordinated with the provincial programmes; and was exclusive of private sector led projects. Secondly, it was not easy for the state to measure their impact at an area based level (RP interview). The findings have also discussed how the new PHSHDAs approach has not been immune to the challenges experienced in the latter programme; as it opposes CoGTA's newly launched district-based model; which indicated weak linkages with the PHSHDAs programme. Other forms of conflicting rationalities were seen with the CoJ's reluctance to support PHSHDAs as they did not align to the municipality's vision of compact city development. The argument on peripheral settlement development was addressed by the need to balance well located development with land that is available, as well as the need to focus on where settlements were already emerging (RP interview).

Re-enforcement of apartheid spatial patterns by the mega projects programme

One of the objectives for the Gauteng mega projects programme was to address the apartheid spatial patterns currently prevailing in the region. This was captured in their 2015 discussion document on “Mega Projects: Clusters and New Cities; which was also never further developed (Ballard and Rubin, 2017). Although Gauteng has decided to implement the concept spatially; the outcomes (so far) re-enforce the current apartheid geographies. One major challenge presented by these new satellite towns and cities is extensive commuting. Savanna City has been developed along the urban edges of the City of Johannesburg Metropolitan Municipality and Midvaal Local Municipality. The development is not located near economic nodes; therefore residents who are employed depend on public transport to get to work. Although the development has offered all the residents a relatively better living environment (such as homeownership and a peaceful living environment) it has not been able to provide residents with access to social and economic services (such as clinics and convenient shops). This has been because the development has also not been able to attract businesses into the area. In addition, the settlement has only been able to attract a relatively small portion of black middle income residents. This confirms the critique that new town development aspirations, particularly on the local economic development front, have always been susceptible to poor predictions (Stewart (1996) as cited in Harrison and Todes, 2017).

Lack of attention given to local economic development issues

The findings presented in Chapter 4 and 5 are similar to Charlton’s (2013) findings on the RDP programme’s impact on the beneficiaries’ lived experiences. There is a contextual assumption (by the state) that the delivery of complementary and supporting infrastructure (such as schools, clinics, and retail facilities) would enable these mega projects to become sustainable human settlements that support the daily lives of the residents (Gauteng’s mega cities programme). Much as the mega projects approach intends to assess the impact of housing delivery on the sustainability issue; the narrowly focused objective on land use planning, indicates how this is largely perceived as a matter falling outside of the DHS capability.

It also seems that there is limited understanding, by the officials, on economic development issues in the housing projects. This was seen on how economic activity was narrowly focused on job creation and skills development opportunities presented solely by the project (assessment criteria for catalytic projects). Findings presented in Chapter 5 highlight the weakness of Savanna City as a new satellite town. This has been seen with the inexistence of offices and businesses in the area; which has resulted in extensive commuting for goods and services, as well as job opportunities by the residents. The findings also concur with Charlton’s (2013 and 2017) arguments that state housing interventions are conceptually disconnected from the political and economic context as the current mega housing approach lacks a conceptual and practical link to household economies. As a component of incubator urbanism; the creation of an economic base out of nothing in a community characterized by joblessness, poverty, and spatial disconnect; highlight the limitations of mega projects pursued by the state. These findings also support Charlton’s (2013:369) argument that the lack of engagement with the issue may lead to misrepresentation of the situation, which would be followed by a misdiagnosis of the problems, thus resulting in inappropriate or limited interventions, such as a policy shift and programme.

In terms of Savanna City, the main idea was that job opportunities would be created by the housing project, through construction activity (TM interview; DZ interview; TH interview).

However, this can be classified as short term employment as this is depended upon the project cycle. This form of employment also did not cater for the mix of Savanna City residents (such as those living in bonded housing units who might be highly skilled). Other ways that employment opportunities could be created was through private sector investments (SP interview); however this is also depended on the broader micro economic climate. As discussed by Ward (1993) and Cevero (1995) that new satellite towns in the UK during the 1950s and 1960s were able to focus on creating job opportunities as during the boom of the economy, but faced major decline in the 1970s due to recession and economic restructuring of the country. State officials however remain optimistic and perceive these developments as work in progress (SP interview; KM interview; TH interview).

7.4 Recommendations

The recommendations made are intended to enhance the continuing appeal for the state in pursuing the mega housing projects trajectory; as well as the potential of mega housing projects to not only provide better living spaces for the poorly housed urban population, but become attractive places for the working class and for private sector investment.

As noted by Harrison and Todes (2017:56), there is a need for local economic development programmes to be central to mega human settlements proposals. These should be orientated towards strengthening the existing economies close to these areas, or to exploring the real prospects for new economic activities, and providing space for informal economies. This would require public-private partnerships around economic development, to explore these areas.

It is also important that local economic development should be viewed as an integral part in planning activities throughout state departments, and not just an afterthought. This would require buy-in from other state departments such that Department of Trade and Industry's programmes are coordinated with the housing programmes. Planning should also be area-based and reflect the economic and human development priorities of the communities. This means that local economic development in these mega projects should move away from a top down-state initiated approach, towards a bottom up approach that provides for locally founded solutions to challenges of poverty and an inequality in communities. This would enable state to increase opportunities for the urban poor on other types of economic gains that can be obtained on the urban peripheries

Recommendations also rest on the need for the state to place more attention on the residents' economic and spatial strategies. This requires meaningful engagement with the targeted communities; as well as the Department of Human Settlements conducting wider studies on the needs analysis of the beneficiaries of the proposed housing subsidy development, in order to better understand the needs and expectations of the communities prior the construction of the development.

Based on the possible long term trajectory of Savanna City operating as part of a broader metropolitan region; it is important that mega human settlements proposals address issues around good transport links and networks

The research also supports the recommendation provided by Harrison and Todes (2017); that mega human settlement that are not located close to the region's economic nodes; or those that do not present realistic local economic development plans, should be avoided. This is based on

the current realities of the Gauteng region (which presents much lower urban population densities than Asian cities; as well as urban sprawl).

In hopes of improving intergovernmental coordination amongst state entities in housing delivery, there is a need to depoliticize the process of policy formulation and adoption in South Africa

Focus should also be placed on aligning the national, provincial and local government budget cycles; while simultaneously re-defining the overlapping functions of national, provincial and local government functions that bring confusion and undermine effective delivery.

Given that the mega projects approach is a top-down form of state planning; policies adopted by NHS should be informed by local government recommendations on the housing agenda

Attention should also be placed on improving project management processes for mega projects, given that their complexities in managing and high demand for resources. As mentioned by Flyvbjerg (2014) that challenges facing mega projects need to be brought to the table in order to discover the possible solutions. This also includes discussions over cost overruns, mismanagement and corruption of state financial resources.

A reform in the way mega projects have been managed is also vital. This means that front-end management also needs to be valued more than project implementation and in addition, better systems need to be put in place in organizations regarding project management for accountability purposes (Flyvbjerg, 2014).

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9. APPENDICES

Table 1: Updated list of national catalytic projects

Province	Municipality	Catalytic Project Name	Project No	Mining Towns	Housing Opportunities	Job Opportunities
Eastern Cape	Buffalo City Metro	Cove Ridge Estate	1	No	8,500	6,566
Eastern Cape	KSDM	MTHATHA COSMO	2	No	2,260	1,280
Eastern Cape	Nelson Mandela Bay Metro	Coega Ridge	3	No	38,000	40,920
Eastern Cape	Nelson Mandela Bay Metro	Fairview West Mega Project	4	No	4,200	3,439
Eastern Cape	Nelson Mandela Bay Metro	Florida Heights Housing Project	5	No	13,110	11,285
Eastern Cape	Nelson Mandela Bay Metro	Walmer Cosmo Housing Development	6	No	5,000	4,228
EASTERN CAPE TOTALS					71,070	67,718
Province	Municipality	Catalytic Project Name	Project No	Mining Towns	Housing Opportunities	Job Opportunities
Free State	Mangaung	Mangaung project 23600 (Caleb motshabi/Khotsong/Khayelitsha)	7	R -	23,600	18,750
Free State	Mangaung	Vista Park Ext 2	8	No	5,000	9,242
Free State	Mangaung	Vista Park Ext 3	9	No	5,749	8,225
FREE STATE TOTALS					34,349	36,217
Province	Municipality	Catalytic Project Name	Project No	Mining Towns	Housing Opportunities	Job Opportunities
Gauteng	City of Johannesburg Metro	DRD Project (Goudrand)	10	No	13,097	8,103
Gauteng	City of Johannesburg Metro	Fleurhof Dev. Project	11	No	10,411	6,847
Gauteng	City of Johannesburg Metro	Protea Glen Ext.	12	No	6,744	5,040
Gauteng	City of Johannesburg Metro	Riverside View	13	No	11,406	6,659
Gauteng	City of Johannesburg Metro	South Hills	14	No	5,726	5,174
Gauteng	City of Johannesburg Metro	Tanganani Ext. 14 - Diepsloot East	15	No	11,009	8,248
Gauteng	City of Johannesburg Metro	The lion park/Cosmo City	16	No	4,711	3,753
Gauteng	City of Tshwane Metro	MAMAPOE Estates	17	No	10,891	9,641
Gauteng	City of Tshwane Metro	Nellmapius/Willows	18	No	11,281	7,118
Gauteng	City of Tshwane Metro	PTA East Node	19	No	10,048	5,429
Gauteng	City of Tshwane Metro	Rosslyn Node	20	No	4,811	6,754
Gauteng	City of Tshwane Metro	Samrand-	21	No	11,300	13,795

		Olivenhoutbosch (SAMOL)				
Gauteng	Ekurhuleni Metro	Clayville Housing Project	22	No	14,332	11,764
Gauteng	Ekurhuleni Metro	Helderwyk	23	No	13,000	11,451
Gauteng	Ekurhuleni Metro	Ringpoort Carnival	24	No		
Gauteng	Ekurhuleni Metro	Watervalspruit/Albertsdal	25	No	19,838	21,000
Gauteng	Midvaal	Savanna City	26	No	18,399	6,908
Gauteng	Mogale City	Leratong City Nodal Dev project	27	No	17,000	13,753
Gauteng	Randfontein	Montrose, Randfontein Dev	28	Yes	5,428	3,800
GAUTENG TOTALS					199,432	155,237
Province	Municipality	Catalytic Project Name	Project No	Mining Towns	Housing Opportunities	Job Opportunities
Kwazulu-Natal	eThekweni Metro	Finningley/Segametsi	29	No	50,000	277,000
Kwazulu-Natal	eThekweni Metro	Inkanyezi City	30	No	2,243	1,475
Kwazulu-Natal	KwaDukuza	Woodmead	31	No	9,778	7,915
KZN TOTALS					62,021	286,390
Province	Municipality	Catalytic Project Name	Project No	Mining Towns	Housing Opportunities	Job Opportunities
Limpopo	Greater Tubatse	Burgersfort (21821 Mixed Units)	32	Yes	19,906	16,118
Limpopo	Greater Tubatse	De Grooteboom Development	33	Yes	20,000	23,151
Limpopo	Greater Tubatse	Driekop(11060 mixed use units)	34	Yes		
Limpopo	Greater Tzaneen	Berlyn and Tzaneen Ext. 70	35	No	100,620	550,000
Limpopo	Lephalale	Lephalale (16964 mixed use units)	36	Yes	16,964	14,192
Limpopo	Lephalale	Worcester	37	Yes	11,100	11,490
Limpopo	Makhuduthamaga	Madihlaba/Jane Furse Integrated Dev.	38	No	19,000	36,546
Limpopo	Mogalakwena	Mokopane (3102 mixed use units)	39	No	3,102	3,950
Limpopo	Polokwane	Polokwane ext.116 &117	40	No	10,387	10,887
Limpopo	Polokwane	Ramahlodi Park	41	No	6,000	10,478
Limpopo	Thabazimbi	Northam Urban Node	42	No	14,500	8,250
Limpopo	Thabazimbi	Regorogile Ext. 8	43	No	3,384	5,431
LIMPOPO TOTALS					224,963	690,493
Province	Municipality	Catalytic Project Name	Project No	Mining Towns	Housing Opportunities	Job Opportunities
Mpumalanga	Emalahleni	Spring Valley Residential Dev.	44	Yes	5,000	6,210
Mpumalanga	Thaba Chweu	Mashishing (4988 mixed use units)	45	Yes	13,800	8,027
MPUMALANGA					18,800	14,237

TOTALS						
Province	Municipality	Catalytic Project Name	Project No	Mining Towns	Housing Opportunities	Job Opportunities
North West	Madibeng / Rustenburg	Marikana Lonmin SHSP	46	Yes	12,500	8,060
North West	Matlosana	Jouberton/Alabama/Khuma Greenfields	47	No	17,925	11,587
North West	Moses Kotane	Sun City	48	Yes	20,016	19,653
North West	Rustenburg	Boitekong Extension 35	49	Yes		
North West	Tlokwe	Tlokwe N12 integrated Dev.	50	No	7,356	9,240
NORTH-WEST TOTALS					57,797	48,540
Province	Municipality	Catalytic Project Name		Mining Towns	Housing Opportunities	Job Opportunities
Northern Cape	Gamagara LM	Gamagara mixed use housing	51	No	13,007	6,870
NORTHERN CAPE TOTALS					13,007	6,870
Province	Municipality	Catalytic Project Name		Mining Towns	Housing Opportunities	Job Opportunities
Western Cape	City of Cape Town Metro	Wescap	52	No	200,000	160,519
Western Cape	Mossel Bay	Mossel Bay	53	No	5,200	3,015
WESTERN CAPE TOTALS					205,200	163,534

Source: Housing Development Agency official, 2020

Appendix 1: Participant information sheet

PARTICIPANT INFORMATION SHEET

Have mega projects achieved what they set out to do?: A case study of Savannah City

Greetings

My name is Dikeledi Lephondo and I am currently a full time student studying towards a Master's Degree in Development Planning in the School of Architecture and Planning at the University of Witwatersrand. As part of my academic studies, I am required to complete a research project and I would be grateful for your assistance in undertaking my research.

I am investigating whether the implemented mega projects have achieved the 5 objectives mentioned in the new housing policy approach. These include increasing housing delivery output, improving coordinated development within the different spheres of government, improving the quality of housing units, creating sustainable new cities and promoting spatial equity. I am particularly looking whether Savannah city has achieved these objectives.

You are identified as a key informant, because the study looks at interviewing residents, government officials, project managers and real estate agents and you fall within this category. I would like you to take part in an interview process because your contribution will help me to answer some of the research questions. I will ask you questions in relation to how your experience has been in terms of implementing the policy. The interview will take approximately 20 minutes of your time, and it will be conducted at a place convenient to you.

I would like to record the interview and take handwritten notes. I will only audio-record the interview if you give me your consent to do so.

Your participation is entirely voluntary, and you may refuse to answer any questions that make you uncomfortable and withdraw at any time without penalty or loss. You will receive no payment or other incentives for your participation. Apart from taking some of your time, your participation should not involve any costs or risks to yourself.

Your participation is not completely anonymous as the interview will be conducted in the presence of the community representative; however your personal name and physical address will not be used, unless you prefer to. If I use direct quotations from this interview, please note that your identity will not be revealed in the final document as I will use numbers to identify you as a respondent in the final document. Any comments that you make that you deem 'off the record' or similar will not be quoted, but be aware that the community representative is also present during the interview; therefore I am not able to guarantee confidentiality to the statements shared.

The research is being undertaken solely for academic purposes and it will be securely stored on my computer and USB. Once I have obtained all the



necessary information, I will present and analyse my findings in a Research Report, which will be submitted for examination at the end of the year. Once it is completed, it will be stored electronically on the Wits Electronic Thesis and Dissertation system, which Wits students and staff would be able to access

If you have any questions, concerns, or comments or if you would like a copy of the final report, please feel free to contact me at 374824@students.wits.ac.za or my supervisor, Dr Margot Rubin: Margot.Rubin@wits.ac.za
Thank you for your time and interest.

Dikeledi Lephondo
MSc Development Planning

Appendix 2: Participant consent form

FORMAL CONSENT FORM

I hereby confirm that I have been informed by the student researcher of the purpose, procedures, and my rights as a participant. I have received and understand the Participant Information Sheet.

I have also been informed of:

- ☐ the reasons why I was selected to participate in the research project
- ☐ the nature of my participation in the form of a written interview, the place and duration of the interview
- ☐ the voluntary nature, refusal to answer, and withdrawing from the interview no payment or incentives
- ☐ no loss of benefits or risks
- ☐ my identity will be kept anonymous
- ☐ the information I provide will be kept confidential
- ☐ how the information will be used and disseminated

I AGREE / DO NOT AGREE to participate by undertaking the interview

I AGREE / DO NOT AGREE to audio-recording of the interview

I AGREE / DO NOT AGREE to my premises being photographed.

Participant signature

Date _____

Appendix 3: Resident questionnaire



INTERVIEW GUIDE

Date:

Reference number: MScDP; Wits University. Report Questions

Enquiries: Ms Dikeledi Lephondo (email): 374824@students.wits.ac.za; 064 752 0071

Supervisor: Dr. Margot Rubin (email): Margot.Rubin@wits.ac.za.

Private and confidential

Resident questionnaire

General Personal Profile of respondent

RESPONDENT NO:	MALE		FEMALE		
AGE GROUP: (YEARS)					
19-29		30-39	40-49	50-59	60+
RESPONDENT CATEGORY:	RDP beneficiary		Social Housing beneficiary	Bonded housing resident	
RESPONDENT ZONE LOCATION:					
RESPONDENT OCCUPATION/EMPLOYMENT STATUS:					
BRIEF RESPONDENT HOUSEHOLD BACKGROUND:					



INTERVIEW GUIDE

1. If you are living in the bonded housing, what were your reasons for choosing to live in Savannah City?

2. When did you start living here?

3. Where were you previously living?

4. Can you describe your experience of living in Savannah City



INTERVIEW GUIDE

5. What are some of the challenges that you face living here?

6. What are some of the benefits of living here that you appreciate?

7. Does the place satisfy your needs (1 being that it does not satisfy any and 10 being that it satisfies all your needs)

8. Why did you say that (follow up question from question 7)



INTERVIEW GUIDE

9. What are some of the improvements that can be made in order for the place to satisfy your unmet needs?

10. As an RDP beneficiary, how you ever consulted about the development?

11. Would you live here permanently?

12. Would you encourage your family to live here permanently?



INTERVIEW GUIDE

13. Can you give reasons for your answers

End of Questionnaire

Appendix 4: State official questionnaire

INTERVIEW GUIDE

Date:

Reference number: MScDP; Wits University. Report Questions

Enquiries: Ms Dikeledi Lephondo (email): 374824@students.wits.ac.za; 064 752 0071

Supervisor: Dr. Margot Rubin (email): Margot.Rubin@wits.ac.za.

Private and confidential

State officials' questionnaire

General Personal Profile of respondent

RESPONDENT NO:	MALE	FEMALE			
AGE GROUP: (YEARS)					
19-29		30-39	40-49	50-59	60+
RESPONDENT OCCUPATION:					
How long have you been working on Savannah city mega project?					

Questions on the mega projects policy

1. Can you give a brief description of your occupation
2. With regards to the mega projects mega projects housing policy, what is your role?
3. What do you think are the objectives of the mega project housing policy?
4. How has this policy been interpreted within your department?



INTERVIEW GUIDE

5. What are some of the challenges that you encountered with implementation of the mega project policy?
6. What were these challenges caused by?

Questions on the Savannah City mega project

7. What are the objectives of Savannah City mega project?
8. What phase is Savannah City currently at?
9. Has Savannah city met any of the objectives of the mega projects housing policy?
10. Can you elaborate which ones they are?
11. Which objectives do you think Savannah City has not met and why?
12. What do you think were the reasons for this?
13. What are some of the lessons that can be learnt from this project for future mega projects?
14. What are your opinions on mega projects as a housing delivery mechanism?

End of Questionnaire

Appendix 5: Project manager questionnaire

INTERVIEW GUIDE

Date:

Reference number: MScDP; Wits University. Report Questions

Enquiries: Ms Dikeledi Lephondo (email): 374824@students.wits.ac.za; 064 752 0071

Supervisor: Dr. Margot Rubin (email): Margot.Rubin@wits.ac.za.

Private and confidential

Project managers' questionnaire

General Personal Profile of respondent

RESPONDENT NO:	MALE	FEMALE			
AGE GROUP: (YEARS)					
19-29		30-39	40-49	50-59	60+
RESPONDENT OCCUPATION:					
How long have you been working on Savannah city mega project?					

Questions on the mega projects policy

1. Can you give a brief description of your occupation
2. With regards to the mega projects mega projects housing policy, what is your role?
3. What do you think are the objectives of the mega project housing policy?
4. How has this policy been interpreted by your project team?



INTERVIEW GUIDE

5. What are some of the challenges that you encountered with implementation of the mega project policy?
6. What were these challenges caused by?

Questions on the Savannah City mega project

7. What are the objectives of Savannah City mega project?
8. What phase is Savannah City currently at?
9. Has Savannah city met any of the objectives of the mega projects housing policy?
10. Can you elaborate which ones they are?
11. Which objectives do you think Savannah City has not met and why?
12. What do you think were the reasons for this?
13. What are some of the lessons that can be learnt from this project for future mega projects?
14. What are your opinions on mega projects as a housing delivery mechanism?

End of Questionnaire