INTRODUCTION

*Our cities: status quo and
the long-range prospects*

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Key Messages

1 SA cities are expected to be effective drivers of both local and national development.

2 Cities are already engines of growth but operate under dynamic and difficult circumstances and with mixed performance.

3 SoCR considers both current (legacy) and future circumstances, dynamics and goals of the cities.

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STATE OF CITIES REPORTING

Over the years, the State of Cities reports have presented a five-year perspective on the performance and conditions of South Africa's largest cities, with a focus on the member cities of the South African Cities Network (SACN). Specifically, the report has evolved into:

1. **A barometer**, compiling evidence about the progress made by South African cities over time in relation to key development roles, targets and outcomes.
2. **An analytical tool**, reviewing the strategic problems and opportunities facing cities.
3. **An agenda-setter**, communicating essential messages about the planning, development and management of cities to the next generation of civic leaders, councillors and officials who would be the incumbents following the municipal elections.

Figure 1.1: State of South African Cities reporting timeline

2004	2006	2011	2016
Cities are important and can be drivers of social change social change	The apartheid form remains largely unchanged	Cities are resilient but face key pressures & vulnerabilities requiring intervention and support	Cities have been effective drivers of local and national development but all actors have to pull together.
SoCR I	**SoCR II**	**SoCR III**	**SoCR IV**

Since its first edition in 2004, the State of South African Cities report (SoCR) has evolved into a regular publication that deliberately coincides with the electoral cycle for local government. This allows the report to align its retrospective and prospective ambitions with the transitions from end-of-terms to the reflective agenda-setting that characterises new political terms of office. Simply put, the report is ideally placed to help South African cities, and their electorate, to take stock and to plan forward.

The 2011 SoCR, which was themed "Towards Resilient Cities", laid the foundation for the guiding theme for SACN's 2011–2016 five-year strategy: "South African cities as effective drivers of local and national development".

This aspirational statement was intended to frame the questions for knowledge generation and reflection in both micro (local) and macro (national) terms. In other words, how could cities be relevant and developmental for their local populace, while also play the macro-economic role required of them? Indeed, the theme proved to be either prescient or self-fulfilling because "cities as the engines of growth" emerged during this period as the mantra for national development in South Africa and, indeed, globally.

This theme is the subject of the fourth edition of the SoCR, which seeks to answer the core question: Are our cities being effective drivers of local and national development?

GLOBAL PERSPECTIVE: CITIES AND URBANISATION

"The 21st century will not be dominated by America or China, Brazil or India, but by The City. In a world that increasingly appears ungovernable, cities — not states — are the islands of governance on which the future world order will be built." (Parag Khanna[1])

Over the past decade, the centrality of cities in the political economy has become a palpable global phenomenon. Dramatic headlines, such as "rise of cities", "urban world" and "planet of cities", resound in academic, business and popular literature. Clearly, cities are important social, economic and political actors at all levels, as shown by population and demographic trends.

The world population is growing fast, although the rate is slowing. In 2015, the world population reached 7.3 billion, one billion people more than 12 years early (in 2003). However, it will take 15 years to add another one billion people to the population, which is projected to reach 8.5 billion by 2030. Between 2005 and 2015, the annual rate of population growth dropped, from 1.24% to 1.18% (UN DESA, 2015).

Africa is the fastest-growing continent. Africa accounts for just 16% of world population (1.2 billion in 2015) but has the highest rate of population growth, at 2.55% annually. This means that almost half (1.3 billion of the 2.4 billion) of the people projected to be added to the world population between 2015 and 2050, will be Africans. As a result, Africa's share of the world population will reach 25% in 2050, and 39% by 2100, whereas Asia's share will reduce to 44% over the same period (ibid).

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1   *http://www.mckinsey.com/global-themes/urbanization/when-cities-rule-the-world*

Figure 1.2 shows the projected growth in world population by areas.

Figure 1.2: Population of the world and major areas (2015–2100)
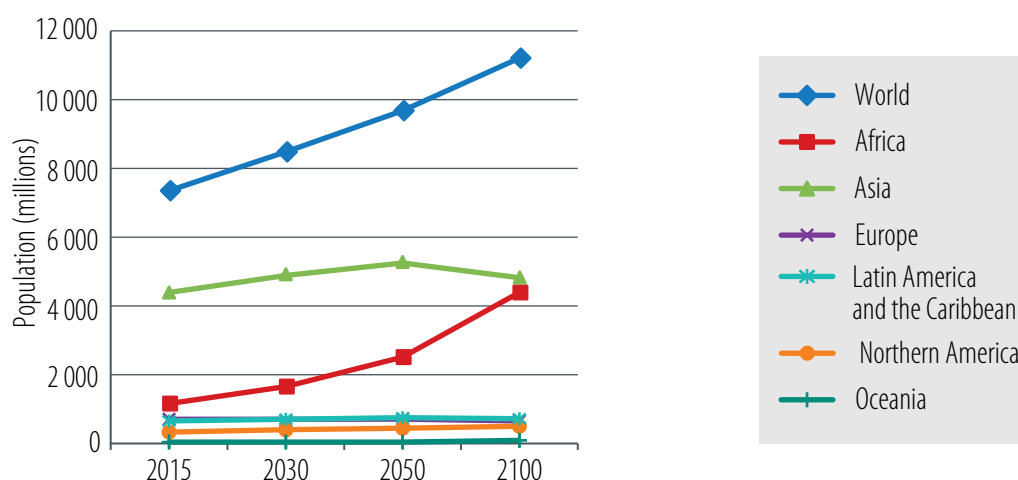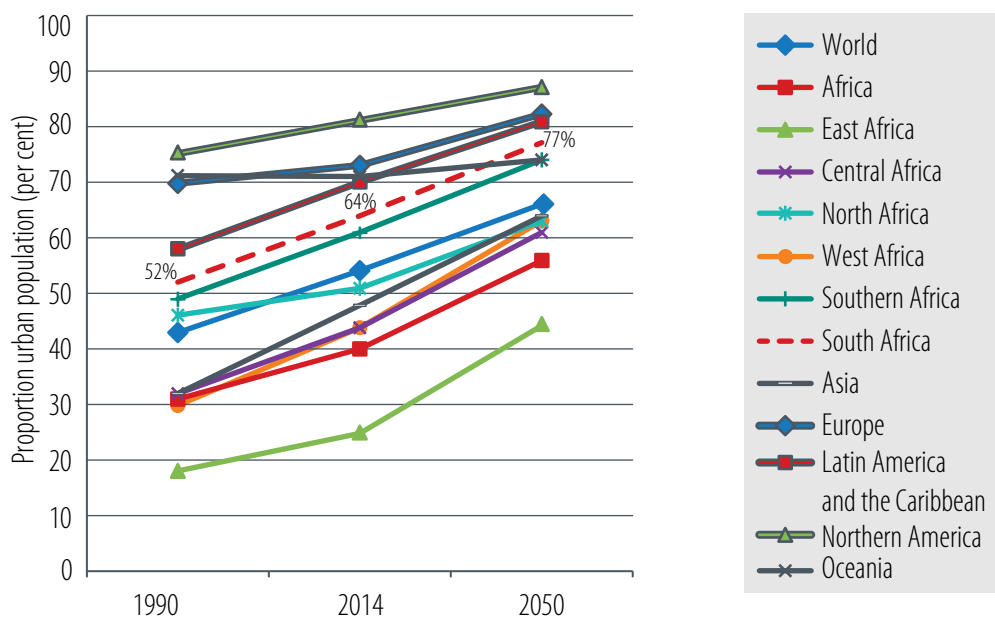

Source: UN DESA (2015)

Just as the world population growth is not evenly distributed, nor will it be so in Africa. The growth will mainly be in poorer countries. By 2100, the populations of ten African countries are projected to increase by at least five-fold (ibid). Over the next 30 years, half of the world's population growth is expected to come from just nine countries, of which five are African: India, **Nigeria**, Pakistan, **Democratic Republic of the Congo**, **Ethiopia**, **Tanzania**, United States of America, Indonesia and **Uganda**. The population of Nigeria will surpass that of the United States, making it the third largest country in the world (ibid).

This growth is mainly urban. In 2014, for the first time in history, more people lived in urban areas than in rural areas. This urbanisation trend is likely to continue, with the world urban population projected to grow from 54.5% in 2014 to 66% in 2050 (Figure 1.3).

Figure 1.3: Proportion urban population (1990–2050)

Source: UN DESA (2014)

The urbanisation trend is particularly marked in the relatively less urbanised regions: the global South and poorer sub-regions. Therefore, the rate of urbanisation will be higher, for example, in West, East and Central Africa than in Southern Africa or South Africa, which is already relatively more urbanised (Figure 1.4). This does not mean that the urban population will not continue to grow in South Africa. The National Development Plan (NDP) estimates that South Africa's urban population will grow by about 10% every two decades, reaching 70% in 2030 and almost 80% in 2050 (NPC, 2011).

Figure 1.4: World urban population[2]
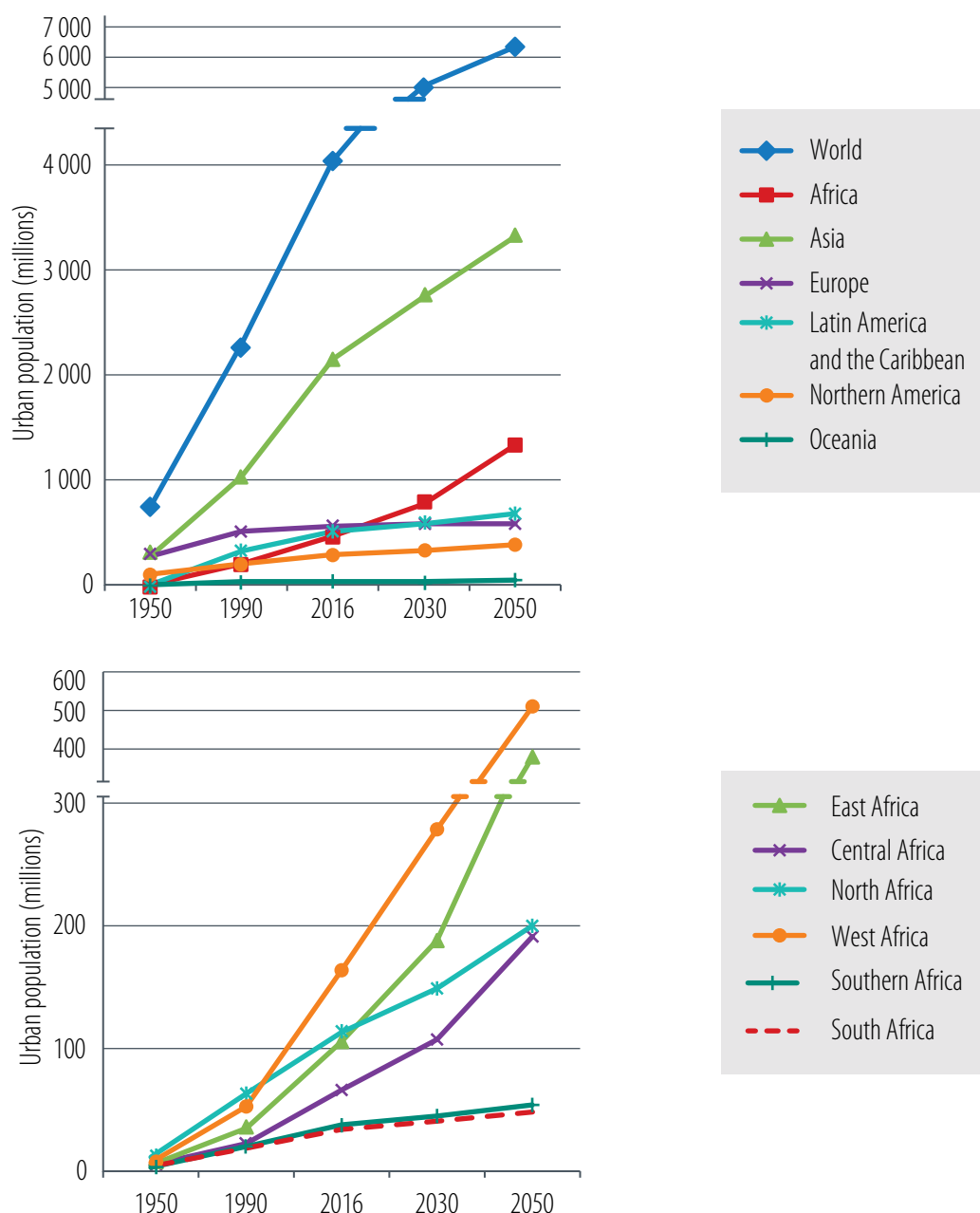
2   UN World Urbanization Prospects: Data Query. *http://esa.un.org/unpd/wup/dataquery/*

The consequence of this rapid urbanisation is that the numbers of urban residents grow fast in specific places. Approximately one quarter (23.9%) of the world population is already concentrated in large urban areas of a million population or more (Demographia, 2016). Four African city-regions are listed among the 50 largest urban areas in the world:

- #17: Cairo – population nearly 16 million (15 910 000) and density of 9000 people per km^2
- #24: Lagos – population nearly 13 million (12 830 000) and density of 9000 people per km^2
- #27: Kinshasa – population over 11 million (11 380 000) and density of 19 500 people per km^2
- #40: Johannesburg – population over 8.5 million (8 655 000) and density of 3300 people per km^2.

The size and growth of specific urban areas is a subject of increasing attention and study as it brings particular challenges, but also opportunities, for socioeconomic growth and development. Today's cities, particularly in the global south, are collectively grappling with these challenges of urban planning, development, management and governance.

LEARNING FROM BRICS CITIES

The BRICS yield up some inspiring examples of how to seize the opportunities that urbanization can provide, and how to pursue inclusive urban development. They also highlight the problems inappropriate policies bring. All these countries have gone through difficult periods during their urban transitions, and several still bear heavy burdens of past failures to process urban growth equitably and efficiently (McGranahan and Martine, 2012: 2).

BRICS countries face common challenges (although of very different scales), but the greatest insights may also come from their differences rather than their similarities.

Urban population: BRICS countries
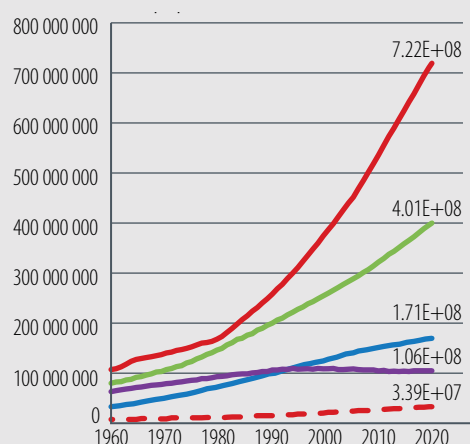
Urban population (% of total)
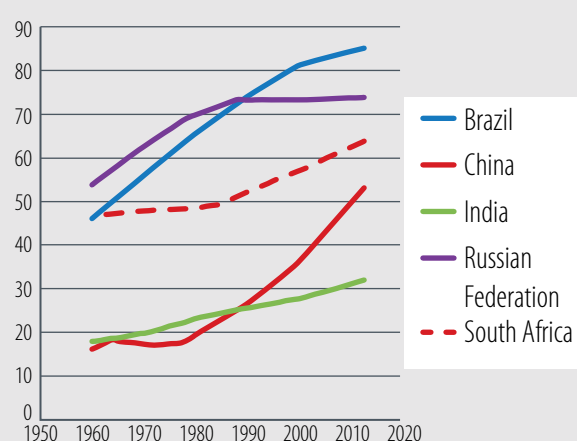
Source: South African Research Chair in Spatial Analysis and City Planning, Wits. Data derived from UN Population Division

BRICS country	Lessons	Challenges
Brazil Little done to manage urban growth during the latter part of the twentieth century, resulting in growth of informal settlements (*favelas*) on hazardous and peripheral land, and huge urban inequalities.	• Innovative approaches to urban management, e.g. transit-oriented development (Curitiba); participatory local budgeting (Porto Alegre); value capture instruments used to fund new infrastructure (Sao Paulo). • Government support of local initiatives through the the *Estatuto da Cidade* (Statute of the City) and the Ministry of Cities. • Electricity production based on hydro power not coal-fired generation; green fuels rather than petroleum.	• Failure of public transport to keep pace with the growth of the large cities. • Mass street protests against inadequate transport systems in 2013, repeated again in January 2016. • Economy in recession, and political troubles mounting, leading to some of the shine of the Brazilian case wearing off.
Russia Highly urbanised (around 75%), but current urban growth very low, with many cities having a static or declining population. Growth continues in Moscow and in a few of the better located secondary cities.	• Ambitious dreams for new urban development, e.g. building a "New Moscow" beyond the edge of the existing city. • Like South Africa, Russia has an extremely resource-inefficient economy because of the historically low cost of carbon-based fuels.	• Struggling economy battling low commodity prices. • Many cities created under a command economy are locationally marginal under market conditions. • Like in South Africa, many Russian cities have an "inverted density gradient", with higher population densities on the edge than in the centre of cities.
India The one BRICS country still experiencing robust economic growth but still extremely poor. Very low levels of urbanisation (around 30%).	• Local-level innovations within a difficult urban context. • Impressive economic growth (Delhi) and success in transitioning to a high tech economy (Bangalore). • Recent introduction of a metro system (Mumbai).	• High levels of informality. • Infrastructure deficits and fragmentations. • Environmental degradation (Delhi is the most air-polluted large city in the world).
China The "giant", accounting for 46% of the population and 56% of the economy of the BRICS countries. Urbanisation rose from less than 20% in 1980 to more than 50% currently. Growth focused on the eastern seaboard until around 2000, when cities in the interior also grew, supported by the government's *Go West* policy.	• Highly successful infrastructure-led development • Recent policy development recognises clusters of cities (or city-regions) as a spatial unit for addressing environmental, economic, transport and other challenges. • Cities that have made the shift to a tertiary economy are benefitting from consumption-led growth.	• Collusion between municipal authorities and developers led to large-scale overbuild in places. • Rapid industry-led growth caused environmental problems, especially air pollution in cities. • Economic slowdown in China putting pressure on cities built on low-end manufacturing. • Controls on urbanisation through the *hukou* (household registration) system have been eroded, but still inequality between those with an urban *hukou* and the "floating population".

South Africa

The minnow, accounting for only 1.7% of the population and 2.6% of the economy of the BRICS countries.

Higher level of urbanisation and per capita income than India and China.

Like China and Russia, South Africa had controls on urbanisation which were only removed in the mid to late 1980s. Since then, there has been an upsurge in urbanisation, which is now gradually slowing down.

South Africa's cities have struggled to keep pace with this recent urban growth and (like in other BRICS countries) face considerable challenges of urban inequality and non-sustainable growth paths.

LEARNING ACROSS BRICS: from city-regions to secondary cities

Urban studies tend to focus on single cities, but the perspective changes when clusters of cities are considered (or city-regions as they are called in South Africa). These clusters present particular challenges and opportunities for urban governance, and require special arrangements for the integration and coordination of development. In the BRICS, the "city-regions" include the mega-clusters of Yangtze River Delta and the Pearl River Delta in China, with populations of 140 million and 120 million respectively. The Gauteng City-Region is far smaller, with a population of around 15 million people.

However, just as we can go up in scale from cities to city-regions, we can also go down in scale for the large and mega cities to the secondary and smaller cities of the BRICS. The learning opportunities are across the scales, and critical opportunities for engagement exist beyond studying the leading cities in the BRICS.

It is also useful to consider the linkages between the cities and city-regions of the BRICS that are experiencing significant movements of people (migrants and tourists), trade, investment, ideas, policies and practices. In addition to internal migration, there are, for example, migrant flows from China and India to South Africa's cities; investments in South Africa's property sector from large firms headquartered in Shanghai, Chengdu in China, and Moscow in Russia; new links in the energy sector between Moscow and South African cities; and the transfer of urban governance practices from Brazilian to South African cities.

The linkages across and lessons from BRICS cities are numerous. South Africa can, for example, learn innovative economic and governance practices by drawing upon the experience of other cities and countries. For example:
* Recent economic innovations in China.
* Local-level governance experiments in Brazil.
* The ways in which urban residents in India creatively make do with what they have.
* Efficient delivery of urban infrastructure from cities in China.
* Participatory governance processes used in Brazilian cities.
* The rebuilding of local planning systems in Russia after their near annihilation immediately after the collapse of soviet rule, to address critical urban challenges.
* Brazil's low carbon footprint efforts.
* China's very recent success in moving towards renewable energy sources.

"The overriding lesson is that cities and nations must plan for inevitable urbanization, so as not to be left with an enduring legacy of inequalities and lost opportunities." (McGranahan and Martine 2012:2)

Learning can be maximised through platforms that allow for mutual learning. This is happening within the formal BRICS structures (e.g. the BRICS Urbanisation Forum) and through other initiatives, such as the Guangzhou Urban Innovation Awards, and the recent launch of a BRICS Cities Lab by academic collaborators across a number of BRICS cities.

Opportunities

"Urbanization has helped millions escape poverty through increased productivity, employment opportunities, improved quality of life and large-scale investment in infrastructure and services." (UN Habitat, 2016: 34)

Cities are core to global production, innovation and trade, making urbanisation a "transformative force" that, if well managed, offers significant opportunities for (UN Habitat, 2016: 27):

• improving economic prospects and quality of life for the majority
• alleviating poverty
• driving innovation and productivity
• working towards social inclusion
• contributing to national and regional development.

For all its challenges, urbanisation offers many benefits to many people: economic options, better education and health, and access to improved infrastructure and services. The top 600 cities in the world account for a fifth (20%) of global population and generate 60% of global gross domestic product (GDP), while the top 100 cities in the world are responsible for 38% of global GDP (MGI, 2011).

These benefits and strengths of cities are key drivers of urbanisation. The spatial concentration of people in cities creates opportunities for creativity and innovation, efficient service and infrastructure provision, and greater resource-use efficiencies. However, while urbanisation can be positive, this is not the full story. Urbanisation is in fact a highly complex mix of interrelated opportunities and challenges.

Challenges

"Africa's fast pace of urbanisation and urban growth contrasts with the slow pace of structural transformation. [...] Urbanisation and structural transformation have not been mutually supportive in many African economies." (AfDB et al., 2016: 149)

The urbanisation process in Africa has been very different from that of the global North, which was driven by industrialisation. Africa's urbanisation is characterised by "an urbanisation of poverty", as individuals and families migrate to cities to escape rural poverty, conflict or other hardships. In spite of clear projections, many African countries and cities are not prepared for the unprecedented population growth, and their economies are not always capable of absorbing this influx. As a consequence, 40% of the global urban expansion is taking place in slums (WEF, 2015).

Unplanned and unmanaged urbanisation can lead to increased inequality, the growth of slums and disastrous impacts on climate change, with particular challenges in four areas (ibid):

• infrastructure
• health risks
• climate change
• social instability.

Addressing these challenges requires increasing the anticipation and response capabilities of the rapidly urbanising regions, countries and cities. However, intergovernmental coordination (alignment between government departments), and collaboration between governments and communities, is often poor. Poor communication, collaboration and planning are partly responsible for the mismatch between spatial and infrastructure planning, which is often exacerbated by political interference and corrupt activities, or flawed means of distribution (Pegasys, 2015).

Key issues for African cities

Given these complex dynamics, African cities need to adopt a more proactive approach to urban planning, management and governance. In recent years, extensive academic and policy research into these issues has begun identifying areas for action in urban development (Pegasys, 2015).

High economic and population growth, and inequality

In many cities, investment, urbanisation and enhanced productivity have boosted economies, but this wealth tends not to "trickle down" to the increasing lower-income population. Instead, it is recycled within the political or class elite. Furthermore, urban populations across the African continent are growing at such a rate that infrastructure development, maintenance, and planning cannot meet the demand, resulting in unequal access to services in most cities. The inability of city government to manage the relationship between economic growth and population dynamics places the urban social and economic systems at risk.

Informality and vulnerability

Slums are proliferating, as a result of high population growth and movement (rural-urban and circular migration) combined with the lack of affordable access to housing and land in cities. As urban residential informality increases, so too does the vulnerability of the poor. In addition, the informal economy has become a hallmark of many cities and the major employer, as a result of the economic structure and growth of many African countries. These vulnerable livelihoods, coupled with poor living conditions, affect well-being in urban areas.

Climate change and resource flows

Extreme weather events and natural resource insecurity (because of climate change) add to the challenges of cities trying to provide services to increasing numbers of people. In the face of high environmental risks, cities have to try to build local resilience (i.e. energy and resource security and food security), while negotiating regional and international partnerships to mitigate and manage the potential future impacts of climate change. Platforms such as the C40[3] and Metropolis[4] have been supporting cities to achieve their greenhouse gas emission targets. This has been strengthened by the 2015 Paris climate agreement on cities at COP21[5] (see Chapter 5).

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3   The C40 Cities Climate Leadership Group is a network of the world's megacities taking action to reduce greenhouse gas emissions.

4   Metropolis, or the World Association of the Major Metropolises, is the leading international organisation that represents cities and metropolitan regions with more than a million inhabitants.

5   COP stands for the Conference of Parties, which is held annually to review the implementation of the Rio Convention that includes the UN Framework on Climate Change (UNFCCC).

To leverage urbanisation in Africa, the following policy responses are required (AfDB et al., 2016).

• Invest in urban infrastructure in order to keep up with rapid urban growth.

• Provide more affordable housing.

• Improve urban connectivity, as city sprawl and current public mass transportation systems have offset the economies of agglomeration.

• Focus urban planning and governance on informal settlements.

Initiatives

For African cities, the challenge (or complex of challenges) is to manage economic and population growth, informality (the manifestation of exclusion from the mainstream) and urban resilience, while building an internationally competitive economy and encouraging investment. This is in addition to delivering on local developmental goals. The adage "think globally, and act locally" applies here, as cities will have to develop contextualised strategies and tactics for addressing their circumstances, as well as engage with global actors and issues, such as around mitigating the potential impacts of changes in the global macro-economy and climate change.

In 2015, the UN adopted 17 **Sustainable Development Goals (SDGs) – Transforming our world: the 2030 Agenda for Sustainable Development**, a follow-up to the 2015 Millennium Development Goals and aimed at ending poverty, fighting inequality and injustice, and tackling climate change by 2030. SDG 11 is specifically about sustainable cities and communities: by 2020, cities and human settlements will have adopted and implemented integrated policies and plans, aimed at inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and implemented in line with the Sendai Framework for Disaster Risk Reduction 2015–2030. Figure 1.5 presents the 17 SDG goals in relation to South Africa's NDP 2030 and illustrates a general correlation between the NDP objectives and actions and the SDG goals and targets (NBI, 2016).

The United Nations Conference on Housing and Sustainable Urban Development – **Habitat III** – will take place in October 2016 in Quito, Ecuador, and intends to frame a new global urban agenda. Within it, an aspirational African urban agenda aligned to African Union Africa Vision 2063 and discussed at the 7th Africities Summit 2015 has also emerged.

Figure 1.5: Aligning the SDG targets and NDP objectives

Sustainable Development Goals	No. of Targets	No. of Objectives	National Development Plan	Sustainable Development Goals	No. of Targets	No. of Objectives	National Development Plan
1 NO POVERTY	7	2	2 NDP objectives from Chapter 11: Social Protection	**10** REDUCED INEQUALITIES	10	3	1 NDP objective from Chapter 3: Economy and Employment; 1 NDP objective from Chapter 11: Social Protection; 1 NDP objective from Chapter 15: Nation Building and Social Cohesion
2 ZERO HUNGER	8	4	1 NDP objective from Chapter 5: Environmental Sustainability and Resilience; 2 NDP objectives from Chapter 6: Inclusive Rural Economy; 1 NDP objective from Chapter 11: Social Protection	**11** SUSTAINABLE CITIES AND COMMUNITIES	10	8	1 NDP objective from Chapter 4: Economic Infrastructure; 3 NDP objectives from Chapter 5: Environmental Sustainability and Resilience; 4 NDP objectives from Chapter 8: Transforming Human Settlements
3 GOOD HEALTH AND WELL-BEING	13	6	6 NDP objectives from Chapter 10: Health Care for All	**12** RESPONSIBLE CONSUMPTION AND PRODUCTION	11	2	2 NDP objectives from Chapter 5: Environmental Sustainability and Resilience
4 QUALITY EDUCATION (Enhance Relationships between TVET Colleges and Industry)	10	13	13 NDP objectives from Chapter 9: Improving Education, Training and Innovation	**13** CLIMATE ACTION	5	3	3 NDP objectives from Chapter 5: Environmental Sustainability and Resilience
5 GENDER EQUALITY	9	3	2 NDP objectives from Chapter 11: Social Protection; 1 NDP objective from Chapter 12: Building Safer Communities	**14** LIFE BELOW WATER	10	1	1 NDP objective from Chapter 5: Environmental Sustainability and Resilience
6 CLEAN WATER AND SANITATION (Partner with Municipalities to address Wastewater Treatment)	8	3	2 NDP objectives from Chapter 4: Economic Infrastructure; 1 NDP objective from Chapter 5: Environmental Sustainability and Resilience	**15** LIFE ON LAND	12	1	1 NDP objective from Chapter 5: Environmental Sustainability and Resilience
7 AFFORDABLE AND CLEAN ENERGY (Incorporate a Greater Share of Gas in the Energy Mix)	5	3	2 NDP objectives from Chapter 4: Economic Infrastructure; 1 NDP objective from Chapter 5: Environmental Sustainability and Resilience	**16** PEACE AND JUSTICE STRONG INSTITUTIONS (Strengthen Partnership with Local Government)	12	6	5 NDP objectives from Chapter 13: Building a Capable and Developmental State; 1 NDP objective from Chapter 14: Fighting Corruption
8 DECENT WORK AND ECONOMIC GROWTH	12	7	7 NDP objectives from Chapter 3: Economy and Employment	**17** PARTNERSHIPS FOR THE GOALS (Cross-cutting Role of NBI in Supporting Collaboration)	19	2	2 NDP objectives from Chapter 7: South Africa in the Region and the World
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	8	1	1 NDP objective from Chapter 4: Economic Infrastructure	SUSTAINABLE DEVELOPMENT GOALS — There is a general pattern of intent between the NDP Objectives and Actions and the SDG Goals and Targets. However, these objectives did not map exactly to SDG targets:			1 NDP objective from Chapter 4: Economic Infrastructure; 1 NDP objective from Chapter 9: Improving Education, Training and Innovation; 2 NDP objectives from Chapter 10: Health Care for All; 2 NDP objectives from Chapter 11: Social Protection

Key: ▬▬▬ Top Actions Forming the Business NDP Action Plan

Source: NBI (2016)

Other multilateral partnerships and associations that support or enhance urban development and resilience include the BRICS Urbanisation Forum and Friendship Cities, as well as C40 and Metropolis already mentioned. Agreements such as the COP Paris climate agreement on cities and the Global Network for Safer Cities (with its regional sister, the African Forum for Urban Safety) also forge collective global agendas. Importantly, all of these present opportunities for South African benchmarking and learning.

LOCAL PERSPECTIVE: CITIES IN CONTEXT

South Africa's cities are neither incidents nor islands – nor are they only the consequence of globalised trends, though these are certainly a factor. They are also defined by the country's particular context and history, a summary of which follows.

South Africa's democratic government has been in place since 1994. The 1996 Constitution allocated legislative and executive authority and powers to three spheres of government, but only in 2000 did the local government system in its current form come into being – when racially based municipalities were transformed into "wall-to-wall", non-racial, democratic local governments.

The White Paper on Local Government (Ministry of Provincial Affairs and Constitutional Development, 1998) sets out the developmental mandate of the sphere as being: "local government committed to working with citizens and groups within the community to find sustainable ways to meet their social, economic and material needs and improve the quality of their lives". However, government's 10-, 15- and 20-year performance reviews have failed to recognise adequately the important role and circumstances of local government, and indeed of cities. Yet signs are emerging of more definitive acknowledgement that transforming our cities, towns and villages is imperative to achieving growth and stability (NDP, 2009; COGTA, 2016).

The 1998 White Paper was firmly grounded in concerns about the apartheid and colonial legacies of spatial distortion, entrenched inequities, social divisions and the uneven distribution of capacity required to meet the needs and aspirations of local communities in a new, free and democratic South Africa. What this legacy has meant for the largest cities over the past 15 years is a double-edged mission: one of dealing with the past and its consequences for today's realities, while imaging and evolving towards a better future.

The cities we have ... Now Future... **The cities we want**

The challenge of the present is to redress the historical imbalances and backlogs, while trying to keep up with population dynamics (increased demands because of rapid and poor urbanisation) and dealing with the consequences of decaying infrastructure (because of supply-side trade-offs in the face of limited resources and capacity).

The challenge of the future is to move towards more desirable cities – cities that are viable and competitive places. This requires re-configuring cities within a context where legacy systems of operation and competencies may not be adequate for dealing with the fundamental shifts in, for example, demographic, technological and natural resource considerations.

These are not either-or options; both must be dealt with. The balancing of the two is the complex space that urban governance will have to navigate between the short and the long term. South Africa is roughly halfway between the establishment of the local government system (2000) and the vision horizon set by the country (NDP Vision 2030), and so this SoCR provides an important opportunity for assessing our progress and, perhaps, refining our approaches towards achieving the vision.

Key issues for South African cities

A number of external (macro) and internal (micro) trends and factors affect cities.

Demographic changes

Since the removal of the apartheid-era constraints on the free movement of black people, South African cities have grown rapidly through a combination of natural growth and in-migration from rural South Africa and neighbouring countries. Although urbanisation is predicted to take place in secondary cities and towns in most countries of the global South (UN Habitat, 2014), currently the most rapid growth is in the large metropolitan regions. Between 2001 and 2011, the population in metros grew by more than 25%, compared to 10% in the rest of the country (Turok and Borel-Saladin, 2014).

Much of this urban population growth has been in the former black townships and in particular informal settlements, which have grown the fastest because they are "the first recipients of rural (and foreign) migrants in search of work" (Mahajan, 2014: 8). In addition to the expansion of informal settlements, many households are renting in backyard shacks. Again this has mainly been in townships and new low-income housing (RDP) settlements.

While the absolute numbers of people in cities have increased, household sizes have decreased, from 4.5 to 3.6 people per household between 1996 and 2011 (Stats SA, 2012), implying that the number of households are also growing. The increase in absolute numbers of people and the reduced size of urban households have resulted in an escalating demand for housing within metropolitan areas, as well as an increased demand for employment opportunities, infrastructure and services.

Relative strength of metro economies

National economic development and growth have long been associated with the productivity of cities. This is not necessarily the case for the majority of South African cities but is true for the largest metropolitan municipalities, which have been growing faster than the rest of the country, and are estimated to generate over 70% of South Africa's GDP and exports (van Huyssteen et al., 2009; Turok and Borel-Saladin, 2013). The metros have the highest levels of skilled labour, research and development capability, and provide services and products to regions far wider than their municipal boundaries. These factors, along with the benefit of agglomeration economies, contribute to their regional competitiveness. While the cities are still confronted with pockets of deep deprivation (some 24% of the urban population is estimated to living in poverty), employment rates – including youth employment – and incomes are generally higher in urban than in rural areas (Van Huyssteen et al., 2009).

Basic service provision

Few will dispute that South African cities have made major gains in the provision of basic services in the past 20 years (Stats SA, 2012; Turok and Borel-Saladin, 2014). The metros have consistently performed better than the other municipalities in all areas of service provision, despite servicing much larger populations. Overall, they have made the most progress in providing water services and relatively the least progress in sanitation services. However, there are challenges. One is in the trade-offs being made between service extension versus infrastructure and service quality, operations and maintenance.

Another is the present conundrum that, despite improved urban infrastructure (Stats SA, 2012), the main development indicators (HDI – the human development index) and the proxies for improved sanitation and water access (deaths due to diarrhoea) have only modestly improved (South Africa's HDI ranking), or even worsened in the case of deaths due to diarrhoea (Turok and Borel-Saladin, 2014). These challenges affect the quality of life in cities.

Increasing inequality and exclusivity of cities

The poor and working class continue to be largely marginalised in South Africa's cities. For instance, most low-income housing is located on the periphery of cities, and residents of these areas suffer poor access to centres of employment and social amenities. Consequences include higher transport costs for the poor, difficulty in accessing good schooling, and long travel times between places of work and home – time that could otherwise spent on much more productive uses. These structural arrangements subvert South Africa's urban vision of having more compact, integrated and inclusive cities (COGTA, 2016).

Understanding of and support for local government

Some governance challenges faced by cities are internal to the local sphere, but others are related to the lack of understanding of local government by other spheres, which have had to recalibrate their systems in order to provide relevant support. One example is decentralisation and the corresponding functional devolutions – planning with the recent Spatial Planning and Land Use Management Act (SPLUMA), and eventually public transport and human settlements. However, these processes have faced delays and are not accompanied by fiscal decentralisation. Another example is the increasing recognition that differentiation in policy and sector support is needed, with programmes emerging that support metros, secondary cities and small towns in different, more targeted ways.

Spatial dynamics[6]

In the NDP (specifically, Chapter 8 on Transforming Human Settlements) and the Integrated Urban Development Plan (IUDF), space and spatial development are important priorities for eliminating poverty and reducing inequality in South Africa. South African apartheid legacies, socioeconomic development needs and employment challenges (especially youth unemployment) require intervention at a fundamental and large scale. Spatial targeting of initiatives, investments, plans and projects can help strengthen economies and boost employment creation. However, sustainable urban (and rural) development will require much more than mere basic service provision or the ad hoc roll-out of large infrastructure projects. It requires investment initiatives that leverage spatial multipliers, and strengthen and extend industry linkages and networks within functional regional economies. The need to identify, strengthen and extend the range of relevant networks and value chains has often been raised, but modest progress has been made at national and various regional levels (EDD, 2014). Since 1996, South Africa's urban landscape has changed and resulted in spatial and developmental implications, opportunities and challenges, as explained below.

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6   The spatial framework applied here is based upon the 2014 version of the SA settlements typology which was developed to support the development of the IUDF (Van Huyssteen, et al., 2014), as well as the stepSA Geospatial Analysis Platform which was developed to improve the spatial resolution of meso level information in South Africa (http://stepsa.org/settlement_typology.html).

Cities and towns are the backbone of regional and rural economic networks

City-regions, cities and major towns are not only home to the majority of the population but are also the engine rooms of the South African economy – an estimated 57% of the formal economy is generated in the city-regions alone. South Africa's cities play key roles as gateways to and/or anchors of spatial networks – connecting people, places, freight, logistics, financial, service, learning and institutional networks (ESPON, 2014). A 2014 analysis conducted by EDD and the CSIR (2014), which was based on a range of municipal and functional city area indicators, highlighted the critical role of cities as international, regional, and more localised networks.

Figure 1.6: Cities and towns are anchors and gateways within regional and rural economic networks
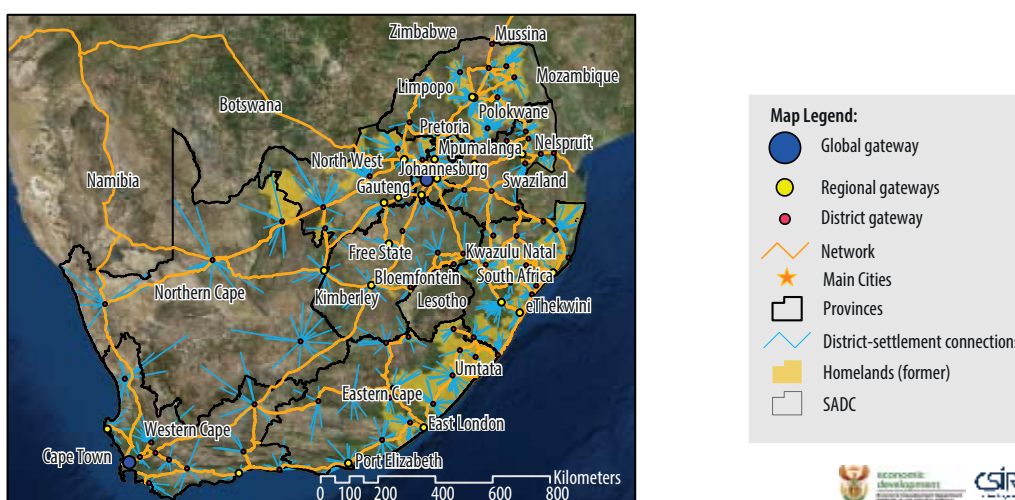
- **International gateways:** Although international investment and trade in South Africa (and Africa) may be directed at more rural, resource-rich enclaves (e.g. mining areas), metropolitan and large urban areas and port cities are used as gateways and springboards.

- **Gateways and anchors for national and regional economic networks**: Metropolitan areas and large urban areas are the major global and regional gateways, and drivers of innovation and job growth in supra-national, national and sub-national regional economic networks and many of the job-driver specific value chains.

- **Gateways for regional and rural economies and service delivery**: Regional and district gateways offer the potential to grow, anchor and connect government and economic service networks, as well as support growth and innovation in local and regional value chains.
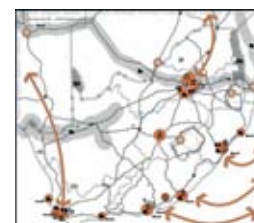
Source for this and later maps in chapter: CSIR and StepSA city viewers and indices. http://stepsa.org/

Cities and towns are playing a major role in housing South Africa's population

South African cities have grown rapidly because of the obvious economic opportunities and prospects, but also because people view cities as places where livelihoods can be improved and access to services is better. Over the past two years, cities and towns have experienced the biggest increase in population, a trend that is likely to continue. It is estimated that almost 78% of South Africa's population of 51.7 million people live in cities and towns in both urban and rural areas, with only 14% of the population living further than 20 kilometres away from a town or city. The map in Figure 1.7 shows the extent of population change that has occurred between 1996 and 2011 (the bar heights reflect the ranges of change).

Figure 1.7: Change in total population between 1996 and 2011 (showing larger values only)
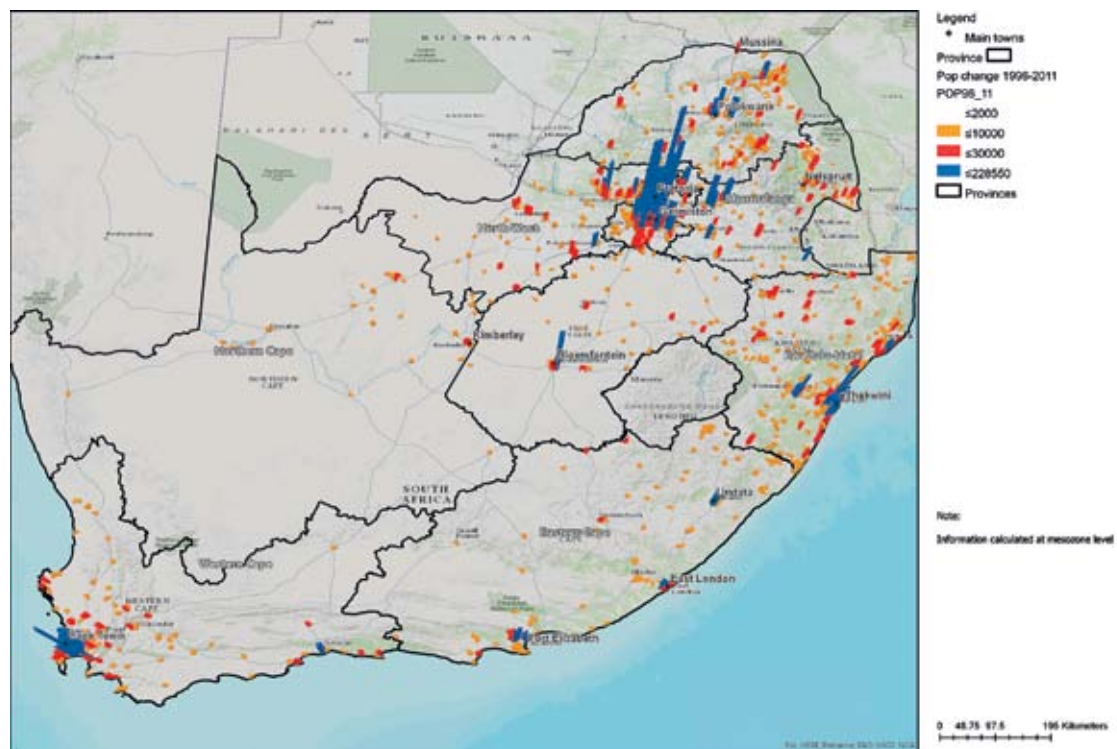
As Figure 1.7 shows, the largest increase in population has occurred in the metropolitan areas of South Africa, as well as several other fast-growing cities, such as Polokwane, Emalahleni, Middelburg and Rustenburg. Some settlements in the vicinity of the metropolitan areas also have increased population numbers. This trend is confirmed in Figure 1.8, which shows that five of the eight metropolitan municipalities reflect the largest change in numbers (population), with the city-regions of Gauteng and Cape Town showing the largest growth between 1996 and 2011.

Figure 1.8: Population change total for the 20 top places (1996–2011)

Top 20 places (drawn from SACN/CSIR typology)
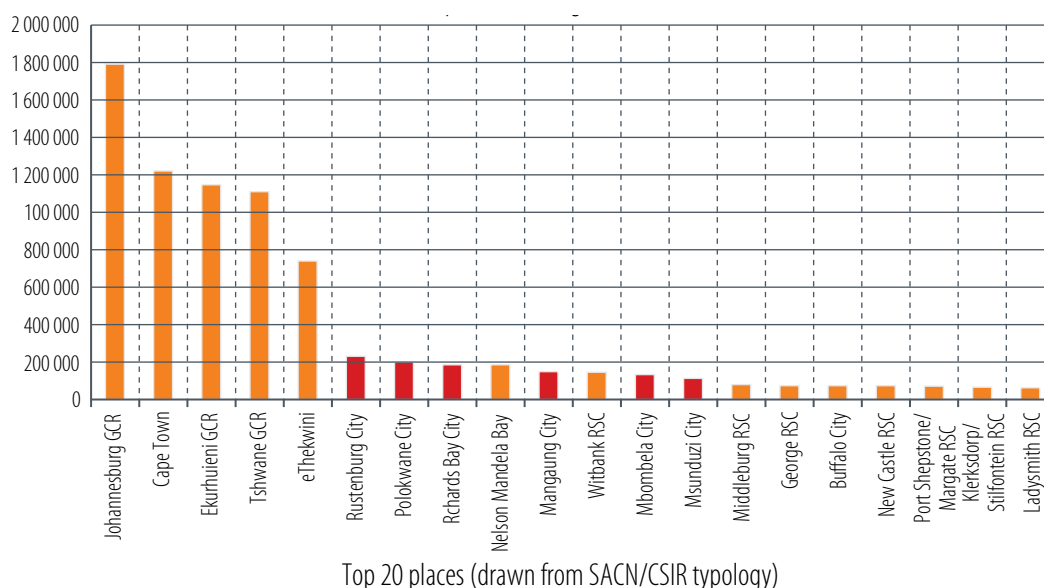
Secondary cities and small towns are also growing fast

The growth of population in metropolitan areas is to be expected because of the economic opportunities within such areas, but the high rate of population growth in smaller towns and cities is interesting to note.

Figure 1.9 shows the rate of population change between 1996 and 2011 per mesozone[7] and presented according to settlement categories listed in the typology: city-region, city, regional service centres, service towns, and local or niche towns. It only reflects settlements with a population of more than 5000 people. The map shows that some smaller cities are in fact growing faster than the large metros.

• Cities such as Polokwane, Mbombela, and Richards Bay.

• Regional service centres such as Emalahleni, George / Knysna.

• Service towns such as Lephalale, Mookgopong, Modimolle, Kathu, Kuruman, New Castle.

• Local and niche towns such as Vaalwater, Thubatse, Kwahlushwa, Manguzi, Addo, Gansbaai.

Access to services could be one of the reasons why these places have such high rates of growth. With the advent of differentiated approaches to urban development, more attention is being afforded to the role and strategies of secondary (or intermediary) cities and small towns, e.g. within in the global Habitat III agenda. The trend in South Africa seems to warrant such consideration.

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7 Mesozone are more or less equal-sized units (roughly 7km x 7km) that are similar in socio-economic character. The whole of South Africa is demarcated into just fewer than 25 000 mesozones (or standard local economic areas) nested within administrative and physiographic boundaries.

Figure 1.9: Rate of population change 1996-2011 (>5000 only)
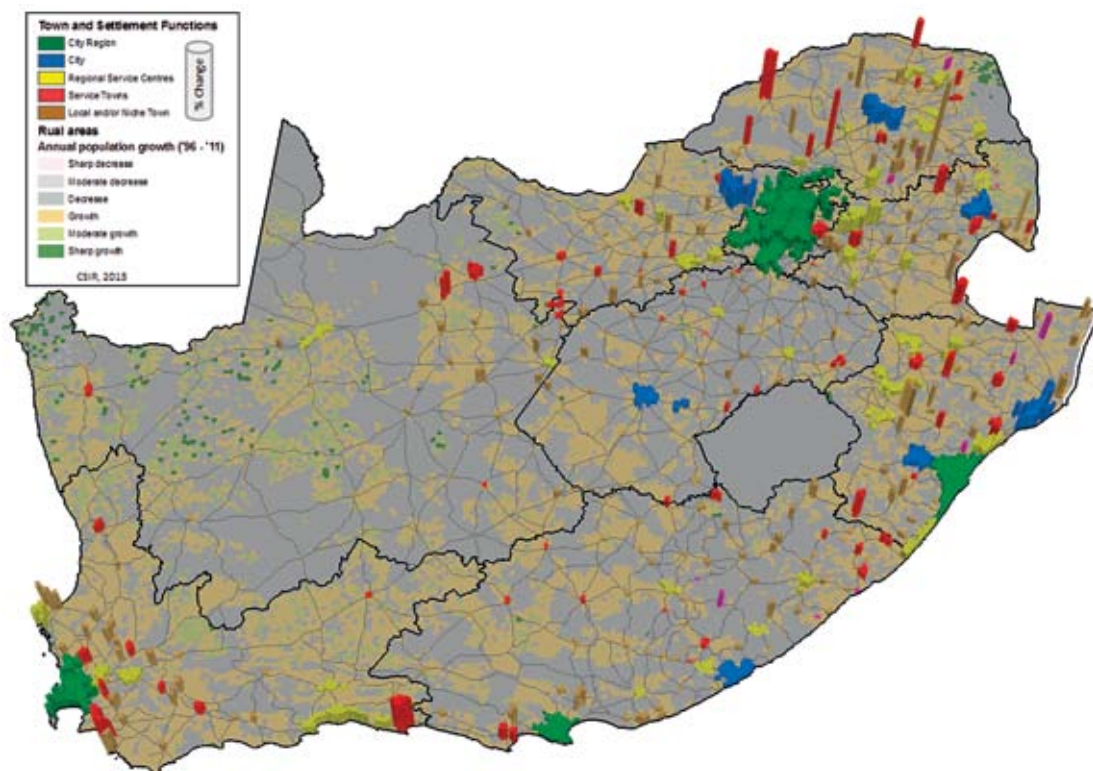
Metros remain by far the largest

While the relative growth rates are important and interesting, almost half (46%) of South Africa's population is concentrated in the metros and their surrounds. In 2011, just four city-regions (Gauteng, Cape Town, eThekwini and Nelson Mandela Bay) contained 42% of South Africa's population.

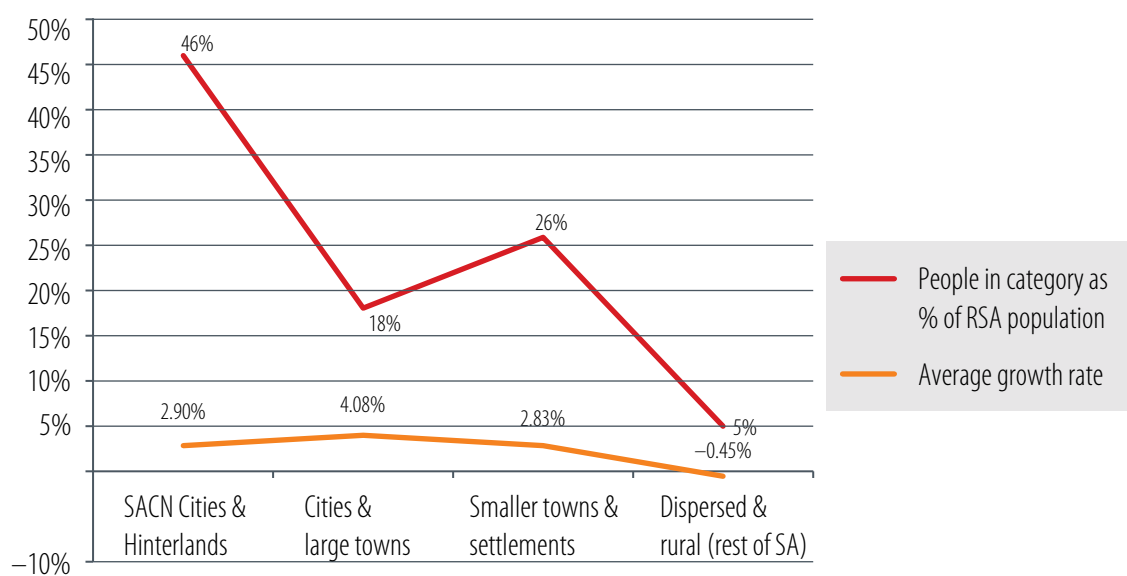**Figure 1.10:** Percentage of population and growth rate of SA cities and towns

Figure 1.10 shows that, while population growth is higher in non-metro cities (secondary cities and large regional service towns), at 4.08% compared to 2.9%, their absolute population is less than half that of metros. In other words, non-metro cities are far from reaching the size of metros.

Populations are also moving (migration trends)

Populations are not static, even in the largest cities. A characteristic of modern life in South Africa is that people move, and then move again. This population mobility, with people moving to and between cities, means that urbanisation is not a linear trend. The complexity of these movements make forward projection and planning for both revenue and expenditure (on infrastructure and service delivery) less predictable. Figure 1.11 shows the total internal net, in- and out-migration for the nine cities. All the cities (except for Nelson Mandela Bay, eThekwini and Buffalo City) experienced a net population gain because of migration.

Figure 1.11: Net migration trends in cities (2006–2011)
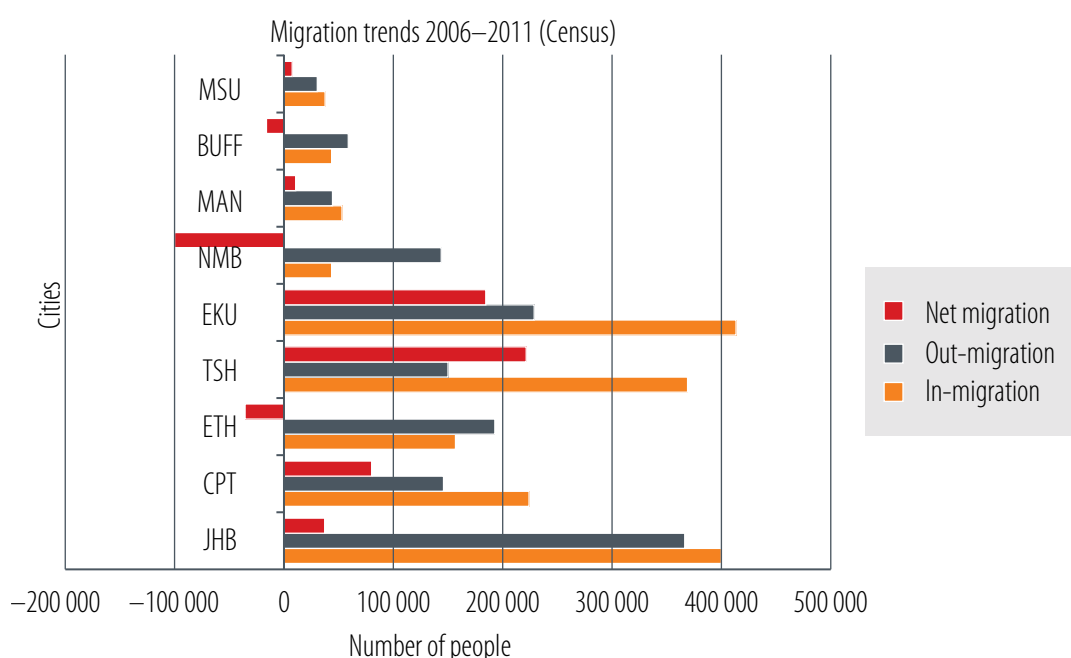
The majority of the 142 000 out movements from Nelson Mandela Bay went to Cape Town and Buffalo City. Of the over 192 000 out movements from eThekwini, close to 30% went to Johannesburg, and a notable proportion of the movements also went to Msunduzi. Tshwane saw the greatest net population gain, with the majority originating from Ekurhuleni and Johannesburg (Pieterse et al., 2015).

Population concentrating in city cores and economic nodes

The apartheid past has had a significant impact on the composition and functioning of South Africa's cities and towns. Planned segregation created racially (physically) divided cities and towns that were still the reality in 1994, when South Africa became a fully democratic country. The apartheid spatial design produced cities that are incredibly inefficient, with many township areas placed on the periphery in locations that were both economically undesirable and deliberately underserviced. The question

today is whether cities are succeeding in reinventing and restructuring the past through spatial transformation.[8] The example of the three metropolitan municipalities in Gauteng (Tshwane, Johannesburg and Ekurhuleni) is used to answer this question, by reflecting on what/where changes and growth have occurred.

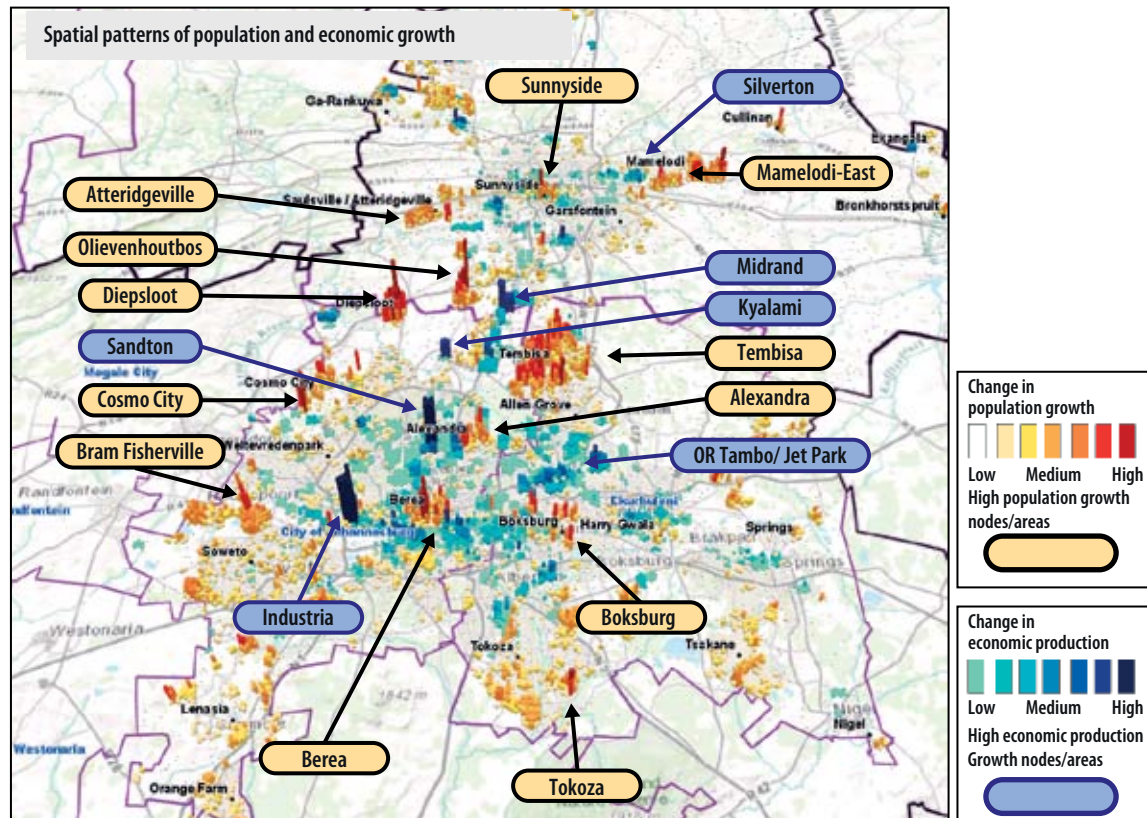**Figure 1.12:** Population and economic growth trends for three Gauteng metros (1996–2011)

Figure 1.12 shows the following occurred between 1996 and 2011.
- Increased densities in the three metropolitan urban cores.
- Significant and unprecedented increased densities, as well as vast new developments, in townships (e.g. Diepsloot, Tembisa, Mamelodi, Alexandra, Atteridgeville). The densification and infill in these areas appear to outpace development happening elsewhere within these cities.
- Medium-density, new developments on the edge of well-established formal suburbs (e.g. developments in Midrand, Centurion, Highveld, Pretoria East, Equestria), and large-scale developments on the urban edge (e.g. Cosmo City, Bram Fischerville).
- Increased densities in the important business and administrative focal points of Germiston, Sandton, Midrand and Pretoria.

The analysis supports research that found the city core zone "still exerts a strong pull" in South Africa's large cities (Cross, 2014: 112).

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8   See Chapter 2 for an in-depth discussion about spatial transformation.

Significant densification through back-yarding

A useful way to explore the form of densification that is taking place is to look for patterns in settlement formation and change over time. Figures 1.13 and 1.14 illustrate the changes along a transect line extending from Lenasia to the north-eastern tip of Tshwane (the red line in the Figure 1.13). Following the transect line, which is illustrated in Figure 1.14, the points of growth between 1996 and 2015 can be clearly seen: Hillbrow, Alexandria, Tembisa. The infill, densification and vast new developments are particularly observable in Tembisa.

Figure 1.13: Transect line from Lenasia to north-eastern Tshwane
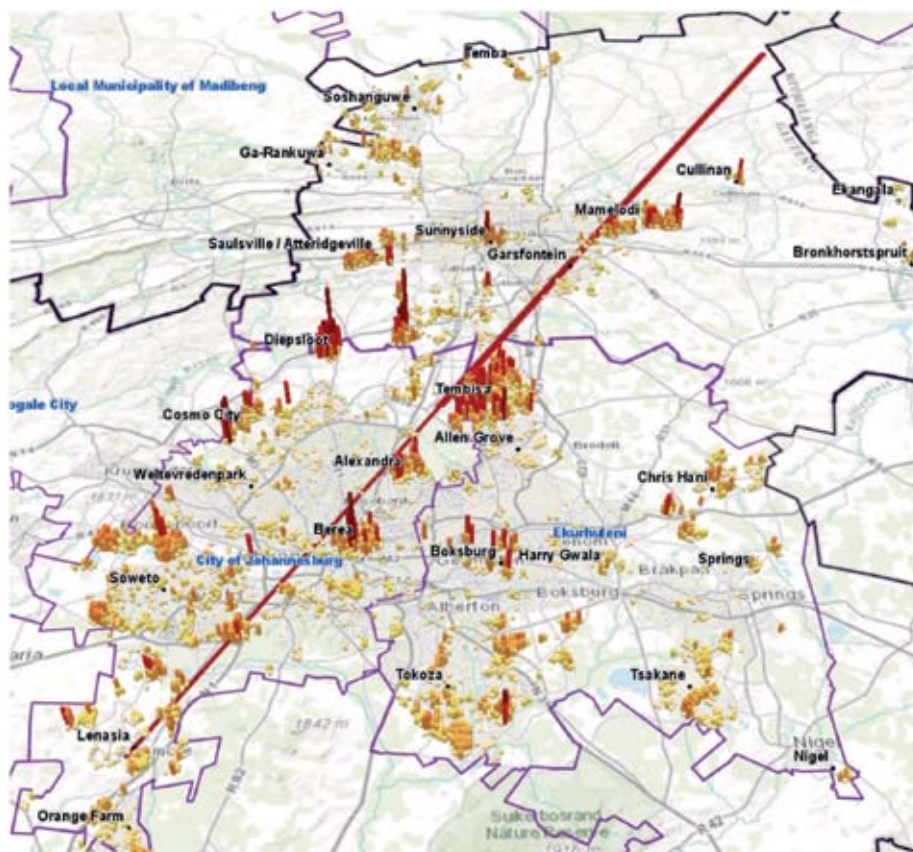
Figure 1.14: Comparison of transect population density values: Lenasia–north-eastern Tshwane
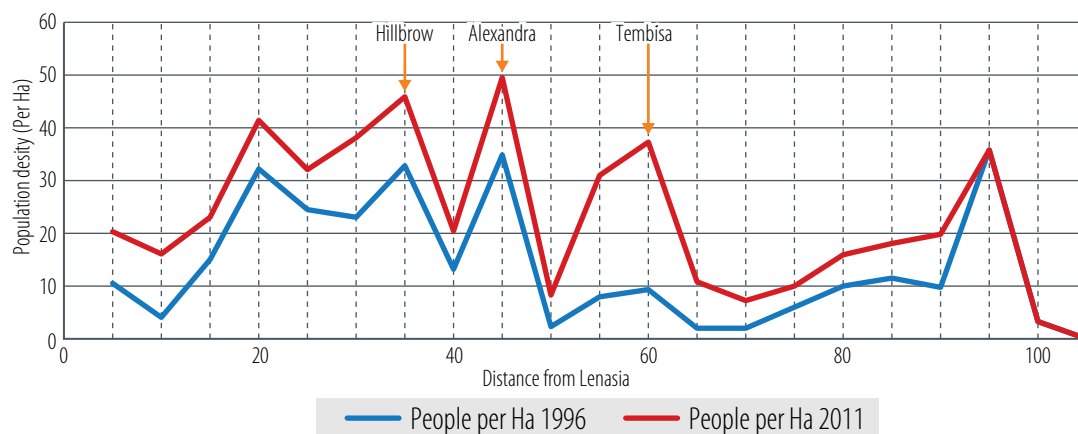
As the nature of this increase cannot be necessarily be deduced from these representations, aerial imagery is used here. Figure 1.15 shows that the densification in Tembisa has been through formalising previously informal settlements, which have then densified through backyard housing. Such backyard infill substantially adds to the number of residential (and other structures) and is an affordable-housing strategy for lower income populations (CSIR, 2012).

Figure 1.15: Aerial imagery comparison of Tembisa area (2002 and 2015)

Tembisa example 1: 2002

Tembisa example 1: 2015

Tembisa (east) example 2: 2002

Tembisa (east) example 2: 2015

**Tembisa north-west example 3: 2002**

Tembisa north-west example 3: 2015

Increased densities and demand have localised effects and implications

Population grows into particular places. This has meant very specific and diverse spatial implications within cities, with some areas experiencing high increases in population and service delivery needs. It has also meant the increase in the footprint of the built-up areas in cities, as illustrated in Figure 1.16.

Figure 1.16: Increased footprints, densities and demand profiles
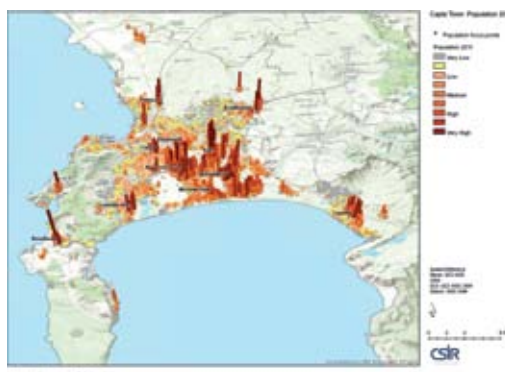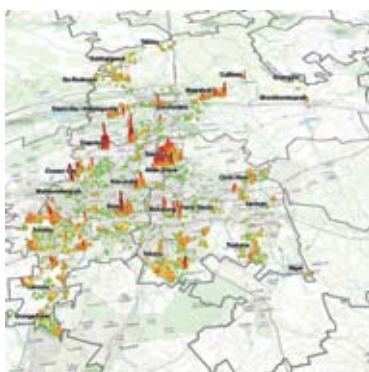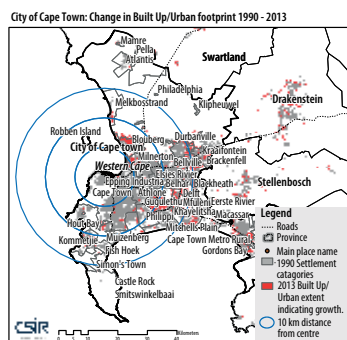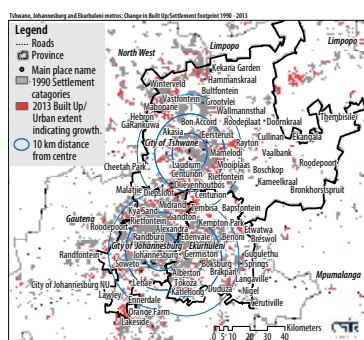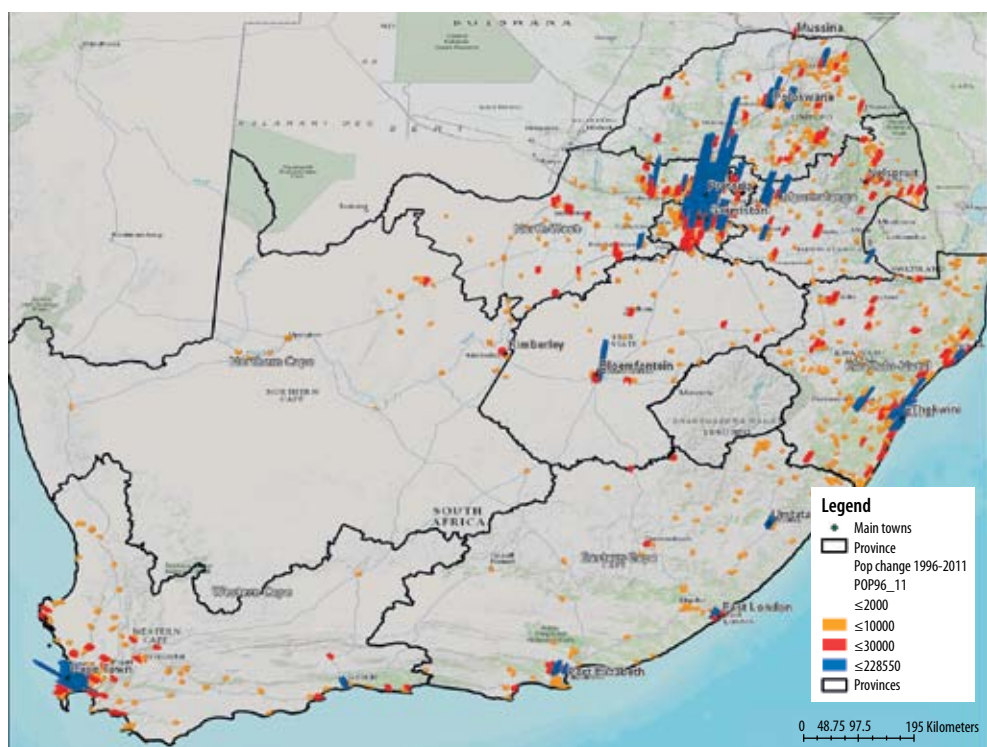
The red areas in the zoomed-in maps show new built-up areas in Gauteng and Cape Town that have both experienced significant increases in footprints. South African cities are already considered to be relatively less dense overall than comparator global cities (Bertaud and Malpezzi, 2014). The SoCR 2011 showed the spatial imbalances, with high densities found in black townships. The indication in this chapter is that much densification in cities appears to be happening through informal backyarding due to affordability reasons.

CITIES AS DRIVERS OF LOCAL AND NATIONAL DEVELOPMENT

The theme – South African cities as effective drivers of local and national development – acknowledges the possible duality between the macro and micro roles of cities. Cities need to be able to respond to global opportunities and build resilience against potential threats, while simultaneously meeting the local needs of their communities. Three core tensions illustrate the context within which South African urban municipalities have to govern (Pegasys, 2015).

Global systems versus developmental mandate

The macro issues include the effects of climate change, increasing global linkages and interdependencies between local and macro economies, which bring the potential of increased risk for local city economies. Long-term planning and policy development can support building resilience and responding to potential risks. In contrast, responding to local needs by planning and implementing the municipal developmental mandate will inevitably demand urgent, or short-term projects within a longer-term planning and policy context. As policy is strongly influenced by politics and political terms are relatively short, finding a balance between these considerations is a challenge for the majority of city governments. Yet the urban resilience and sustainability of cities hinges on the ability of city leadership and managers to find a balance between the long term-impacts of global systems and immediate domestic developmental demands.

Urban resilience versus economic competitiveness

Ensuring urban resilience to global environmental factors and changes in the macro-economic framework is essential to building a more sustainable urban future. An aspect of this resilience is a robust and dynamic local economy, which is directly related to the "competitiveness" of a city. Competitiveness in the modern world is associated with specialised business services and infrastructure, and a socioeconomic environment that encourages innovation and attracts a high level of skilled individuals and investment (OECD, 2016). As cities seek to be competitive against other urban regions, they may run the risk of being too focused on the macro-dynamics and enabling powerful economic actors. In addition, negative aspects of large cities, such as increased poverty and inequality, can pose a risk to overall urban resilience. Finding a balance between competitiveness and inclusive growth is essential to building the resilience of cities.

Global networks versus domestic responsiveness

Leveraging the potential of global networks (e.g. UN Habitat, Cities Alliance, ICLEI,[9] and UCLG[10]), which provide an international platform for urban issues, is partly about city marketing. Sharing urban best practices in these forums is also essential for encouraging investment and support. This can be described as macro-politics, and, while important, should not take precedent over managing local politics and domestic social challenges.

These urban tensions provide the "backdrop" or institutional context, and support for the work of the SACN. They emphasise the need for cities to find a balance between global and domestic concerns to ensure a more resilient and more sustainable urban future. The need to find a balance between "thinking globally, but acting locally" are most pronounced in large cities because of their high population concentrations and connectedness to global financial and economic systems.

Figure 1.17: "Tensions" describing the duality between the emerging global and domestic considerations

Global systems	Development mandate
Urban resilience	Economic competitiveness
Global networks	Domestic responsiveness

Source: Pegasys (2015)

This SoCR begins by acknowledging this balance of tensions, as well as the need to govern for the present and for the future. The assessment and discussion of whether the cities are becoming more inclusive, productive, sustainable and well-governed (SACN's themes) will begin to ascertain whether South African cities are succeeding in achieving a positive trajectory towards being dynamic and developmental.

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9   Founded in 1990 as the International Council for Local Environmental Initiatives, now called Local Governments for Sustainability, the ICLEI is the leading global network of local governments dedicated to sustainability, resilience, and climate action.

10   UCLG stands for United Cities and Local Governments, an organisation that supports international cooperation between cities and their associations, and facilitates programmes, networks and partnerships to build the capacities of local governments (www.uclg.org).

Figure 1.18: SACN's thematic areas for good city governance

PRODUCTIVE CITY — Can the local economy provide the majority of residents with opportunities to make a reasonable living?

INCLUSIVE CITY — Do residents have the opportunities and capacities to share equitably in the social and economic benefits of city life?

CITY DEVELOPMENT STRATEGY — What are the immediate, medium and long term growth and development imperatives of the municipal area?

WELL GOVERNED CITY — Is the political and institutional content stable, open and dynamic enough to accommodate varied objectives and interests?

SUSTAINABLE CITY — How is the city impacting on the limited reserve of non-renewable resources that sustains the settlement and makes it viable?

South African cities were built to serve a smaller, exclusive minority and to be ineffective for the majority. They were not designed with an inclusive or sustainable future in mind. Post-apartheid, these cities have not been static – they have gone through some fairly profound changes (which are still being understood) and have been driven by various forces, certainly not exclusively by government planning.

Cities are made of two key assets: space (their territories) and people (the agglomerating population). Therefore, for South Africa to achieve an inclusive, sustained growth trajectory depends on strengthening the ability of cities to support spatial transformation and dynamic entrepreneurship/livelihoods.

INTRODUCING THE STATE OF SOUTH AFRICAN CITIES 2016

The fourth SoCR comes at a time when cities are being acknowledged globally as the key to growth, development and stability. Rapid urbanisation and critical economic, social and environmental imperatives have necessitated this attention to urban issues. However, as this chapter has illustrated, city governments face complex and sometimes contradictory demands. Within these circumstances, South Africa's teenage (16-year old) municipalities have been somewhat successful, although the SoCR also acknowledges upfront their challenges.

Informed by five years of research and engagement within the local government sector, the chapters aim to summarise the key insights and messages about whether and how cities are driving local and national development.

Chapter 1 introduces the key trends, dynamics and concepts related to the theme, "South African cities as effective drivers of local and national development".

Chapter 2 defines better the imperative for **Spatial Transformation**, by examining the practical role of space and the built environment in urban development.

Chapter 3, **Productive Cities**, assesses and then discusses how cities can deliver effectively on both growth and economic inclusion (supporting livelihoods).

Chapter 4, **Inclusive Cities**, looks at how cities can better enhance local resilience and reduce inequality.

Chapter 5, **Sustainable Cities**, explores how cities can develop in a way that is in balance with natural resource realities and planetary limits.

Chapter 6, **Well-Governed Cities**, assesses whether city governance systems are – or could be – capable, effective and accountable.

Chapter 7, **Finance and Innovation**, asks how sustainable municipal financing can be achieved in a context where there is not enough money to go around.

Chapter Eight, **Enabling Environment**, concludes with a call for action to all urban actors whose commitments will be necessary to ensure innovative, dynamic city economies and livelihoods.

The annexed sections that follow thereafter present:

Brief **individual city reports** that highlight key city progress indicators and flagship programmes of the cities, and the **data Almanac** section, which explains where and how the report data can be found and used.