



## TOWARDS A MORE EQUAL CITY

# Johannesburg: Confronting Spatial Inequality

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## EXECUTIVE SUMMARY

### Highlights

- ▶ South Africa is confronted by a profound spatial paradox: social development investments tend to exacerbate existing spatial isolation and segregation, especially in urban areas.
- ▶ One of the major focuses of post-apartheid South African urban policy has been to overcome spatial inequality created by colonialism and further entrenched through apartheid policies.
- ▶ Access to core services improved after 20 years of investment, but access to economic and social opportunities remains unequal, particularly in Johannesburg.
- ▶ In 2013 the City of Johannesburg tried to reduce spatial inequality by pursuing an integrated investment program called Corridors of Freedom, which aimed to increase mixed-income density around the city's bus rapid transit (BRT) lines to facilitate transit-oriented development (TOD).
- ▶ A change in city leadership in 2016 played down the Corridors program in the government's priorities. The private sector was slower than expected in responding to the program, but by 2018 there were several developers responding with new, affordable offerings within the Corridors.
- ▶ The experience in Johannesburg demonstrates the importance of institutional coordination across scales and local government agencies to a city's transformation.



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**Since 1996, South Africa, and Johannesburg specifically, has dramatically increased access to basic services through rights-based subsidy programs.** Yet the provision of free housing and basic services did not create economic opportunity for the urban poor. Spatial inequality has prevented segments of the city from accessing jobs, social opportunities, and high-quality education. The failure to radically transform the city led political leaders to change their approach to development. As a result, the City of Johannesburg adopted an integrated approach to invest in bus rapid transit and high-density mixed-use development along three critical corridors.

**The Corridors of Freedom (COF) program, launched in 2013, was one iteration of a long-term policy process to overcome apartheid planning.** Its aim was to use the BRT to offer more equal economic and social opportunities to the urban under-served. The COF provided detailed site plans across the city that increased public space, offered social services, increased residential density, and integrated retail and commercial space into new development. It also aimed to reorient private investment towards the new public transport service. The COF was part of a systematic policy progression that moved away from focusing on access to basic services and towards a more strategic focus on the spatial barriers that prevent economic and social inclusion in the city. In addressing spatial inequality, the COF required coordination across local government to provide spatially detailed and integrated plans. This is a dramatic change from the earlier public housing program, which created large, monofunctional neighborhoods devoid of the dynamism necessary for economic development. This progression demonstrates that access to services alone does not help a city overcome its unequal access to economic and social opportunities.

**The Corridors program—and its successor, Transit-Oriented Development Corridors (TODC)—hinges on shifting the type and location of private investment in the real estate market.** Earlier programs contracted private sector entities to provide subsidized housing units on publicly owned land. Then the City of Johannesburg and the Johannesburg Development Agency (JDA) provided developers incentives to redevelop mixed-use buildings in the central business district (CBD). Through the CBD program, the city provided market data and increased transparency to support private sector investment decisions. The Corridors program took the next step in working directly with investors to change the type and location of their projects because the City of Johannesburg recognized that it was the only viable way to achieve long-term integration.

**Several factors enabled and inhibited the progress of the Corridors program.** The COF reflected the anti-apartheid urban policy focus on corridors to overcome racial segregation. When investment surrounding the World Cup in 2010 made it possible for Johannesburg to build the Rea Vaya BRT system, there was a huge opportunity to reorient the city's development investments and policies. Local and international planning and policies bolstered this momentum by providing support for a transit-oriented approach to restructuring the city's economy. Yet progress was hindered by entrenched inequality in land ownership that makes radical transformation incredibly difficult. Furthermore, the concept of mixed-income housing was untested in Johannesburg, making it difficult to achieve widespread and rapid market uptake. Institutional fragmentation and changing city leadership also made it difficult to maintain full support for the Corridors. Johannesburg's experience demonstrates how critical it is to align various agencies within the local government. The Corridors program shows that coordinating around a vision for transformation is as important as working out the technical and financial details.

**Several key recommendations emerge from the Corridors experience that can be applied to cities across the globe.** The first is that housing programs need to adopt an integrated approach that acknowledges the connection between informal and formal housing markets. One direct outcome of a more integrated approach is targeting social rental housing towards specific groups, such as young professionals and students, who seem more willing to be close to public transit. The Corridors experience also shows that increasing access to opportunities requires integrating BRT, and other mass transit systems, with the informal minibuss system. Finally, a forum to support public, private, and civil society stakeholder engagement could create more civic ownership, improve transparency, and create wider buy-in, shielding long-term transformation projects from the political winds of change.

## About This Paper

**This case study is part of the larger World Resources Report (WRR) *Towards a More Equal City*.** The WRR uses equitable access to core urban services as an entry point for examining whether meeting the needs of the under-served can improve the other two dimensions of sustainability. The city case studies examine transformative urban change, defined as that which affects multiple sectors and institutional practices, continues across more than one political administration, and is sustained for more than 10 years, resulting in more equitable access to core services and a more equal city overall. The goal of the WRR case studies is to inform urban change agents—including policymakers at all levels of government, civil society organizations, the private sector, and citizens—about how transformative change happens, the various forms it takes, and how they can support transformation towards more equal cities.

### Box 1 | Abbreviations

ANC	African National Congress
BRT	bus rapid transit
CAPEX	capital expenditures
CBD	central business district
CIMS	Capital Investment Management Systems
COF	Corridors of Freedom
CSP	City Support Programme
DA	Democratic Alliance
EFF	Economic Freedom Fighters
GCRO	Gauteng City-Region Observatory
GDS	Growth and Development Strategy
GMS	Growth Management Strategy
IDP	Integrated Development Plan
JDA	Johannesburg Development Agency
JSIP	Johannesburg Strategic Infrastructure Platform
NDP	National Development Plan
SDF	Spatial Development Framework
SERI	Socio-Economic Rights Institute of South Africa
TOD	transit-oriented development
TODC	Transit-Oriented Development Corridors
SME	small and medium enterprise
UPDA	Uganda People's Democratic Army
WRR	World Resources Report

Figure 1 | **City of Johannesburg at a glance**



Type of jurisdiction	<b>Municipality</b>
Population in:	
1980 <sup>a</sup>	<b>1,554,000</b>
2001 <sup>b</sup>	<b>3,226,055</b>
2016 <sup>c</sup>	<b>4,949,347</b>
Total land area (in km <sup>2</sup> , 2016) <sup>d</sup>	<b>1,645</b>
GDP per capita, Gauteng province (2011) <sup>e</sup>	<b>\$11,352</b>
Human Development Index, Gauteng (2013) <sup>f</sup>	<b>0.72</b>
Human Development Index, South Africa (2016) <sup>g</sup>	<b>0.69</b>
Gini coefficient, Johannesburg (2016) <sup>h</sup>	<b>0.65</b>
Population living below the poverty line (% , 2017) <sup>i</sup>	<b>43</b>
Population living in informal dwellings (% , 2017) <sup>j</sup>	<b>18</b>
Access to electricity (% households, 2017) <sup>k</sup>	<b>91</b>

Access to piped water on premises (% households, 2017) <sup>l</sup>	<b>92</b>
Access to flush toilet (% households, 2017) <sup>m</sup>	<b>90</b>
Trips by mode (% , 2013): <sup>n</sup>	
Private cars	<b>37</b>
Walking and cycling	<b>31</b>
Taxi, minibus	<b>23</b>
Public transport (bus and metro)	<b>7</b>
Motorized two-wheelers	<b>0.1</b>
Average trip length (km, 2017) <sup>o</sup>	<b>4.1</b>
Average prices of urban services (2017):	
Electricity (per kWh) <sup>p</sup>	<b>\$0.08</b>
Water (per m <sup>3</sup> ) <sup>q</sup>	<b>\$0.54</b>
Sanitation (per m <sup>3</sup> ) <sup>r</sup>	<b>\$1.14</b>
Public transport ride (bus) <sup>s</sup>	<b>\$1.24</b>
Informal transport ride (taxi, minibus) <sup>t</sup>	<b>\$2.70 + 0.90/km;</b>
	<b>\$0.75</b>
Average price of gasoline (per liter, 2017) <sup>u</sup>	<b>\$1.03</b>
Primary decision-making level for cities:	<b>Johannesburg City Council</b>
Type of city leader, term years, and term limits:	<b>Mayor, 5 years, 2 terms</b>

Notes: All prices are reported in US\$ using market exchange rates for the source's corresponding year.

Sources: a–b. Statistics South Africa, 2011; c. Municipalities of South Africa, n.d.; d. COJ, 2016b; e. GCRO, n.d; f. HSRC, 2014; g. UNDP, 2016; h. COJ, 2016b; i–m. Visagie and Turok, 2017; n. COJ, 2013; o. GCRO, n.d.; p. City Power Johannesburg, n.d.; q–r. Johannesburg Water, 2017; s–t. Based on authors' personal communication with transportation representatives, Johannesburg, 2017; u. BusinessTech, 2017.

## 1. INTRODUCTION

South Africa's urban reform experiences over the past 20 years are relevant to exploring the practical dimensions of urban transformation. South Africa has a robust legal and policy framework to ensure that core services reach everyone, with an eye towards achieving broader economic and social empowerment within a sustainable development frame. In this paper we are particularly concerned with the potential to overcome unequal access to opportunities through targeted investments around mass transit to encourage a different type of private investment in real estate.

The origin of South Africa's urban reform agenda is its 1996 constitution. That document established "developmental local government," which mandates local authorities to ensure all

citizens' socioeconomic rights within a participatory democratic system.<sup>1</sup> Developmental local government resulted in an expansive legislative framework for how local government should be structured and operate.<sup>2</sup> This included Integrated Development Plans where service delivery was sectorally integrated and coordinated. These plans were aligned with international discourses promoted through the various United Nations global conferences that took place during the 1990s.<sup>3</sup> This approach was profoundly radical in a context where the majority black population experienced systematic discrimination, deprivation, and economic exclusion throughout the colonial period (over 300 years) and beyond, when racial separatism was intensified with the introduction of formal apartheid in 1948. This system was enforced until 1994, when democratic elections took place for the first time.

Institutionally, the constitutional imperative established single-tier metropolitan governments in the large cities, which in turn created a fiscal basis for intra-urban redistribution of resources to ensure more equal access to basic services.<sup>4</sup> These city-level measures were supported through a raft of national government transfers. The reforms enabled considerable expansion of affordable housing, water, sanitation, electricity, waste collection, and public transport in large cities.

While acknowledging the importance of core services, the South African experience shows that focusing on expanded access without consideration of the location of such services and without addressing spatial isolation of poor communities had a major unintended consequence—it worsened spatial inequality, which in turn reinforced economic exclusion for poor black families living in informal settlements and townships.

Johannesburg is emblematic of this dynamic. The city's leadership committed to implementing the developmental local government approach. As the unintended consequences of spatial inequality became apparent, the city took innovative measures to confront the issue. One of the outcomes was a spatially targeted, intersectoral program focused on equalizing access to economic opportunity, called the Corridors of Freedom (COF).

This paper offers an account of the Corridors program to show the challenges of broadening a pro-poor basic service agenda to include access to economic opportunities. After clarifying our methodology, we provide context on how improving access to core services was not enough to address spatial and economic exclusion in Johannesburg. We then offer a detailed discussion of how transit-oriented development (TOD) planning principles were integrated into public and private investment and explore both enabling and inhibiting conditions of this process. The final section explores prospects for the spatial transformation agenda under the administration of Mayor Herman Mashaba.

## Data and Methods Used

This case study is part of the larger World Resources Report (WRR) *Towards a More Equal City*, which focuses on equitable access to core services. The WRR is a series of working papers on housing, energy, the informal economy, urban expansion, water, sanitation, and transportation that analyze sectors and themes across *struggling* and *emerging* cities in the global South.<sup>5</sup> The WRR also features a series of city-level case studies on urban transformation, of which this case study is a part.

In the WRR, by definition, *transformative urban change* addresses a seminal problem that negatively affects many people's lives and involves multiple sectors and institutional practices. It continues across more than one political administration and is sustained for more than 10 years. Experience suggests that when cities solve a problem that affects many people, it creates momentum for change that has the potential to positively affect other spheres in a broad, virtuous cycle. Each of the WRR city case studies examines how approaches to addressing seminal problems have (or have not) triggered broader cross-sectoral, institutional, citywide transformation and explores how transformative urban change occurs. It is important to note that every case has progressive and regressive elements, and every city experiences difficulties, conflicts, setbacks, and false starts. This case study explores these questions with respect to challenges involving transport access and economic development in Johannesburg.

This paper draws on interviews with senior policy managers, researchers, and other key informants conducted expressly for this work, as well as interviews and data previously conducted and collected by Edgar Pieterse, the first author. He has conducted research on governance systems and policy processes in Johannesburg and the Gauteng city-region since 2010. Our literature review covered both academic and gray literature held in a shared archive between the Gauteng City-Region Observatory and University College London's Development Planning Unit.<sup>6</sup>

## Contextual Background

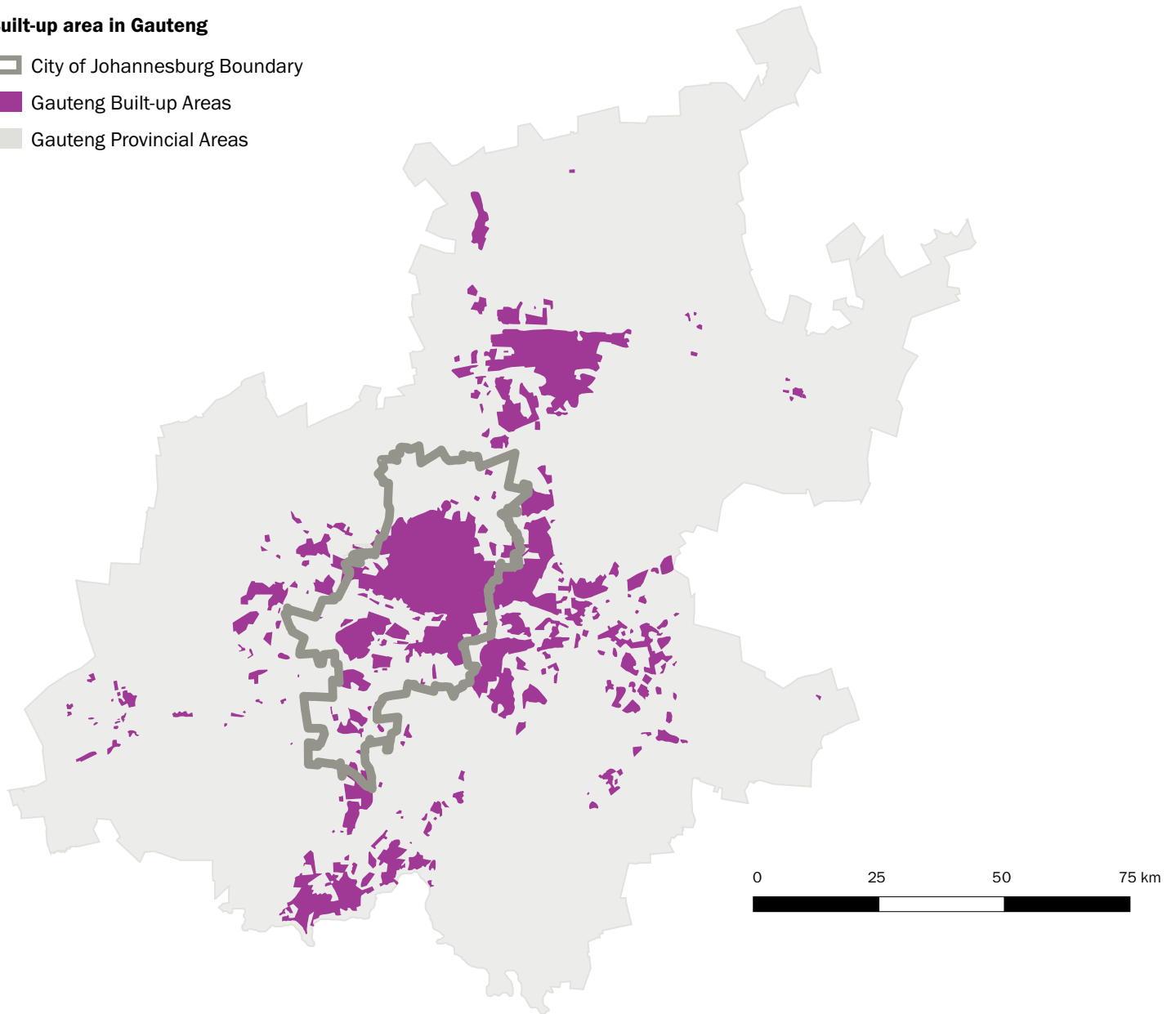
Johannesburg's metropolitan area has slightly less than 5 million inhabitants, or 1.85 million households.<sup>7</sup> However, Johannesburg sits within the Gauteng Province, which includes two neighboring metropolitan councils, Tshwane (Pretoria) and Ekurhuleni, which together have 12.3 million people, or 23.7 percent of South Africa's population (see Figure 1).<sup>8</sup> Johannesburg has the country's highest migration rates, which contributed to the city's dramatic population growth between 2001 and 2016.<sup>9</sup>

Gauteng is the economic heartland of South Africa, and Johannesburg is its epicenter (see Figure 2). Originally the industrial center of South Africa, Gauteng's economy evolved to become the country's finance hub. The Sandton area of Johannesburg contains Africa's highest concentration of financial service companies and is home to its largest stock exchange. Unsurprisingly, it follows that finance is the municipal economy's largest component.<sup>10</sup> It also follows that Johannesburg, along with Cape Town

Figure 2 | **Map of Johannesburg and the Gauteng Province**

**Built-up area in Gauteng**

- City of Johannesburg Boundary
- Gauteng Built-up Areas
- Gauteng Provincial Areas



Source: Based on authors' analysis using data from the City of Johannesburg, 2016.

and Tshwane, have the highest income per capita of all South African municipalities.<sup>11</sup>

However, inequality and exclusion are reflected in the city's occupational distribution. Income inequality stems from a widening wage gap between semiskilled manual workers and their high-end professional counterparts.<sup>12</sup> The 29 percent unemployment rate—which is 40 percent among youth specifically—also contributes to inequality and exclusion and is unusually high for an upper-middle-income country.<sup>13</sup> Of those employed, 78

percent are in the formal sector, 8 percent in the informal sector, and 13 percent in private households.<sup>14</sup> The structural problems in the labor market exacerbate the effects of spatial inequality. In addition, the large wage gap, extremely high unemployment rate, and failing education system<sup>15</sup> have intensified the long-term economic marginalization of low-income black populations. The dynamic between race, earnings, and occupations is in flux in Johannesburg, where the middle class has become more racially mixed, yet blacks remain overrepresented among low-wage and unemployed workers.<sup>16</sup>

As a result, poverty levels remain high despite relatively widespread access to services. Interestingly, the prevalence of poverty unlocks a bundle of constitutionally mandated free services and housing subsidies.<sup>17</sup> Households with incomes below the poverty line—which in 2016 was 42.6 percent of the population<sup>18</sup>—are entitled to a minimum level of free core services. Johannesburg uses a spatially referenced multiple deprivation index, which measures various aspects of poverty, to measure where the free services are required. The index informs infrastructure planning, investment, and maintenance. Fiscal transfers provide funding to local authorities for capital and operating costs associated with the service provision mandate.<sup>19</sup> Another database, the Indigent Register, tracks residents qualifying for the free package of services.<sup>20</sup> National government departments and jurisprudence keep pressure on municipalities to expand access to core services.<sup>21</sup> Civil society also tracks service provision and protests when it feels that needs are being ignored. The result is

Table 1 | **Socioeconomic Indicators for Johannesburg**

INDICATOR	%
Enrollment in early childhood development	90.7
Electricity for lighting	91.0
Electricity for cooking	92.0
Completion of primary school year-on-year (2002 cohort)	84.7
Completion of secondary school year-on-year (1997 cohort)	53.6
Cellphone ownership	93.4
Usage of Internet	15.8
Completed secondary or tertiary education	49.7

Note: Figures are based on an “index of multiple deprivation,” which is a government’s geographical measure of relative deprivation of small areas, typically using different aspects of poverty (living environment, crime, income, health, etc.). The end product is a mapping tool.

Source: Visagie and Turok, 2017.

### Box 1 | Soweto’s Transformation

Soweto is probably the most well-known black township in South Africa with 1.3 million residents. According to the Johannesburg metropolitan government, Soweto has undergone a renaissance since 2001. This claim is premised on large-scale and sustained public investments. The earliest example—the Baralink Regeneration Project—dates back to the mid-1990s, but only came to fruition in the early 2000s. The project had many pieces, including 1) a cluster of residential, commercial, and medical and office facilities; 2) a major recreational development focused on the Orlando Dam; 3) informal settlement upgrading; and 4) a large, multimodal transport facility with a traders’ market next to the Baragwanath public hospital. Another similar major investment was the Kliptown Development Project, which commenced in 2001. The project was related to the fiftieth anniversary of the Freedom

Charter—the ideological manifesto of the African National Congress (ANC)—which was adopted and signed in Kliptown in 1955.

Political leadership and several major events drove investment into Soweto. For example, the 2002 United Nations World Summit on Sustainable Development, hosted in Johannesburg, triggered planting 200,000 trees that was linked to a broader open-space policy framework for Soweto. In addition, environmental investments were rounded out by a road construction project in which 314 kilometers across Soweto was tarred, eliminating all gravel road surfaces. These projects required focus and coordination, which was possible due to the determined leadership of Mayor Amos Masondo.

The 2010 World Cup triggered more large investments. Johannesburg’s main stadium adjacent to Soweto, Soccer

City, was overhauled; two more practice venues inside Soweto were upgraded. More importantly, the first phase of the bus rapid transit (BRT) network connected Soweto and Johannesburg’s inner city. The BRT link crowded in additional public investments in rental and owner-occupied housing. The compilation of these investments over the decade transformed Soweto’s physical environment. However, the sustained public investment did not catalyze private investment, support local industries, or create jobs as expected. Private investment has been limited to four shopping malls constructed between 2005 and 2013 with modest commercial success. These investments demonstrate that despite the scale of public support to transform Soweto’s built form, the living conditions and access to opportunity for the township’s residents remains the same.

Source: Harrison and Harrison, 2014.

## Box 2 | Urban Spatial Segregation in South Africa and Johannesburg

The National Party came to power in 1948 on a platform that aimed to achieve apartheid, or separateness, ushering in an era that sought to establish total racial segregation. These ambitions were successful because the colonial era (1652–1948) had thoroughly prepared the territory for urban segregation on the basis of race.<sup>a</sup> The three central pillars of the apartheid government’s urban segregation program were the Group Areas Act of 1950, the Reservation of Separate Amenities Act of 1953, and the regulation of African movement into cities and towns through “influx control” policies that stemmed from the Bantu Urban Areas Act of 1954.<sup>b</sup> These measures were premised on the Population Registration Act of 1950, which required all citizens to be classified into one of three distinct racial groups: white, African, or colored (which initially included Indians).

Apartheid policies realized racial segregation and maintained white supremacy in economic, social, and political spheres. Black people were relocated to the urban periphery in low-density, single-story residential

townships that were disconnected from economic and social opportunities.<sup>c</sup> Economic opportunities existed in the central business district (CBD) and in office parks located close to white upper- and middle-income areas but far from the black townships. A.J. Christopher, an authoritative scholar in the field, intimates that the administrators of apartheid planning consequently had achieved virtually total segregation in residential patterns in most South African cities by the 1980s. Indeed, segregation levels by the 1970 census indicate that in the majority of cities implementation of segregation was nearly complete. This suggests that by the early 1990s remarkably few urban dwellers had lived even a part of their adult lives in racially or ethnically integrated conditions.<sup>d</sup>

This assessment certainly applied to Johannesburg. However, by the late 1980s, some parts of the city began to desegregate as other areas became more segregated. A key driver of racial mixing was the fact that numerous medium-rise apartment blocks and converted office buildings in the

inner city became occupied by black households.<sup>e</sup> Another driver was “white flight” from the inner city to the suburbs, which started in the 1970s. An area like Hillbrow in inner-city Johannesburg was classified as white in terms of the Group Areas Act, but by the end of the 1980s, only 20 percent of the population remained white, reflecting the scale of the exodus. However, white flight was not absolute, explaining why white flight and deracialization can coexist set against the demographic profile of a population that was 90 percent black and 10 percent white.

In the post-apartheid era, the northern suburbs became more racially integrated as middle-income blacks moved to the area.<sup>f</sup> At the same time, the former blacks-only townships predominantly found in the southern suburbs had a larger share of unemployed workers and were more segregated.<sup>g</sup> The growth of low-income housing also pushed more low-income black families to mono-use edges.<sup>h</sup> Thus, post-apartheid planning improved overall integration, but low-income spatial entrenchment persisted.

Sources: a. Pieterse, 2009; b. Todes et al., 2018; c. Todes et al., 2018; d. Christopher, 2001: 128; e. Pieterse, 2009; f. Crankshaw, 2008; g. Crankshaw, 2008; h. Todes et al., 2018.

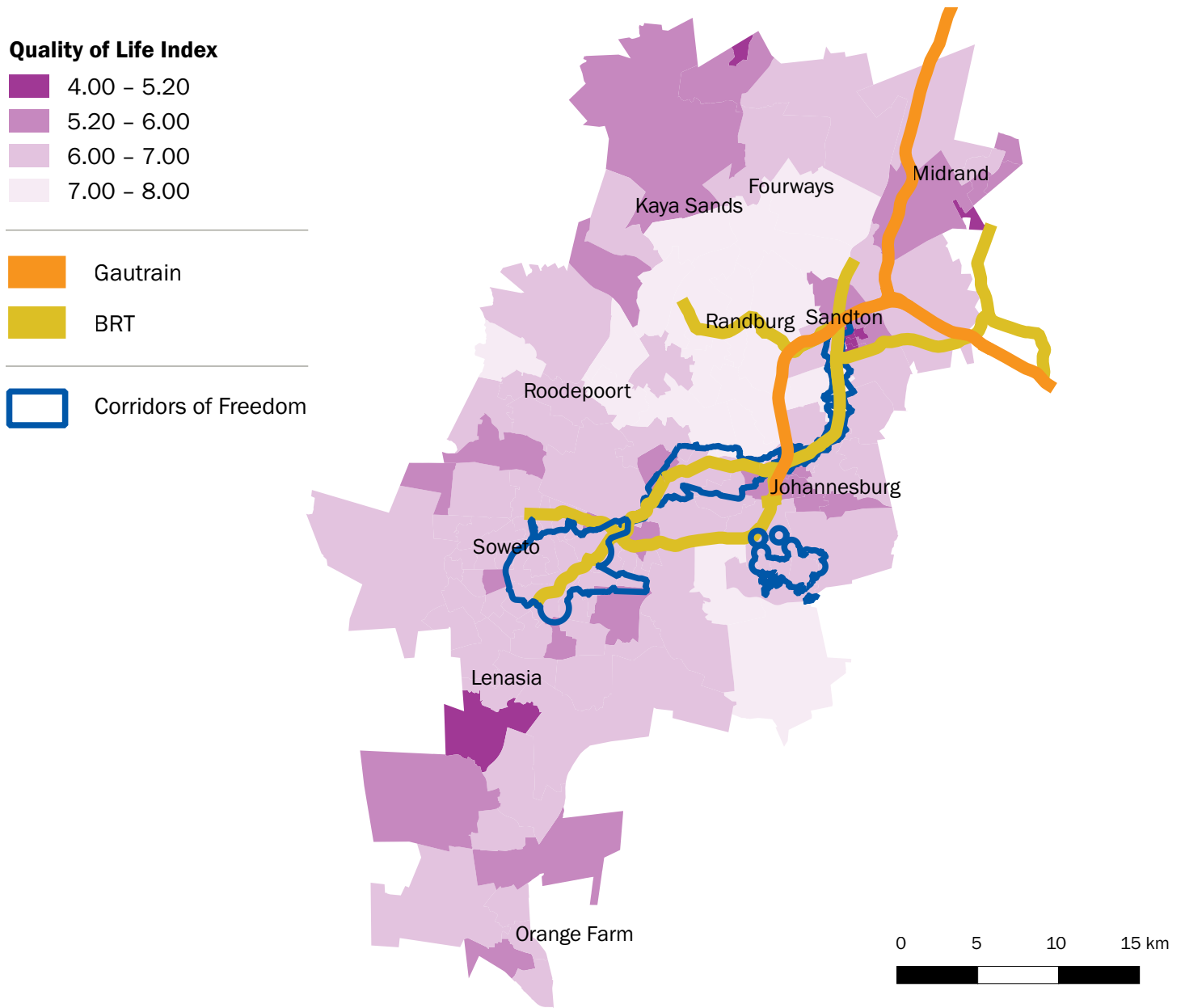
that Johannesburg scores high on access indicators relating to basic services (see Table 1). (Box 1 details how sustained public investments in Soweto have changed access to services and the built form without overcoming poverty).

However, widespread service provision has not jump-started economic transformation in spatially disconnected areas where a majority of the urban poor live.<sup>22</sup> Figure 3 reflects satisfaction with services (dwelling, water, sanitation, energy, waste, roads, safety, health) as reported in the Quality of Life survey.<sup>23</sup> The distribution of satisfaction reflects a north-south divide where the poor live on the south side and the working and middle class

live in the north. The exceptions are pockets of dark purple in the north, which reflect large black and poor areas in Alexandra abutting Sandton and other informal settlements. Overall, this demonstrates the city’s duality, where the highest levels of deprivation are in the south (notwithstanding some affluent areas) compared to high levels of affluence in the north. Significantly, Figure 3 illustrates that Soweto is more mixed than other areas of concentrated poverty. Figure 3 also shows how much of the city, particularly the high-deprivation areas, is inaccessible via mass public transit—the Gautrain or BRT. The figure shows that the COF are within neighborhoods that report a relatively high quality of life. The cost of being disconnected is reflected



Figure 3 | Quality of Life Index in Johannesburg, 2015



Source: Based on authors' analysis of data from Gauteng City-Region Observatory and Johannesburg Development Agency, 2017.

in the fact that the “very poor (survivalist) spends over 50% of their household income on food and 20% on transportation, essentially captured in the periphery. In 2016, the ‘working poor’ (below R2,500 or approximately US\$160 per month) spent over 35% on transport and 20% on food.”<sup>24</sup> This effectively represents a deep and insurmountable spatial poverty trap.<sup>25</sup> Box 2 provides some historical context on why spatial divides are so deeply entrenched in South African cities.

There is a long-standing South African policy debate over whether spatial mismatch can best be solved by bringing jobs to people or by helping people get to jobs more affordably and efficiently.<sup>26</sup> To date, a bevy of promotion programs for small businesses and urban renewal interventions have failed to produce a vibrant private sector in poor suburbs. These disappointing outcomes tilted public policy towards providing affordable and safe mobility from poor areas to employment opportunities in other areas. Resulting efforts have combined long-standing service provision

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programs with mobility investments to overcome the spatial mismatch. We therefore chose to focus this case study on recent TOD efforts reflected in the City of Johannesburg's long-term Growth Management Strategy (GMS).

## 2. FROM CORE SERVICE ACCESS TO SPATIAL TRANSFORMATION

South Africa is confronted by a profound spatial paradox: the more it invests in redistributive policies to address the housing, water, and sanitation needs of the poor, the more the poor are structurally excluded from economic opportunities. This is because social development investments tend to exacerbate existing spatial isolation and segregation, especially in urban areas.<sup>27</sup> In addition, education and public health investments follow new housing settlements that are built far from economic opportunities, further isolating the urban poor and making it even more difficult for poor families to find a path out of poverty. This is not to undermine the importance of such investments but rather to suggest that when it coincides with poor spatial location, the transformative impact of such essential support is muted (see Figure 3, which demonstrates the divide between areas of deprivation and affluence).

The 1994 Reconstruction and Development Programme (RDP), also known as the million house program, provided a fully subsidized house and land to all households below a given poverty threshold.<sup>28</sup> South African families could access this entitlement if they registered on a housing waiting list administered by either a local or provincial government authority.<sup>29</sup> The target was met by the end of 2000—ahead of schedule—because the houses were financed by the national government and built by private contractors.<sup>30</sup> Private contractors could make a modest profit delivering large-scale monofunctional settlements (3,000–10,000 units per development) by locating them in large greenfield sites because the subsidy included the cost of land.

However, the settlements' location on the periphery of urban areas created an enormous fiscal burden. It meant that infrastructure had to be extended over long distances and required recipient households to spend a significant portion of their income on transportation.<sup>31</sup> It also meant that public resources across many sectors had to be invested into these new (and former) townships, expunging any possibility that the complex social urbanism<sup>32</sup> that arises from multifunctional, culturally diverse, and inhabited spaces would arise.

Since the publication of the National Development Plan (NDP) in 2011, all levels of government have focused on how to solve the spatial paradox. The National Treasury concluded that none of the sectoral departments involved in housing provision, public transport, or infrastructure investment had the focus, clout, or ability to fix the problem.<sup>33</sup> Research conducted for the NDP and subsequent work commissioned by the National Treasury argued for more investigation into what was driving the spatial paradox.<sup>34</sup>

The National Treasury established a new grant instrument, the City Support Programme (CSP), to address spatial inequality.<sup>35</sup> The goal of the CSP was “to strengthen the partnership across sectors and spheres of government for inclusive economic growth.”<sup>36</sup> Practically, the CSP offered metropolitan governments like Johannesburg incentives to change the way they plan, invest, and operate so they could address the policy challenges associated with the spatial paradox.<sup>37</sup>

### Implementing Transit-Oriented Development through the Corridors of Freedom

By 2012, the national focus on spatial transformation emboldened Johannesburg's newly elected mayor, Parks Tau, to aggressively pursue TOD in his flagship initiative, the Corridors of Freedom. A year into his term, Tau presented the long-term Growth and Development Strategy (GDS) Johannesburg 2040.<sup>38</sup> Embedded within this policy was the COF initiative, which intended to anchor the long-term ambitions of the GDS.<sup>39</sup> In his 2013 State of the City speech, Tau spelled out his vision:

Our city seems to be spatially dividing and splintering itself with no end in sight, as the poor live in informal settlements dotted on the periphery of our city and those more prosperous living in secure townhouse complexes. Coupled with the reality of the now—climate change, inequality, poverty, violence and unemployment adds to the inherited challenges of the past. We not only have to level the historical playing fields; we also have to build a better tomorrow. . . . Today we are taking transit-oriented development another step forward, with the introduction of a project that will forever change the urban structure of Johannesburg and eradicate the legacy of apartheid spatial planning. . . . Transit-oriented development will change the entrenched settlement patterns. It will also slow down the process of urban sprawl and the uncontrolled spread of low-density developments on the fringes of the city.<sup>40</sup>

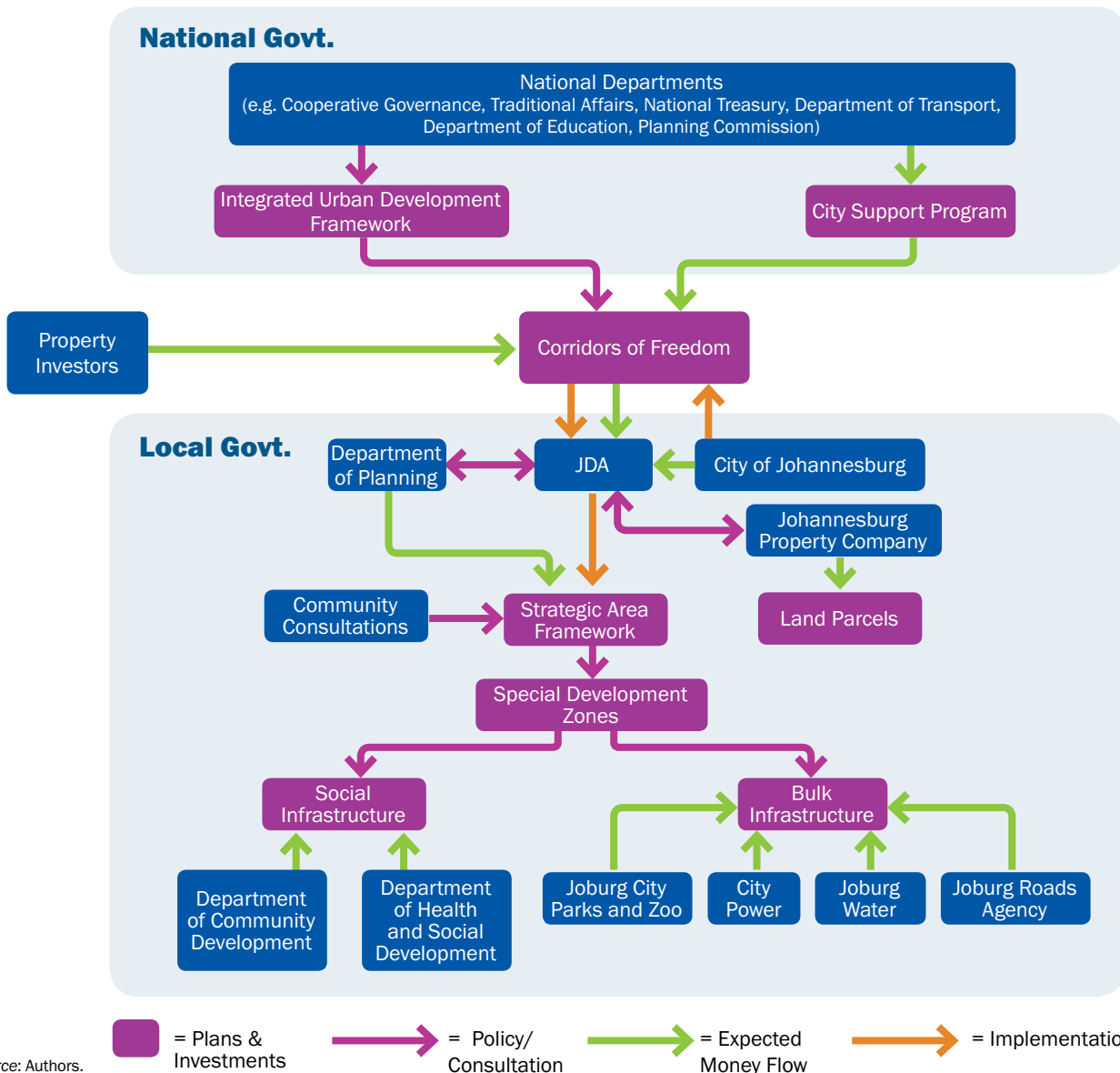
Tau's ideas must be understood in the context of the spatial inequality described earlier. To fully appreciate the COF's agenda, we will unpack its core tenets and explain how it was possible to create institutional traction across municipal departments and entities between 2013 and 2016. The COF succeeded in creating interdepartmental coordination and aligning capital investments.

### Components of the Corridors of Freedom

The COF identified three priority spatial zones structured around the BRT network where the tenets of TOD would be fully implemented.<sup>41</sup> Figure 4 depicts the relationship between various actors

and components of the COF program. It created a framework that could corral diverse investments in a spatially targeted fashion to align institutions, enabling them to achieve transformative outcomes. The program was implemented through two components that were undertaken in parallel. One was a targeted communications campaign within the COF's three designated areas. A booklet and video initially accompanied Tau's State of the City address to inform a diverse set of often skeptical stakeholders.<sup>42</sup> The campaign also targeted the City of Johannesburg's 30,000 staff members. The other component involved assembling a small but committed technical team responsible for creating mixed-use, mixed-income, and high-density development proposals that were based on in-depth feasibility and market studies. By June 2014, the Johannesburg

Figure 4 | Corridors of Freedom stakeholders in Johannesburg



Source: Authors.

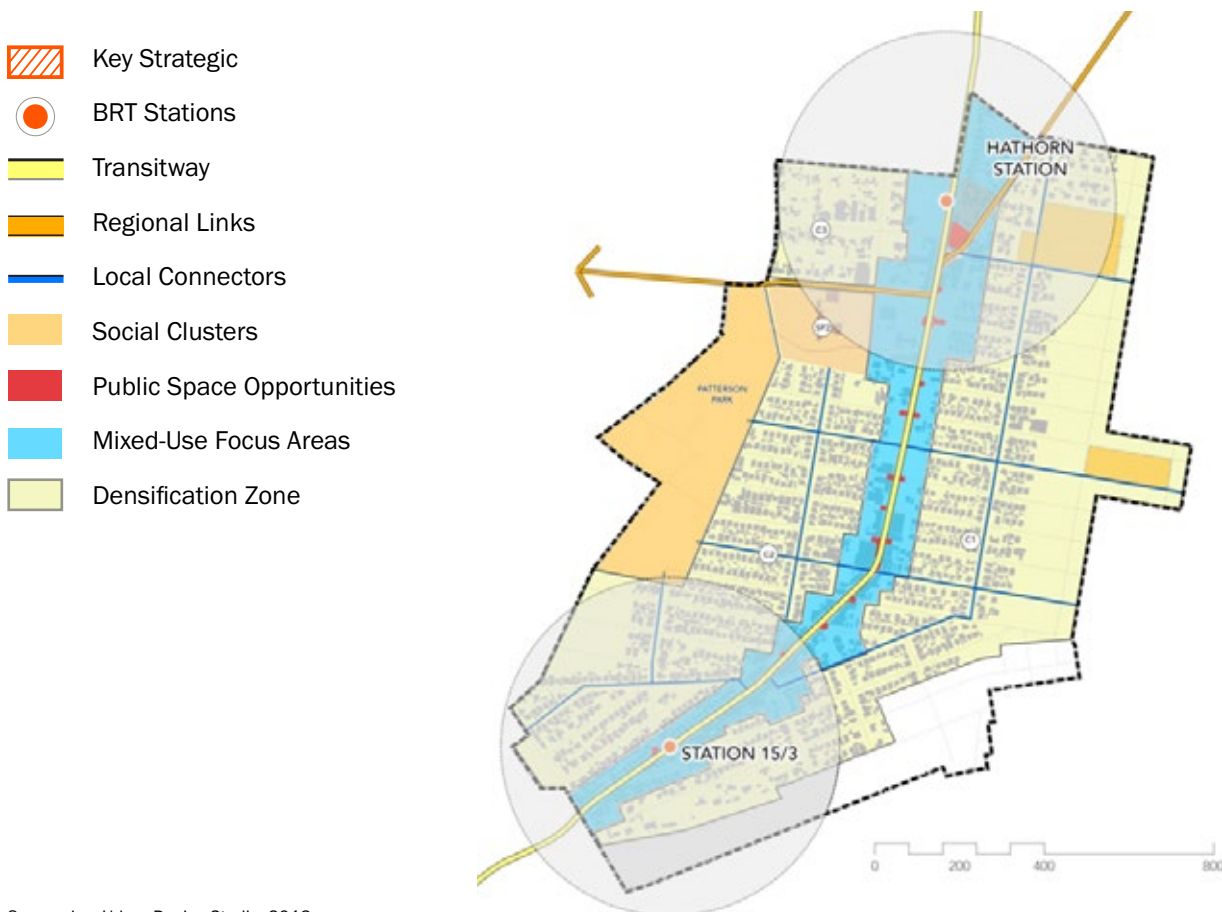
Development Agency (JDA) was serving as an intermediary between private, public, parastatal, and resident organizations impacted by the plans.<sup>43</sup> The JDA's capacity had to shift from facilitating inner-city renewal to creating value in new areas. Yet its role in linking market activity with government investment remained consistent and closely managed by the Department of Development Planning. The JDA also had to work closely with the Johannesburg Property Company to purchase strategic parcels of land along the Corridor.

The City of Johannesburg adopted<sup>44</sup> precinct-level development frameworks, Strategic Area Frameworks, anchored by the BRT stations and connected to a larger spatial flow. The Strategic Area Framework specified where Special Development Zones (SDZs) should be established. The SDZs formed the basis of an incentives package aimed at the private sector, which included reducing the time it took to acquire planning approvals (by establishing preemptive high-density zoning plans) and making it possible to negotiate certain development levies.<sup>45</sup> Planning studies on each Corridor provided detailed guidance on densification and repositioning land use. This was the first time

that a metropolitan government in South Africa had done such detailed technical analysis; the goal was, in part, to convince private sector investors to build affordable mixed-income and rental developments within denser mixed-use neighborhoods. The plans focused on walking and biking through complete streets and linear parks. Figure 5 provides an example of a strategic land-use plan within the Louis-Botha Corridor. The plan shows how social clusters, public space, mixed use, and densification were part of the plans.

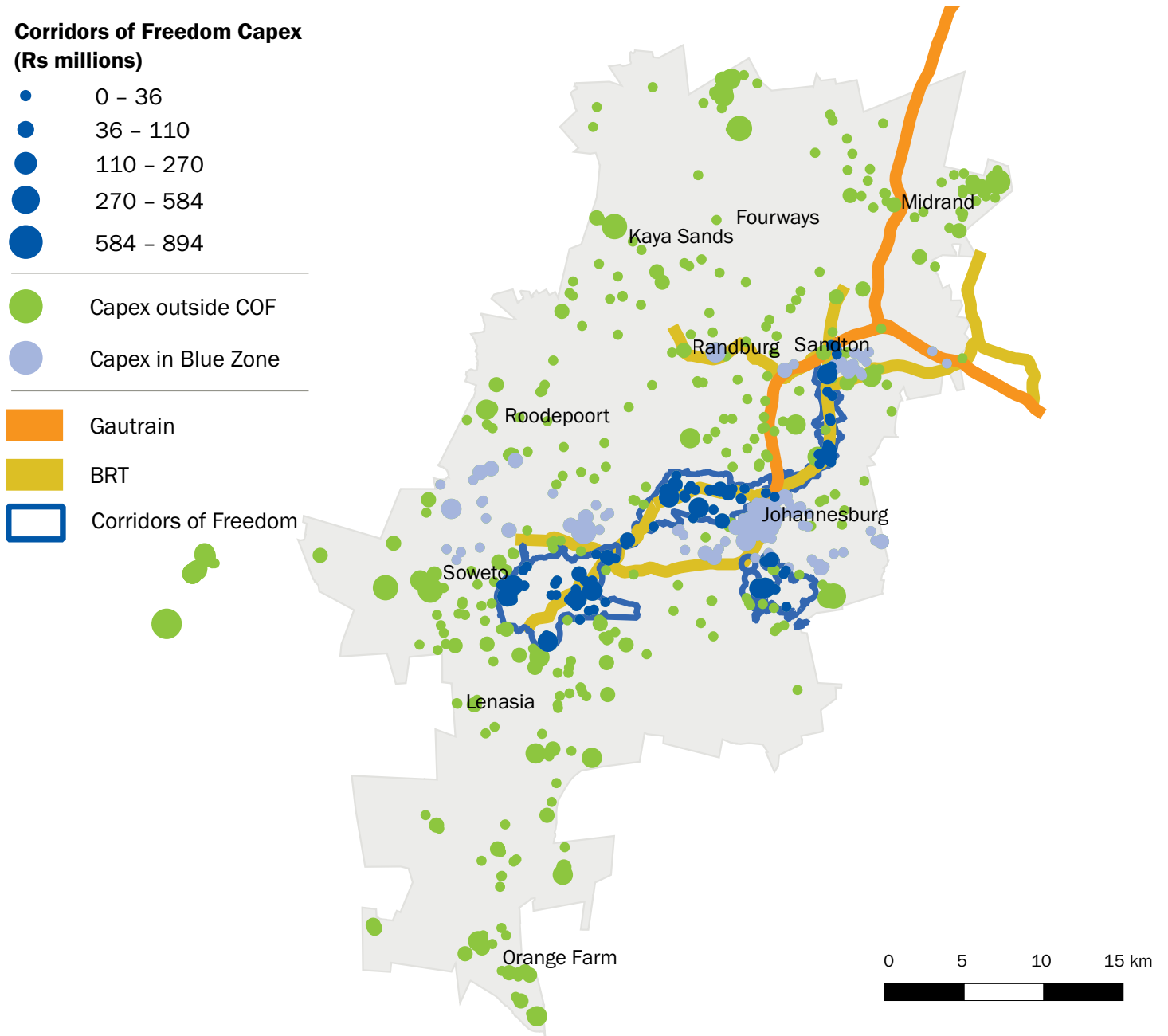
To catalyze development, the city brought together various three-year sectoral capital budgets to ensure the requisite bulk infrastructure would be in place to support the Strategic Area Frameworks.<sup>46</sup> Every line department was required to provide budget support to the COF's strategic goals. Between 2018 and 2020, approximately 14 percent of the overall public capital expenditure budget will go to the Corridors (see Figure 6). The Corridors' expenditures make up 45 percent of the capital expenditures within the city's larger Blue Zone of Transformation project, which encompasses redevelopment

Figure 5 | Detailed site plan within Louis-Botha Corridor of Freedom



Source: Iyer Urban Design Studio, 2013.

Figure 6 | **Johannesburg capital expenditures (CAPEX) 2018–2020**



Source: Based on authors' analysis of Gauteng City-Region Observatory and Johannesburg Development Agency, 2017.

in the CBD and Soweto. These expenditures go beyond bulk infrastructure to include social facilities, such as libraries and recreational areas (see Figure 6). The assumption was that combining infrastructure expenditure and preemptive zoning would trigger private investment in line with the Strategic Area Frameworks.

In practice, private investment has been slower to respond than initially expected.<sup>47</sup> Researchers at Wits University explored the private developers' perceptions of the COF and found that:

The Corridors are not that interesting necessarily to private developers. They don't necessarily follow where the state chooses to invest. . . . They follow where the market is, and where there is demand. If there are moments of correlation or overlap, then that is great. [However, for developers] there is nothing that is being offered in a pack of incentives that is that inspiring. [Instead], all these developers really want is for the City to be efficient when it comes to "basic urban management," making sure

their billing is correct, providing planning approvals in a reasonable amount of time. . . . There is an enormous amount of mistrust between the City and the private sector and it is borne of a long history of both sides not necessarily following [through] on their commitments.<sup>48</sup>

However, more recent research indicates there is a potential appetite for some projects in the COF development area.<sup>49</sup> Interviews across Johannesburg's real estate sector indicate that large, established commercial developers have little interest in the COF, but a new group of developers is interested. This group is focused on affordable inner-city rental housing projects that accommodate young professionals and students attending tertiary education institutions in or adjacent to the COF. Rising prices and limited site availability in the inner city have pushed this group to develop sites within the COF. By September 2017, around "4,500 new affordable units had been committed for development or were being developed on these routes."<sup>50</sup> This investment is the first sign that private developers are shifting towards the COF, which may spark a development cycle that features more mixed-use projects. An interview with one of these developers supports this analysis.<sup>51</sup>

It is important to keep in mind that the public sector owns very little property within the COF; probably less than 15 percent.<sup>52</sup> Thus, the city will have to find ways to interest private investors in these areas if they are going to develop moderately dense, mixed-use, mixed-income housing. That said, the 4,500 new units can be regarded as a significant achievement if placed in the larger context of real estate transformation under way in larger Johannesburg. Unlike international trends, Johannesburg is becoming more dense because of more multifamily housing on infill sites. For example, inner-city high-rise buildings increased occupancy, but in townships, informal backyard dwellings lead to multiple households living on one plot. Interestingly, on the higher-income end of the real estate spectrum, former white suburbs are also becoming more dense because larger plots are being subdivided to build apartment clusters in between large residential homes. Such apartments are similar to the new townhouse complexes built at the edge of the city, which first-time home buyers are more able to afford. However, these dwellings are more compact and closely clustered than former middle-class housing stock, leading to much higher densities than older suburban housing.

These trends will clearly continue, which makes it easier to support submarkets that would be interested in apartment living in the context of the Corridors; such housing will represent an

affordable option, minus the hassle of congestion and the need to travel long distances to work. In other words, if the new niche private developments in the Corridors are placed in relation to broader trends, they could become an important component of the larger real estate mix. However, many respondents cautioned that it is probably too soon to assess whether the approach will pay off and how high a priority it will be for the new administration.<sup>53</sup>

New political leaders have mixed attitudes towards the COF. Mayor Mashaba has clearly de-emphasized the COF but has not stopped the planned infrastructure investments that create the conditions to achieve the policy's medium-term objectives. However, he is continuously under pressure from his (informal) coalition partner, the Economic Freedom Fighters (EFF), which regards the COF as a suburban beautification project that distracts from focusing on poverty-stricken areas.<sup>54</sup> The Mashaba administration has a broader agenda that seeks to balance investments in deprived areas, key corridors, and the established economic heartlands to ensure that all areas maintain optimal infrastructure, traffic flow, and routine maintenance.<sup>55</sup>

Despite initial rhetoric, the initiative was renamed the Transit-Oriented Development Corridors (TODC) around May 2017, signifying a desire to jettison the COF branding but retain the program's fundamental approach.<sup>56</sup> Furthermore, in the budget speech in May 2017 there was no mention of the Corridors despite public commitment to continue building the BRT. This indicated that momentum had slowed, and it seems unlikely that the same level of resources will be funneled into the TODC's strategy. This matters because if momentum is lost, it becomes even harder to persuade the private sector to coinvest.

Significantly, the more substantial *Integrated Development Plan (IDP) Review* of the City of Johannesburg, published in 2017, paints a very different picture. In it, the new administration officially endorsed the GDS Johannesburg 2040, with some tweaks, but for all intents and purposes, it is very similar to the first iteration promoted by Tau. The new Spatial Development Framework (SDF)<sup>57</sup> was approved before the change in administration but remains central in the *IDP Review*. The centrality of the SDF suggests that the rebranded TODC will have considerable support over the medium term. It is particularly instructive that the *IDP Review* put forward spatial justice as a key output and says it will be realized in the following manner: "By 2021, a series of catalytic spatial transformation projects must ensure

ongoing development along corridors with a strategic approach to residential densification embedded. The City will integrate state investment into the property market through partnerships and a spatially coordinated focus on deprived areas.<sup>58</sup> One reason to assume that there will be some measure of continuity is the history of corridors and nodes as mechanisms of spatial transformation. It is therefore relevant to consider the precursors to the COF/TODC.

## Enabling Conditions for the Corridors of Freedom

Anti-apartheid urban policy of the mid-1980s<sup>59</sup> promoted corridor development as an antidote to racial exclusion.<sup>60</sup> During the heyday of apartheid, corridor development policy offered an alternative way to undo the spatial dynamics of racial segregation, oppression, and exclusion.<sup>61</sup> A large and fragmented metropolitan bureaucracy coordinated around the TOD through a series of spatial frameworks that culminated in the COF. Figure 7 provides a timeline of important dates related to the COF.

The GMS and the COF were more focused on steering private sector investment decisions than two previous strategic planning frameworks:<sup>62</sup> iGoli 2010 and iGoli/Johannesburg 2030.<sup>63</sup> Both iGoli frameworks focused on the mechanics of integrating eight local authorities to overcome a dire fiscal situation that had developed in the 1990s. Furthermore, the limited capital budget available at the time focused on investments in prominent black areas such as Soweto and Alexandra, leaving very few resources for broader strategic programs.<sup>64</sup> Nonetheless, the core tenets of corridors and nodes were embedded in both strategic frameworks.<sup>65</sup>

With the policy narrative supporting TOD, the implementation of a BRT in 2006 made the possibility of coordinated investment to overcome the spatial mismatch a physical reality.<sup>66</sup> Johannesburg used South Africa's agreement with FIFA to host the World Cup in 2010 to install a BRT system called Rea Vaya.<sup>67</sup> The 2003 Integrated Transport Plan (ITP) had already laid out TOD principles.<sup>68</sup> In November 2006, the City of Johannesburg unveiled a plan to construct Phase 1A, a 25.5 kilometer route connecting Soweto to the CBD and Ellis Park, the location of the major soccer stadium. The line has 31 stations that partially operated in 2009, before the World Cup games, and became fully operational a year later.<sup>69</sup> The BRT strategy was underwritten by a national government grant that allowed Johannesburg to meet the World Cup deadline.<sup>70</sup>

With the BRT under development, the GMS's new spatial approach crystallized as the COF initiative, marking a decisive shift from service delivery to spatial transformation in concert with the private sector. In response to pressure from President Thabo Mbeki, the Mayoral Committee decided at a May 2007 workshop to support market-led growth by collecting and publishing development trend data.<sup>71</sup> Given the Marxist history of the ANC, the decision was an important pivot away from a growth model that depended on the public sector alone.<sup>72</sup> The public sector would work with private developers to manage sprawl and redistribute spatial development more evenly across the city. The mayoral workshop was concerned that some parts of the city were growing in high double-digit numbers (up to 30 percent), while the monofunctional townships were devoid of growth.<sup>73</sup> The planning department had six months to produce a GMS that would detail precise planning and infrastructure investments to help spatially rebalance development. Box 3 sets out the unique role of the planning department in Johannesburg, which enabled it to develop the GMS so quickly and effectively.

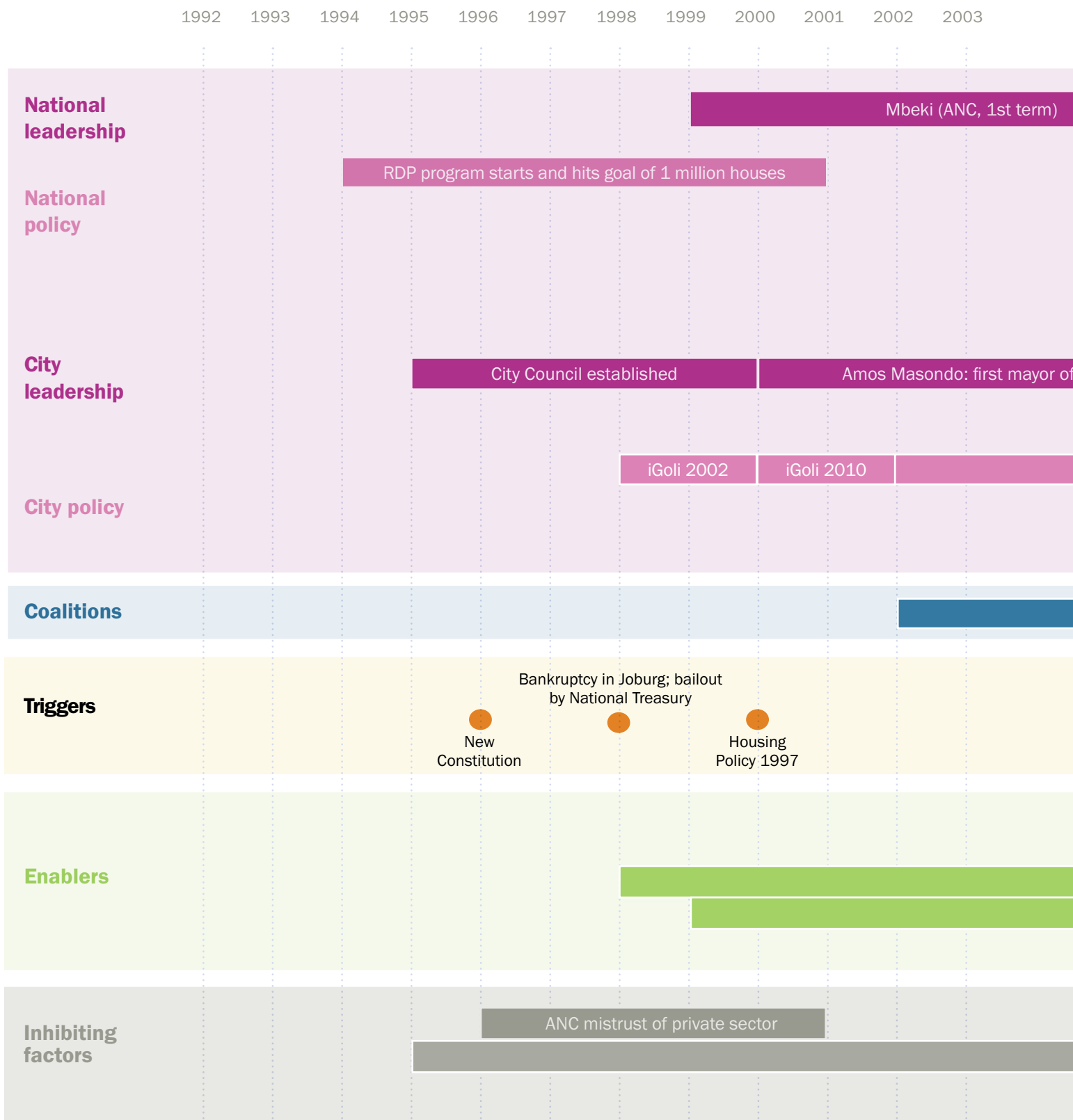
The GMS provided a spatial typology that prioritizes action around public transport and marginalized areas. The GMS delineates a TOD planning approach while ensuring the reduction of service delivery backlogs remains a priority.<sup>74</sup>

### Box 3 | Planning Department and Capital Budget Planning

The spatial planning department controls the municipality's capital budget. This is highly unusual internationally and unique within South Africa. However, it means that the spatial planning department has considerable power to align spatial priorities with budget allocations. This was especially useful in driving an integrated budget process over a three-year horizon around the three Corridors of Freedom (COF) plans. This institutional arrangement goes back to 2003 when the planning department was given the authority to implement the Capital Investment Management Systems (CIMS), a software tool that allowed it to bilaterally engage with all municipal departments to assess whether their capital investment plans aligned with the city's strategic plan and spatial development framework. This system was revised and updated in 2014 and is now known as the Johannesburg Strategic Infrastructure Platform (JSIP).

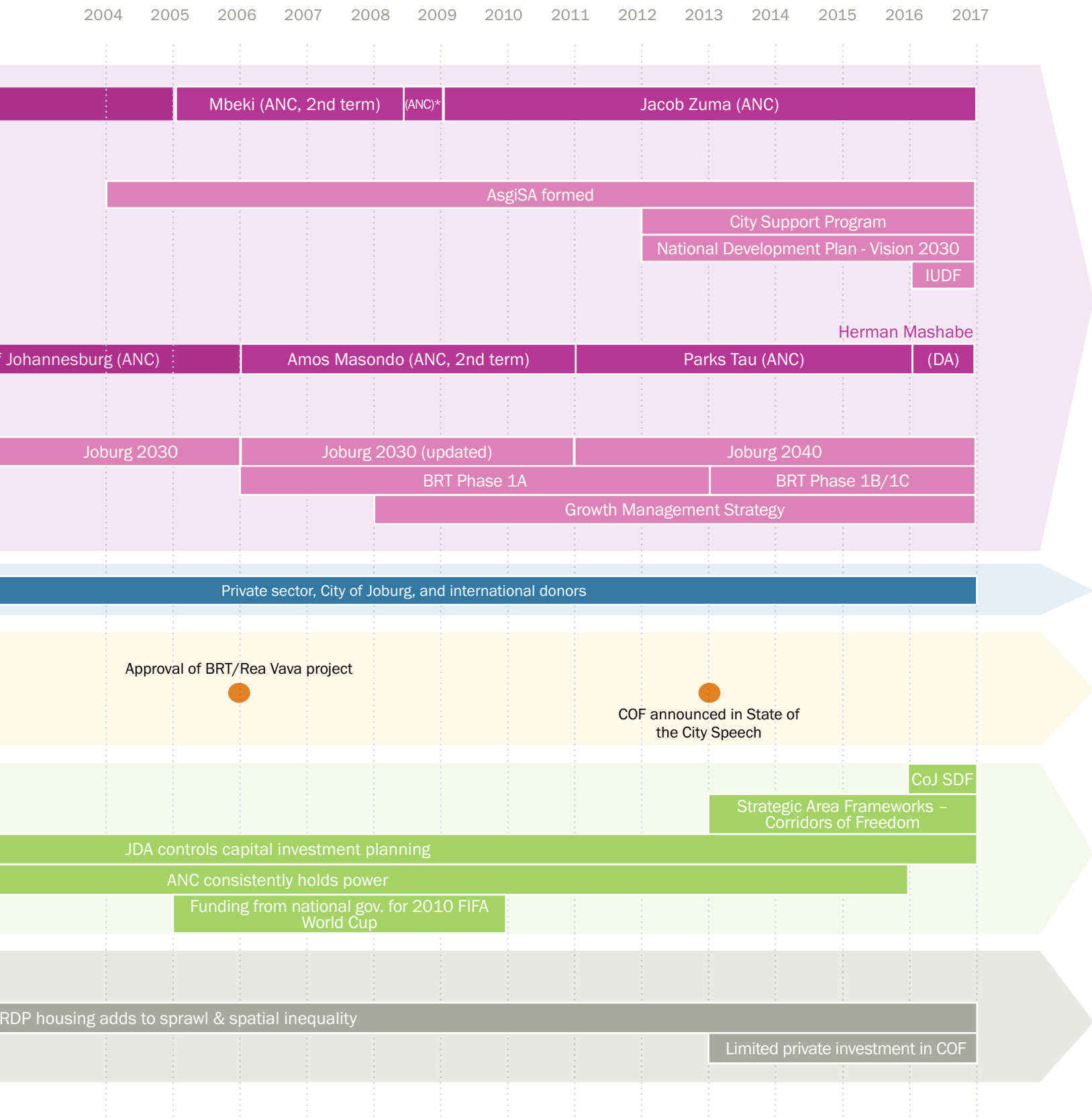
Source: Authors' analysis on Interview 4.

Figure 7 | **Timeline of events in Johannesburg**



Note: \*Kgalema Motlanthe was president between Sep 25, 2008 and May 9, 2009, after Mbeki resigned on Sep 25, 2008.  
 Source: Authors.





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The GMS differentiates between three levels of priority for growth management, which break down into five area-based categories for planning:

1. High priority
  - a. Public transport areas
  - b. Marginalized areas
2. Medium priority
  - a. Consolidation areas
  - b. Expansion areas
3. Low priority
  - a. Peri-urban areas

With this categorization, the GMS seeks to respond to the growth dynamics that reflect a century of deliberate spatial engineering that reinforced racial exclusion and privilege (see the urban form shown in Figure 3) while also promoting restorative justice. New private development plans tended to cluster in the northwest arc of the city outside the Blue Zone of Transformation shown in Figure 6.<sup>75</sup> The GMS approach to prioritization made the disproportionate investment reality highly visible. This created political awareness of how routine municipal investments and planning decisions undermined socioeconomic ambitions at the core of post-apartheid identity. Through this process the GMS enabled the Corridors approach of crowding in private investment along transit corridors.<sup>76</sup> The GMS was formally adopted in June 2008, laying the groundwork for the COF to be aggressively promoted by 2012.

International actors also influenced the shift in Johannesburg's planning approach. Mayor Tau fully understood the political and symbolic value of engaging with various international networks and agencies. For example, he played a leading role in Metropolis, the interest group representing metropolitan governments around the world. Tau embedded himself and Johannesburg in various sustainable urban development networks that were converging around the ideas of densification, compactness, and TOD.<sup>77</sup> For instance, the City of Johannesburg signed up to a global network of cities, the C40 Cities Climate Leadership Group, initiated by Michael Bloomberg. Through this and similar outreach efforts, the city became a poster child for sustainable urban management policies and principles. Tau engaged the former head of UN-Habitat, Dr. Joan Clos, to participate in spatial development framework workshops. This advocacy resulted in financial support from the French Development

Agency (AFD), the Global Environment Fund (GEF), and the Development Bank of Southern Africa.<sup>78</sup> This international support and exposure provided resources to commence the flagship program despite local political and financial constraints. However, policy implementation is never linear or simple.

## Inhibiting Conditions for the Corridors of Freedom

Johannesburg's spatial planning is nuanced and collaborative, but it is virtually impossible to achieve spatial transformation without radical interventions in land markets. The formal private real estate market in South African cities adds about 1 percent new stock to the built environment each year.<sup>79</sup> Public sector investments represent at best a further 2 percent. The best case scenario for a public real estate project requires three to five years of planning and one to two years of implementation. Thus, changing the spatial outcomes of only new stock has a limited impact on overall inequality.<sup>80</sup> To dramatically transform the effects of apartheid planning requires land to be expropriated and repurposed in ways that would potentially undermine the entire region's market system. Nevertheless, cities like Johannesburg that are characterized by acute spatial inequality must find ways to achieve radical land reform with buy-in from the real estate sector and middle classes. Doing so requires visionary and inclusionary political leaders with the savvy and clout to foster buy-in from all vested interests.<sup>81</sup>

Institutional fragmentation within the public sector makes it difficult to expropriate and repurpose land because large tracts of publicly owned land are not available for redevelopment. Given the colonial history of expropriation and extermination, land expropriation is constitutionally allowed but with strong protections for fair compensation and requirements to demonstrate a clear plan to use the asset for a redistributive purpose. Since state-owned enterprises do, in fact, own vast tracts of well-located land that they refuse to hand over to municipalities for public use, private landowners would have a strong legal case to oppose expropriation. To bypass this potential obstacle, the first step for Johannesburg would be to defragment the public ownership of land and create a more comprehensive plan for the use of public land. This agenda will at a minimum require close working relations between the metropolitan and provincial governments, which is challenging since two political rivals are involved.

Putting aside the challenges of radical urban policy reforms, let us now consider the challenges facing the Corridors program.

One of the toughest challenges the JDA faced was persuading large real estate players to bring so-called gap housing to the market in partnership with the public sector. Gap housing is social housing for people who have employment, earn more than the income threshold to qualify for RDP housing, but earn too little to access a mortgage. Given the income distribution of the South African labor force, this is a considerable portion of the urban population. As discussed before, many of these people find themselves living in backyard shacks in the townships or in overcrowded apartments in derelict buildings in the inner city.<sup>82</sup> Private financial institutions are reluctant to lend in this space, which in turn increases developers' perceived risk and willingness to participate in the Corridors program.<sup>83</sup> As noted, there is a small new group of niche developers supported by the JDA, but they are not yet in the position to undertake the scale of affordable housing construction envisaged for the Corridors.<sup>84</sup>

A related inhibiting factor is the challenge of demonstrating the feasibility of mixed-income housing. There is no precedent for mixed-income housing, making it difficult to model demand and long-term financial feasibility. Part of the problem is that middle-income households that can access a mortgage have many options in Johannesburg's suburban submarkets. They are unlikely to trade their suburban lifestyle, even in a semidetached house, for apartment living as envisaged in the COF's densification models. By the same token, poor households would struggle with the monthly expenditures associated with apartments. These unknowns make it difficult to model the economic returns of these projects. This uncertainty was not resolved when the government changed in 2016, which made it more difficult for advocates to push for continued government focus. However, the increasing proclivity to live in more dense environments across the housing market spectrum may prove to be a mitigating factor, spurring demand for the kind of social housing opportunities that the Corridors might offer over the medium term.

The final inhibiting factor is the influence of political leaders. This factor is difficult to classify because, on the one hand, the mayor's full support and vision was critical to gaining initial momentum for the project. On the other hand, it made the COF highly political, which has added a large degree of uncertainty given the change in parties leading the city. We have shown that TOD concepts have been embedded and evolving in Johannesburg's planning framework since the 1980s. Thus, it is reasonable to assume that without political ownership, the concept would have continued to evolve.

Yet it also clear that the JDA and the Johannesburg city administration gained considerable momentum for TOD because Mayor Tau took the reins on persuading the public, and he was willing to stake his political capital on driving the COF. In the first six to eight months of Mayor Mashaba's administration, it seemed doubtful that he would provide any political support to the concept since his priorities are the inner city, potholes, traffic lights, and compliance with bylaws pertaining to the regulation of crime and the prevalence of informal traders.<sup>85</sup> Yet despite his indifference, the new administration officially endorsed the GDS (the sponsoring policy of the COF),<sup>86</sup> and the 2017 *Integrated Development Plan Review* confirmed that TOD plays a central role in setting investment priorities.<sup>87</sup> Furthermore, detailed budget allocations from the projected capital expenditure have been made to the TODC and are in the public domain. At the time of this writing (November 2018), there is still uncertainty about whether Mayor Mashaba will put "political skin" in the game, especially since his coalition partner, the EFF, remains profoundly skeptical about the TODC. We return to this issue in the next section.

### 3. SUSTAINING REFORMS TOWARDS SPATIAL TRANSFORMATION

In the previous section we established the origins of the COF initiative, its significance for addressing spatial mismatch, and the integrated and coordinated local government approach that is more focused on achieving complex outcomes than on providing core services. This is one of the most challenging aspects of taking a commitment to achieving universal access to core services and converting it into an attempt to achieve transformative change. When leadership changed in 2016, it raised important questions about whether the COF would survive. In the new government's first year, the signals were very mixed, but a network of senior officials from key departments were able to forge common cause with the new leadership's technical advisers, creating a basis for planning and budget continuity. However, the COF was renamed (because of its close political association with the former mayor), and it was de-emphasized in the new mayor's political statements. Instead, Mashaba delivered a message of clean government that would attend to the "basics" (potholes and traffic lights) and focus on revitalizing Johannesburg's inner city, which can be interpreted as potentially complementary to the renamed TODC.

In view of these shifts, this section offers a series of interrelated recommendations to further entrench and potentially scale the ambitions of the TODC. These recommendations should be read as propositions for debate by local actors interested in

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figuring out how best to sustain policy and institutional reforms for spatial and economic transformation. Readers from other places will also be able to discern implications for their unique contexts, especially if they, too, struggle with fragmentation, competing policy priorities, and the absence of a shared agenda.

First, it is important to adopt a more integrated approach to the entire housing market, stretching from high-end commercial and private real estate to informal settlements on the other end of the spectrum. The formal and informal segments of the housing market are connected through the regional economy of the city region<sup>88</sup> and, significantly, various categories/types of settlements are undergoing densification.<sup>89</sup> Taken together, these trends reflect a cultural shift that is potentially in tune with the mixed-income, mixed-use lifestyle proposed by the TODC. In other words, it speaks to new kinds of demand that the TODC can accommodate.

In this context, it is worth proposing a clearer niche for the TODC: social (rental) housing for young professionals and student accommodation. This can build on the emergence of niche real estate developers, as discussed earlier. While this does not offer a solution for the urban poor, it will create a more dynamic market in the townships. Many tenants of backyard shacks are employed professionals who cannot access the mortgage market, which makes them ideal candidates for Corridor housing. Also, if these opportunities are regarded in relation to the significant low-cost rental options, it can contribute to a broader pool of affordable housing in areas more accessible to public transit, as envisaged in the SDF. New opportunities for medium-density social housing in the TODC are likely to stimulate demand for similar typologies in the townships, leading to increased diversification in the housing market to serve a range of income groups.

Second, the public sector—the City of Johannesburg, Gauteng Provincial Government, and the National Department of Transport—must move towards a hybrid, integrated public transport solution. Investigations into the BRT system in various South African cities conclude that the low-density urban form undermines the possibility of BRT systems ever becoming financially viable, even if they are optimally utilized.<sup>90</sup> However, there is great potential to optimize the BRT armature of dedicated lanes and stations by allowing the minibus taxi fleet to also use the infrastructure. In return, the state should consider allocating a share of the public transport subsidy pie to the minibus taxi sector to recapitalize their vehicles and bring

the sector in line with safety, speed control, and electronic payment requirements. Digital platforms that are producing disruptive mobility options such as Uber and Taxify can easily be adapted to enhance the efficiency of these ubiquitous vehicles. This will have positive economic benefits for one of the few black-owned business sectors while also effectively responding to the sprawling low-density urban form. This is important because an efficient and fully integrated public transport system is a precondition for the kinds of mixed-use and high-intensity urban development envisaged by the TODC. Institutionally it means that the interdepartmental coordination achieved through the TODC budgeting processes needs to be extended to other levels of government, especially since transport is a concurrent function of provincial and national government.<sup>91</sup>

Third, it is essential to establish a (semi-)permanent forum between the City of Johannesburg, organized business (especially the property and financial sectors), and organized civil society organizations to mutually shape, inform, and monitor the implementation of strategic projects along the TODC. Unless social capital is strengthened between the leaders of these sectors, it will not be possible to generate the requisite synergy between public planning, private investment, and societal support. The TODC demand a sustained forum participation that enables deliberation, conflict mediation, and mutual learning. This would make deals more resilient to political changes.

However, such an institutional ecology cannot be fashioned without effective intermediary institutions. A rich and growing international literature on urban innovation suggests that strategic intermediaries between the local, state, and other vested actors are indispensable if these kinds of compacts are to work effectively.<sup>92</sup> The JDA is currently such an intermediary, but it is woefully underfunded and understaffed to conduct the necessary convening, intermediation, and support to ensure sustained interactions between the various parties. However, on this institutional note, it will also be important for the City of Johannesburg to establish a more coherent interdepartmental nucleus to jointly drive the implementation, monitoring, review, and adaptation that will be required to implement something as complex and evolving as the TODC. Ideally, such a cluster should consist of the planning, transport, housing, and finance departments and report to the City Manager and Mayor.

Fourth, deliberate actions must be devised to broaden the TODC's social base. Since many of the substantive benefits of the Corridors agenda are only likely to be visible in the medium term, it is essential to foster and grow a multiclass, multisectoral coalition for spatial transformation. This would require going beyond technocratic public participation processes towards *cultural* initiatives to create civic-based ownership to drive emblematic demonstration projects, such as public art or musical performances. The civil society and business organizations referenced above would be important partners to ensure that this is done in an inclusive and meaningful manner. For example, cities should emphasize two to three emblematic projects that are already under way and can be used to demonstrate that change is possible, desirable, and not so threatening. This effort should be more than a communications campaign; it must be a process of social mobilization across diverse civic and business networks, linked to practical actions that can be undertaken to both strengthen and improve these initiatives.

Fifth, to ensure the credibility of such interventions, it will be important to promote much greater transparency and interactive capacity regarding the progress made around the TODC's short- and medium-term plans. This is an important tool to sustain interdepartmental momentum, but most importantly, it creates societal understanding that can reinforce the kind of cultural embedding discussed earlier. A good example of what is possible is the recently launched web-based interface called Municipal Money.<sup>93</sup> It provides citizens with an overview of municipal income and expenditure, but this could easily be adapted and tailored to popularize the implementation agenda of the TODC. This could also offer the private sector an important opportunity to demonstrate its commitment and support for the leading program to address spatial transformation.

Sixth, and finally, the TODC require visible and unambiguous leadership from the City of Johannesburg. It does not have to be Mayor Mashaba, because he must maintain the delicate and uncertain working relationship with the EFF. However, it is possible to give a trusted senior member of the Mayoral Committee this task.

These recommendations are demanding and complex, and unless there is strong political ownership and voice, the inevitable challenges associated with staying the course will be that much harder to navigate.

## 4. CONCLUSION

This case study illustrates the challenges associated with overcoming spatial isolation for the urban poor and towards achieving economic and environmental transformation as envisaged in the WRR framing paper. The Corridors of Freedom and its successor, the Transit-Oriented Development Corridors, constitute innovative policy experiments to create facilitating conditions along strategic mobility corridors.

The COF enjoyed strong leadership from the former mayor, who was able to marshal most of the senior metropolitan government managers and utilities behind the vision. This was reflected in a shared local strategic planning framework that aligned budgeting and investment. Aligning budgets around the shared planning framework was a significant success.

This is particularly impressive because the approach was novel, and the program had to be implemented with relatively modest human resources within the City of Johannesburg and implementing agencies such as the JDA. Furthermore, despite new political leadership that did not demonstrate the same enthusiasm for the initiative, a network of administrators were able to persuade key policy thinkers in the new administration of the initiative's fundamental rationale. As a result, the program got rebranded to assuage the politicians, but the investment program seems to remain intact, at least in the city's formal planning documents.

What is more disconcerting is that without the requisite political drive, it does not seem possible to significantly enhance capacity within the City of Johannesburg and the JDA to drive implementation with non-state actors (such as niche social housing developers and the nonprofit social housing sector). This casts doubt on whether the program's momentum will be maintained and whether the necessary scaling can be performed to turn an audacious pilot initiative into an impactful program of work over the long term.

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## APPENDIX A. DESCRIPTION OF INTERVIEWEES

INTERVIEW NUMBER	DATE	POSITION AND AFFILIATION
1.	March 27, 2017	Research Director, Gauteng City-Region Observatory
2.	March 28, 2017	Executive Director, Development Planning, City of Johannesburg
3.	March 28, 2017	Partners of architecture firm, Urban Works
4.	March 30, 2017	Spatial Development Planning Department, City of Johannesburg
5.	May 23, 2017	Senior Researcher, Planning Department, University of Witwatersrand
6.	May 23, 2017	Director, Strategy & International Relations, City of Johannesburg
7.	May 23, 2017	Representative, City of Johannesburg
8.	May 23, 2017	Director, Policy and Research, Private Office of the Executive Mayor, City of Johannesburg
9.	May 24, 2017	Former City Manager, City of Johannesburg
10.	May 24, 2017	Representative, Johannesburg Development Agency
11.	June 6, 2017	Former Manager, Johannesburg Development Agency
12.	June 6, 2017	Programme Director, City Support Programme
13.	October 26, 2017	South African Research Chair in Spatial Analysis and City Planning
14.	November 23, 2017	Former Manager of Jozy-at-Work

## ENDNOTES

1. Parnell and Pieterse, 1999.
2. Parnell and Pieterse, 1999.
3. Pieterse and van Donk, 2013.
4. For details, see Gotz et al., 2011.
5. Beard et al., 2016.
6. In particular, we are indebted to Graeme Gotz, the research director of the Gauteng City-Region Observatory and a long-standing collaborator of the lead author.
7. COJ, 2016a.
8. COJ, 2016a.
9. Visagie and Turok, 2017.
10. GPG, 2015.
11. Visagie and Turok, 2017.
12. Crankshaw, 2017.
13. SACN, 2016.
14. COJ, 2017b.
15. It is important to note that South Africa does very well in the provision of free basic education, but the quality leaves a lot to be desired due to overcrowded classrooms, poorly trained teachers, and managerial failures at schools in poor areas. Despite the exceptional education expenditure per capita compared to low- and middle-income countries, South African pupils score in the lowest quintile for numeracy and literacy in international tests.
16. Crankshaw, 2008, 2017.
17. Parnell and Pieterse, 1999.
18. Visagie and Turok, 2017.
19. Pieterse and van Donk, 2013.
20. Everett, 2014.
21. It is beyond the scope of this paper, but it is important to note that local government has also been the site for substantial corruption and maladministration. One indicator of this is the annual assessment of the Auditor General of South Africa, who most recently announced that these tendencies are getting worse; see Saunderson-Meyer, 2018.
22. Todes, 2014.
23. GCRO, n.d. The biennial Quality of Life (QoL) survey measures the quality of life, socioeconomic circumstances, attitudes to service delivery, psycho-social attitudes, value-base, and other characteristics of the Gauteng city-region. The QoL Index for 2015 draws on 58 indicators that can either be weighted by ten dimensions (global life satisfaction, family, community, health, dwelling, infrastructure, connectivity, work, security, and sociopolitical attitudes) or by the full set of indicators; Culwick, 2015.
24. COJ, 2017b: 26.
25. The statistical significance of the spatial mismatch is usefully captured in SERI, 2016.
26. SERI, 2016.
27. SERI, 2016.
28. Pieterse and van Donk, 2013.
29. Pieterse, 2007.
30. Presidency, 2003.
31. Ahmad and Pienaar, 2014.
32. Burdett, 2013.
33. Interview 12.
34. The first author was part of the development of this program.
35. Pieterse, 2017.
36. National Treasury, 2015: 1.
37. It is worth noting that in April 2016, the South African Cabinet adopted the Integrated Urban Development Framework (IUDF), which is the equivalent of a National Urban Strategy as articulated in the New Urban Agenda. It consolidated the analysis of the NDP and the CSP about the spatial paradox that plagues South African cities.
38. COJ, 2011.
39. COJ, 2011.
40. Tau, 2013.
41. That said, it is important to qualify that one of the corridors—Turfontein—did not have a bus rapid transit line that ran through it, although other forms of public transport were available there. Also, nodes within Soweto were added to the COF after the first demarcations in 2013. For more detail, see [https://www.joburg.org.za/departments\\_/Pages/City%20directorates%20including%20departmental%20sub-directorates/development%20planning/Corridors-of-Freedom.aspx](https://www.joburg.org.za/departments_/Pages/City%20directorates%20including%20departmental%20sub-directorates/development%20planning/Corridors-of-Freedom.aspx).
42. These materials are available on a dedicated website. See COJ, 2017a.
43. Interviews 2 and 4.
44. The scale of planning in the strategic area frameworks translates the metropolitan spatial framework into distinct local areas, especially those identified as priority zones in terms of the GMS. These plans provide more detail guidance at a local-area scale and tend to incorporate a number of spatially related precincts within a spatial framework for larger urban areas.
45. Preemptive zoning was a planning regulatory innovation developed by the planning department to create more incentives for private developers to pay more attention to the COF areas. Essentially, the City of Johannesburg would preemptively develop mixed-use zoning schemes that would make it easier to apply for more complex development rights. In other words, developers would simply prove their development met the criteria of the city and they would almost automatically get planning approval. This scheme was still under development at the time of collecting our data. See Interview 2.
46. In Interview 10 from the JDA, he expressed deep skepticism about whether the sectoral departments follow through on the CAPEX commitments they have made for each of the COF. In his experience, these departments would commit, but when they had to carry out actual prioritization, it was not a given that they would honor their pledges. In other words, the integrated medium-term CAPEX budget for COF that reflected the contribution of the different departments did not necessarily always materialize due to competing priorities within each sector department or agency.
47. Interview 10.
48. Interview 4; Rubin cites a particularly important example. “A few years ago, the City announced it will provide densification bonuses to developers who did well in this regard but those bonuses never materialized.” The research also revealed that the developers are less interested in where the city invests but rather follows the investments of the JDA very closely because the developers know “that when the JDA says they will do something, they will do it.” The COF are held in the city’s planning department but other departments and entities, such as transport, also play a major role.
49. Todes and Turok, 2018: 8.
50. Todes and Turok, 2018: 9.

51. Based on authors' e-mail correspondence with Carel Kleynhans, executive director at Ithemba Property Development in Johannesburg, June 4, 2018. Mr. Kleynhans also confirmed that niche developers like Ithemba are pooling resources with larger, more established developers to create a new fund that will specialize in social housing in the inner city and key nodes along the TODC or adjacent to them. They are awaiting approval from the Competition Commission before the announcement will be made public. This finding informs the recommendations that follow.
52. Todes et al., 2018.
53. Interviews 2, 4, 5, 6, 7, and 13. Mayor Tau was replaced by Mayor Herman Mashaba from the Democratic Alliance (DA) after the local government elections in August 2016.
54. Interview 9.
55. Interview 8.
56. Interview 8; COJ, 2017b. Hereafter, the paper refers to COF/TODC or just TODC.
57. The SDF is a statutory requirement and must be reviewed and reformulated every five years. This usually happens within a year after an election takes place.
58. COJ, 2017b: 23.
59. Dewar, 1995; Dewar and Uytendogaardt, 1991.
60. Swilling et al., 1991.
61. Pieterse, 2007.
62. Borja and Castells, 1997.
63. These plans are critically discussed in Cartwright and Marrengane, 2016; Lipietz, 2008; Parnell and Robinson, 2006; and Beall et al., 2013.
64. Gotz et al., 2011; Harrison and Harrison, 2014.
65. The metropolitan government has produced a number of strategic plans. The flow of frameworks that aligned priorities for the COF project is as follows: GDS 2006 >> GMS 2008 >> GDS 2011 (Johannesburg 2040) >> COJ SDF 2016 >> local SAFs.
66. COJ, 2008.
67. Bickford, 2014.
68. COJ, 2013.
69. The second component of Phase 1A only came into operation after the World Cup in 2011. Furthermore, Phase 1B, a second trunk route of 16.7 kilometers from Soweto to the CBD via the western suburbs, Parktown and Braamfontein, with a further 17 stations, became operational in October 2013. In August 2015, a second bus operating company formed by about 150 minibus taxi operators and the Public Utility Transport Corporation, called Ditsamaiso, began operating services with 134 buses. Rea Vaya Phase 1C proposals were approved by the Mayoral Committee in June 2014, but a revised operational and business plan is being submitted in this financial year and it is anticipated that the first subphase of Phase 1C along Louis Botha and Katherine Avenue between the inner city, Alexandra, and Sandton CBD, will start operating in October 2018.
70. Implementation issues are beyond the scope of this paper and other authors, such as Haferburg et al., 2015; Mokonyama and Mubiwa, 2014; and Wood, 2015, provide pertinent analyses.
71. Interview 4.
72. It is difficult to definitely characterize the ideological identity of the ANC because it brings together diverse political orientations ranging from African nationalism to Marxism and social democracy.
73. Interview 4.
74. COJ, 2008: 37.
75. COJ, 2010.
76. It is beyond the scope of this paper, but it is important to note that the planning department was able to produce the first draft of the GMS within six months of the May 2007 Lekgotla because of a capital budget prioritization tool called CIMS. This tool allows the planning department, as opposed to the finance department, to receive, rank, and prioritize capital investments from all sectoral departments. This system was first introduced in 2002 when there was hardly a capital budget to speak of and the planning department asked for this function and was given it, creating an institutional configuration that is unique.
77. Parks Tau is currently on the WRI Ross Center's Advisory Board.
78. GEF, 2017.
79. McGaffin, 2018.
80. Based on the author's personal notes from a public talk by Rob McGaffin at the Green Building Council Conference, held at the Canal Walk Convention Centre, Cape Town, South Africa, October 10, 2017.
81. As an aside, it is worth noting that the EFF is explicitly committed to land expropriation without compensation and holds a strategic alliance with the Democratic Alliance (DA) in Johannesburg to prevent the ANC from forming a governing coalition. The DA is ideologically wedded to a free-market economy premised on private property.
82. There is a substantial academic and policy literature on this topic that is beyond the scope of the paper. See Govender et al., 2011; Lemanski, 2009; and Turok and Borel-Saladin, 2016.
83. Cirolia et al., 2016; Gunter and Scheepers, 2012; SACN, 2015; Turok and Borel-Saladin, 2016.
84. Interview 10.
85. Mashaba, n.d.
86. The GMS was a policy position paper developed by the Planning Department to demonstrate how land-use guidelines and zoning schemes could be deployed to achieve greater concentration of public and private investments in specific geographic areas. It strongly reinforced the Corridors approach reflected in the GDS in 2006 and also informed the next iteration of the GDS in 2011 called Johannesburg 2040. This GDS established the strategic planning rationale for the COF.
87. COJ, 2017b.
88. Gotz and Todes, 2014.
89. Todes et al., 2018.
90. Interview 12; see Todes et al., 2018.
91. An association of the eight metropolitan governments—the South African Cities Network—is well placed to support Johannesburg in pursuing this agenda.
92. Guy et al., 2010.
93. Municipal Money, n.d.



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