

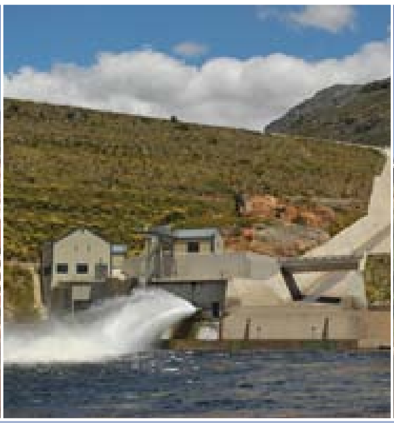


State of Cape Town Report 2010




CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

THIS CITY WORKS FOR YOU

DOCUMENT NAVIGATION

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Acknowledgements

This report is a product of the Strategic Development Information & Geographic Information Systems (SDI & GIS) Department, and is stronger for the efforts of various team members.

Natasha Primo was responsible for research and analysis, report writing and compilation with support from Carol Wright who provided research advice and reviewed reports, and Keith Smith who also provided guidance.

Karen Small, Janet Gie and Nontembeko Poswa assisted by providing numerous data tables and checking data currency and accuracy. Consultant Lucille Gavera completed an initial draft framework for the report as well as gathered some of the initial information during the latter months of 2010.

Other contributors include members of a City of Cape Town reference group who commented on earlier drafts of the document specifically in as far as it related to their areas of expertise, with contributions from Amy Davison, Alison Goldstuck, Jeremy Marillier, Dr Bryan Chute, Othelie Muller, Trevor Dennis Mitchell as well as Dilshaad Gallie. Smaller yet equally important contributions were made by a range of City and other colleagues, which are also acknowledged.

In particular, the City of Cape Town would like to thank Professor Mark Swilling, Programme Coordinator: Sustainable Development in the School of Public Leadership at Stellenbosch University and Academic Director of the Sustainability Institute, for sharing his insight and comments.

Last but not least, the City of Cape Town gratefully acknowledges the authors of the short 'think pieces'. They include Mike Borchers from Sustainable Energy Africa, Dr Nancy Odendaal at the School of Architecture, Planning and Geomatics at the University of Cape Town, Ulrich Jacobs from Statistics South Africa, Stephen Granger from the City of Cape Town, Creative Consulting & Development Works whose work informed the think piece on social cohesion, and Professor Ivan Turok from the Human Sciences Research Council for the piece on the Cape Town economy.

- Any feedback, comments or suggestions with regard to the report are welcomed and may be e-mailed to devinfo@capetown.gov.za

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This publication also includes a number of 'think pieces' from authors not employed by the City of Cape Town. The opinions they express in their writing shall not be interpreted as those of the City of Cape Town.

The City of Cape Town (or 'the City') refers to the City administration, including elected councillors, responsible for the development and local administration of the city.

The city of Cape Town (or 'the city') refers to the geographical area that is administered by the City of Cape Town, and includes its physical elements as well as all the people who are living and active in it.

This document should be referenced as: City of Cape Town (2011), State of Cape Town Report 2010.

Production management – Aletta Kruger and Amina Taylor, Communication, City of Cape Town

Photography – Bruce Sutherland, Communication, City of Cape Town; Sydelle Willow Smith, Cape Town Partnership (pp 63 left-hand image, 64 left-hand image, and 65 left-hand image), and Wesgro (page 64 right-hand image).

Production – The Creative Store

Printing – Tandym Print

Foreword

It is my privilege to present the third edition of the bi-annual *State of Cape Town Report – State of Cape Town 2010*.

The key objective of the *State of Cape Town Report 2010* is to provide a snapshot of the city with up-to-date information and analysis of the most pertinent issues influencing the city and its residents and businesses. It highlights the opportunities and challenges facing the city, and serves as a basis to inform decisions on the choices that the City of Cape Town ("City") needs to make in relation to urban development and management challenges.

This report is premised on the notion that each challenge facing the city poses an opportunity for innovation and the chance to create new targeted solutions. These challenges and opportunities are contextualised within global, national and local dynamics, as is appropriate. The *State of Cape Town Report* also informs the Integrated Development Plan, particularly in sketching the current context.

The last few years have been a challenging time for the world's nations and peoples, following the onset of the global financial crisis in 2008. Increased integration into the global economy and the fall-out of the financial crisis has meant that Cape Town was not able to come through it unscathed. Unfortunately, a number of jobs were lost between 2008 and 2010, and this has increased the challenge for Capetonians.

Cape Town is not alone in this. Like in many other developing countries, Cape Town is contending with rising unemployment, and persistent poverty, together with a high incidence of HIV/Aids and crime.

Increasingly, efforts to address these challenges will require an integrated, aligned and strategic response to address these challenges in the medium to long term.

For the next five years, the City will structure its programmes and interventions around five key principles and objectives that are intended to define Cape Town as a city: that Cape Town is a city of opportunity, is safe, caring, inclusive, and well-run.

For the medium to long term, the City will need to make strategic decisions about the kind of development that is needed to build the city's resilience both now and into the future – resilience of Cape Town's economy, people, and environment. Also key will be the decisions about how we live as residents in the city – and how we use resources – in a way that does not bring undue and unnecessary pressure on the City's resources.

This report shows that the future of the city is the responsibility of all stakeholders in Cape Town, and first and foremost, its residents. Let us move forward towards a Cape Town that is equipped to deal with the challenges growing uncertainties that the future holds.

Capetonians should embrace the old saying that 'necessity is the mother of invention' as we move forwards and innovate local solutions to Cape Town's particular development challenges.

Achmat Ebrahim
City Manager


Malmesbury
Atlantis
Paarl
Robben Island
Durbanville
Table Bay
Blouberg
Sea Point
Bellville
Epping
Cape Town
Stellenbosch
Wynberg
Constantia
Khayelitsha
Hout Bay
Mitchells Plain
Muizenberg
Somerset West
False Bay
Kommetjie
Gordon's Bay
Simon's Bay
Simon's Town
KEY
City of Cape boundary
Protected areas
Water areas
Developed areas
Major roads
Airport
N
0
5
15
10
20 km
Cape Point

Acronymns and abbreviations

AIDS	-	Acquired Immune Deficiency Syndrome
AQMP	–	Air Quality Management Plan
ART	–	Anti-retroviral treatment
CAPA	–	Climate Adaptation Plan of Action
CCT	–	City of Cape Town
CDS	–	City Development Strategy
CIPRO	–	Companies and Intellectual Property Registration Office
CO_2	–	Carbon dioxide
DIRCO	–	Department of International Relations and Cooperation
DSL	–	Digital subscriber line
DST	–	Department of Science and Technology
DTI	–	Department of Trade and Industry's
ECAP	–	Energy and Climate Action Plan
EDS	–	Economic Development Strategy
EPWP	–	Expanded Public Works Programme
FET	–	Further education and training
FIFA	–	Fédération Internationale de Football Association (International Federation of Association Football)
GDP	–	Gross domestic product
GEM	–	Global Entrepreneurship Monitor
GHS	–	General Household Survey
GVA	–	Gross Value Add
Ha	–	Hectares (10 000 square metres, or 2,47 Imperial or United States acres)
HIV	–	Human Immunodeficiency Virus
IDASA	–	Institute for Democracy in Africa
IDP	–	Integrated Development Plan
IMEP	–	Integrated Metropolitan Environmental Policy
IMR	–	Infant mortality rate
IRT	–	Integrated rapid transit
ITP	–	Integrated Transport Plan
LAB	–	Local Action for Biodiversity
NO_2	–	Nitrogen dioxide
OECD	–	Organisation for Economic Cooperation and Development
PM_{10}	–	Particulate matter of 10 micrometres or less suspended in the air)
R&D	–	Research and development
RDP	–	Reconstruction and Development Programme
SACN	–	South African Cities Network
SANS	–	South African National Standard
SDF	–	Spatial Development Framework
SDI & GIS	–	Strategic Development Information and Geographic Information Systems
SETA	–	Sector education training authorities
SMME	–	Small, medium and micro enterprises
TB	–	Tuberculosis
UNAIDS	–	Joint United Nations Programme on HIV/AIDS
UNFCC	–	United Nations Framework Convention on Climate Change
UNFPA	–	United Nations Population Fund
WEF	–	World Economic Forum
WHO	–	World Health Organisation
YES	–	Youth Environmental School

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Executive summary

This report, the third produced by the City, seeks to provide information on and to analyse the current challenges facing Cape Town, while also highlighting issues that the organisation needs to keep track of and attend to as it moves forward.

Cities of the developing world will absorb roughly 95% of the total population growth expected worldwide in the next two decades, and over 1,5 billion residents – many of whom are poor – will be added to developing-country cities by 2030. Urbanisation will be one of this century's biggest drivers of global economic growth, and developing-country cities – especially middleweight cities[1] – will increasingly become the locus of economic growth. More and more, it is cities – rather than states – that are seen as central to communities and households' ability to build a better future. Cities are thus key to bringing about social upliftment and social cohesion, involving millions of people. As far as global business is concerned, country-level strategies are no longer sufficient for many companies looking for growth, and cities increasingly compete for advantage over other cities in order to attract investment. With respect to global challenges like global warming and climate change, cities are central to adaptation and mitigation strategies, and to meeting global environmental quality goals (such as reducing carbon emissions).

Purpose of the report

This *State of Cape Town Report 2010* is the third in a series produced by the City of Cape Town, following on reports in 2006 and 2008. It seeks to provide information on and analysis of the current challenges facing Cape Town, while also highlighting issues that we need to keep track of and attend to as we move forward, into the future. The purpose of the report is to sketch a current picture of Cape Town; a snapshot of its profile, the issues, key challenges and opportunities

1. These are defined as emerging-region cities with current populations of between 150 000 and ten million inhabitants. These middleweight cities are then divided further into three categories based on population size. Large middleweights have populations of five million to ten million, midsized middleweights have two million to five million, and small middleweights 150 000 to two million. (McKinsey Global Institute. 2011. *Urban World: Mapping the Economic Power of Cities.* [Online] Available: http://www.mckinsey.com/mgi/publications/urban_world/index.asp. p 44.)

This report covers four themes:
- People
- The natural environment
- The economy, and
- 'Living in the city'

Twelve key challenges that Cape Town faces are highlighted. These include:
- Planning for population growth
- Poverty and poor health
- Social marginalisation and criminality
- High levels of unemployment
- Developing a more compact social form
- Education that does not match the market's needs
- Investing in the knowledge economy
- Undue pressure on natural and cultural resources
- Potential water and energy shortages
- Aging bulk infrastructure

facing the city and its stakeholders. Each challenge inherently also poses an exciting opportunity for innovation, and the chance to create solutions to Cape Town's specific challenges.

The report attempts to provide a basis for informed engagement and reflection by highlighting the most pertinent urban challenges facing Cape Town. It is aimed at policy makers and decision makers, senior managers and other stakeholders, as well as researchers and ordinary residents who are concerned about the diverse set of development challenges and opportunities facing the city. It is not a City policy document, but rather an informant to policy, strategy and, importantly, implementation and improved service delivery.

Local government leaders need detailed intelligence to improve their ability to manage their cities successfully. Business, in turn, needs to be aware of the challenges and opportunities, and of where they can play their important part in promoting economic growth. Residents also need to understand the diversity of challenges their cities face, and which issues to prioritise in order to influence their leaders and inform their own responses and development. This report aims to meet all these information needs.

Scope and limitations

This 2010 issue of the *State of Cape Town Report* covers four themes: people, the natural environment, the economy, and a chapter called "Living in the city", which looks at the experience of living in Cape Town from the perspective of infrastructure accessibility and quality. Each of the thematic chapters contains a review of the current context (or 'the facts'), some of the key trends and emerging challenges facing the city, as well as an "Into the future" section that picks up on some of the issues that all stakeholders will need to attend to in the short to medium term.

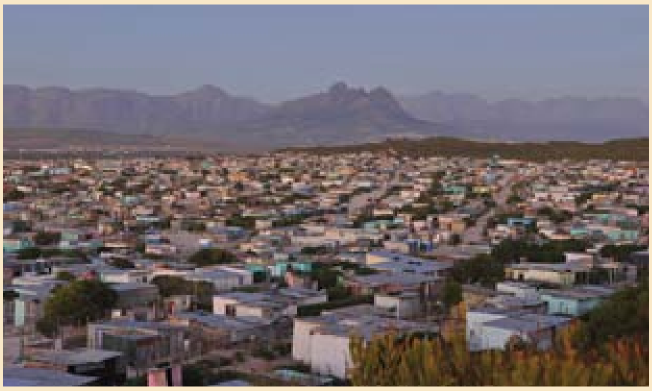
This report does not purport to be a comprehensive overview of all the possible challenges that will shape the future Cape Town, but rather selects those most pertinent to increasing economic growth and development, diminishing social marginalisation, advancing social inclusion and cohesion, and building the city's resilience. The report underscores the view that the inevitable growth of Cape Town is both a challenge and an opportunity for social, institutional, economic, as well as materials and technology innovation. The report uses the most current available data. An attempt is made to provide data for 2010; however, where 2010 data were not available, the most recent were used.

While the report focuses on Cape Town, the authors have not lost sight of the fact that the city functions within a broader context. Therefore, some inter-city comparisons are made where possible. It is hoped that future reports will continue this trend of considering Cape Town within its broader regional context.

Main findings

Cape Town's key challenges highlighted in this report include the following:

1. Cape Town's population will continue to grow, and the City, together with other spheres of government and stakeholders, needs to plan ahead timeously to meet the needs as they emerge – especially access to low-cost housing and basic municipal services.
2. While Cape Town's health profile is improving, wide-scale poverty persists, with poor communities living on the periphery of the city, their spatial location serving as but one reflection of their social marginalisation.
3. The city's social fabric is undermined by social marginalisation and high levels of social criminality, especially drug and murder-related crimes. This requires concerted interventions to build social equity, foster a sense of community, and encourage residents (especially youth) to engage in (re)building the city.
4. Large proportions of Cape Town's population are unskilled and unemployed, while the traditional high-labour-absorbing industries in Cape Town (such as the textile industry) are in decline. The City will need to support an environment conducive to informal sector growth and small, medium and micro-sized enterprise (SMME) development, with a view to providing some entry-level jobs and contributing to economic growth.
5. Combating social marginalisation and building trust and community between population groups in Cape Town will require a more compact city form, with ample green and open public space to facilitate social interaction and play.
6. Young people emerge from the current education



system with low to medium-level skills that do not meet the needs of the job market. This calls for programmes to help build the quality of education and increase the uptake and completion of tertiary and advanced tertiary training.

7. In order to capitalise on the potential knowledge economy, Cape Town needs to invest in the soft (human capacity) and hard (fibre optic networks) infrastructure that will yield the optimal conditions for a knowledge-based (and high-value-add services) economy to flourish.
8. The rate of urban development is placing undue pressure on Cape Town's natural and cultural resources. This calls for action by the City to support ways to conserve and enrich the existing natural and cultural landscape, from the neighbourhood to the city level.
9. As a consequence of climate change, Cape Town is facing possible water scarcity with the potential knock-on effect of food insecurity. The City needs to continue with water demand management and should explore and secure alternative water sources.
10. The City's bulk infrastructure needs urgent maintenance to reduce resource loss (such as water leakage) and to enhance environmental conservation efforts (such as stormwater runoff and sewage systems).
11. The emerging possibility of a global oil scarcity requires that Cape Town maps all the alternative energy solutions potentially available and/or developable in/by the City, including good-quality public, hybrid (electric) and non-motorised transport alternatives as well as alternative local energy generation and storage solutions.
12. Capetonians will have to be a part of the solution to Cape Town's challenges. This requires that the City facilitate interventions that encourage residents' participation in efforts to reduce their carbon footprint at household level – including recycling household waste and using public or non-motorised transport more often – and being engaged more broadly in efforts to build the city's resilience at the environmental, economic and social (for example, by embracing diversity) level.

In terms of the future, the most pressing urban development challenges and opportunities facing Cape Town in the next five to 15 years, on which the City of Cape Town and others will need to concentrate, include the following:

- Responding positively to the rapid growth of the city, with timeous planning and the integrated delivery of low-cost housing as well as municipal and social services (especially for poor households) and infrastructure for business and economic growth, while conserving the city's rich cultural and natural landscape, from neighbourhood to city-wide level
- Concerted efforts in youth and social development and education support programming in order to develop and integrate young people between the ages of 15 and 25, of whom some 50% are currently unemployed, into the economy, and to reduce the pull of young people into social crime
- Supporting the rapid growth of the services sector by facilitating delivery of high-level skills and the requisite fibre network infrastructure, alongside efforts to create opportunities (especially in SMMEs and the informal sector) to absorb the high number of unskilled and semi-skilled unemployed workers
- Facilitating wider access to high-speed, broadband connectivity that can stimulate the development of key skills required of future knowledge workers in Cape Town, as well as build the basis of a potentially new manufacturing force that taps into the knowledge and experience of others across the globe in order to tackle projects locally
- Strengthening the integration of, access to and use of public transport in Cape Town at scale, with increasing use of non-motorised transport modes
- Capitalising on plans to create a more compact and resource-efficient city by also creating social spaces that foster more interaction and better understanding among social groups, to build trust and advance social cohesion
- Preparing for the effects of climate change (like water scarcity) and resource depletion (such as fossil fuel-based oils) through innovations in managing existing resources more optimally (including managing Cape Town residents' resource demands) and tapping into alternative energy sources (like solar, wind, biogas) and emerging know-how about storage technologies.

> "Cities, rather than states, will increasingly be seen as central to communities and households' ability to build a better future."

Chapter summaries

KEY FACTS

- Cape Town's population is around 3,7 million
- This will grow to 4,25 million in the next 20 years
- There are around 1 060 964 household units
- Approximately 18% of the total population is living with HIV/Aids
- TB incidence has been fairly stable at under 900 per 100 000
- Cape Town's infant mortality rate declined between 2003 and 2009
- About 65% of black African and 44% of coloured youth in the 15–24 age group are unemployed
- About 5% of households listed social grants as their main source of income
- Of the South African metros, Cape Town is the least unequal, with a 2010 Gini coefficient of 0,58

This section contains a summary overview of each of the chapters, including an overview of the facts and trends as well as a glimpse of some of the potential avenues that the City and other stakeholders could or may – rather than should or must – consider for further exploration or implementation. The information presented here has been informed by emerging challenges and developments in Cape Town, in the country as a whole as well as across the globe.

The people

The facts

Cape Town's population in 2010 is estimated at 3,7 million, with an estimated 1 060 964 household units, and is expected to grow to 4,25 million by 2030. A rapidly growing metropolitan area, Cape Town is a socially and spatially fragmented city, with real geographic limitations on where development can take place and vulnerable communities largely located on the margins of the city, remote from work opportunities. The city is confronted with a range of challenges, including high levels of unemployment, high drug use and crime incidence, uneven access to social and municipal services, and limited uptake of (advanced) higher education, despite its proximity to four higher-education institutions in the area.

HIV/Aids and tuberculosis (TB) are the key health challenges facing Cape Town's residents. While Cape Town's HIV/Aids prevalence rate has remained largely unchanged between 2004 and 2009 – with an average of 18% of the total population living with this disease – the number of facilities dispensing antiretroviral treatment (ART) grew over the last five years. Likewise, the number of people registered for treatment increased by more than 300% between December 2006 and December 2009, from 17 646 to 52 141.

While Cape Town has the lowest prevalence of HIV/Aids and sexually transmitted infections (STIs) of all South African cities, it remains a challenge to reduce the spread and impact of these diseases. In line with global trends, Cape Town shows higher HIV prevalence rates in informal settlements than in formal areas, with women in informal areas particularly at risk. TB incidence per 100 000 of the city's population has been fairly stable between 2003 and 2009, at under 900, although the number of TB cases have increased from just below 25 000 to just under 29 000 in the same period.

Cape Town's infant mortality rate (IMR) declined considerably between 2003 and 2009, and indicates good overall health in the city as well as improved living and social conditions. At 20,76 in 2009, Cape Town significantly outperforms the national IMR. The 2009 rate shows a decline from the rate of 21,4 in 2006, although it is slightly higher than the rate of 19,79 in 2008. The IMR is significantly higher in the poorer areas of the city such as Khayelitsha, and remains a major concern.

In 2005, 84% of Cape Town's adult population had achieved a Grade 4 level of education or higher, which classified them as being literate (compared to 82% of the total South African adult population). This implies that 16% of the city's population was illiterate in 2005. This relatively high rate of adult illiteracy is a major contributor to the still unacceptably high levels of unemployment in Cape Town. For 2009, Cape Town had an unemployment rate of 24% among working-aged people between the ages of 25 and 65.

Among the youth (i.e. 15–24-year-olds), who made up 47% of the city's population in 2010, about 49% were unemployed. More importantly, youth unemployment is more prevalent in certain population groups in Cape Town: About 65% of black African and 44% of coloured youth in the 15–24 age group are unemployed, compared to less than 10% of their Asian and 5% of their white peers. Even better-educated young people remain poor, which suggests that the labour market is not successful in absorbing new entrants into the employment market and in alleviating poverty. It further suggests that the education system is not delivering the (quality of) skills needed in the local labour market.

In 2009, about 5% of the estimated total of 1 019 395 households in Cape Town listed social grants as their main source of income. For 3% of households, this was their sole source of income. As in the rest of the country, levels of poverty are highest amongst the black African population in Cape Town: Some 40% of black African households earned R2 880 a month or less compared to almost 30% of Asian (though the number of Indian/Asian households in Cape Town is small), 23,5% of coloured and 12% of white households. In 2009, the proportion of black African households in

Cape Town registered with the City of Cape Town as indigent – i.e. earning R2 880 a month or less – was almost twice the number of indigent coloured households, and three times that of indigent white and Indian/Asian households.

In addition to high poverty levels, South African cities are among the most unequal in the world. Of the South African metros, Cape Town is the least unequal: The 2010 Gini coefficient (a measure of income inequality among a city's inhabitants, with highest inequality being closest to 1) for Cape Town was still unacceptably high at 0,58, but marginally better than that of other major South African metros, including Johannesburg and eThekwini (Durban), with Gini coefficients of 0,62 and higher. (Ekurhuleni, for example, had a Gini coefficient of 0,63.) Rising inequality in the cities (and beyond) is fuelled by increasing unemployment levels as well as increasing disparities in the income earnings of people in the South African labour market.

Cape Town's crime levels in 2009/10 are above the national averages – with drug crimes and murder occurring most frequently – and constitute one of the city's strategic challenges. Homicides most often occur in the city's poorer districts and suburbs, demonstrating a link between crime and poverty.

The current crime level in Cape Town has a deleterious effect on the quality of life of those living in close proximity to it, and those who feel targeted by it. Furthermore, it has consequences for the local economy and skills base, as it may inhibit both international and national investment as well as the ability to attract and retain skilled human capital.

Into the future

Rapid population growth will require more efficient public transport systems for people to travel between home and work, and to reduce congestion and negative environmental impacts. Efficient mass transport facilities – public buses and trains – will become critical infrastructure to allow larger numbers of people seamlessly to traverse the city. An integrated system will also encourage the use of non-motorised transport, while private car users must be encouraged to switch to public transport and be incentivised to switch to hybrid cars that are powered by plugging them into the electricity grid. These initiatives will have positive energy and quality-of-life spin-offs by reducing pollution and improving air quality in Cape Town.

Addressing youth unemployment and youth development across all communities and areas in Cape Town is a key component of the strategy to prevent disaffected and unemployed youth from being pulled into an exploding drug-crime environment, and could potentially enhance social development and inclusion. This is likely to have positive medium-term to longer-term spin-offs, such as a reduction in youth uptake of drug and gangster lifestyles as well as a skills and energy injection into the economy.

Meeting the related goals of youth development and addressing youth unemployment and poverty will require stronger and proactive alignment between the quality of education and skills generated throughout the education system on the one hand, and the employment demands and capacity of the local economy on the other. The City has to explore how, through social programming, it can support efforts to produce better-quality graduates throughout the education system and through social entrepreneurial activities.

Cape Town will continue to host multiple family forms and residents with different needs and services requirements, all of whom need to be catered for. However, the certain prospect of a persistent and more rapid influx of people into Cape Town, most of whom are expected to be relatively poor, will escalate the demand for low-cost shelter and related services, and will put added pressure on already limited developable land and scarce resources in Cape Town, in particular energy, water and affordable food.

Substantial investments in – and an integrated approach to – low-cost housing, education and health (with a particular focus on improved child and maternal health) will help build a more inclusive society. The City will need to explore how best to coordinate its interventions so that the various development objectives reinforce and amplify one another to create continuous opportunities and (common) spaces for engagement, build understanding and advance a sense of social inclusion and shared community.

In order to compete in the global economy, Cape Town will have to invest substantially in broadening access to high-speed connectivity, especially at public access points such as libraries. The future working

“Cape Town will continue to host multiple family forms and residents with different needs and services requirements, all of whom need to be catered for. However, the certain prospect of a persistent and more rapid influx of people into Cape Town, most of whom are expected to be relatively poor, will escalate the demand for low-cost shelter and related services, and will put added pressure on already limited developable land and scarce resources in Cape Town, in particular energy, water and affordable food.”

KEY FACTS

- Cape Town is the South African metro with the second-largest economy
- Cape Town's contribution to the national economy is 10,9%
- The city's economy is shifting towards the services industries
- There will be a decline in employment opportunities for semi-skilled and unskilled workers
- Cape Town lost close to 90 000 jobs from 2008 to 2010
- One in two economically active Capetonians between the age of 15 and 24 is unemployed
- The skills produced by the secondary and tertiary education system diverge from what the Cape Town economy requires

population of Cape Town will need to be highly skilled in accessing, filtering and processing large amounts of information, and must also be familiar with, and have a flair for, experimenting with new technologies. Over the next decades, our current and future youth will need to compete globally with their highly educated and technologically literate peers.

The economy

The facts

Cape Town is the South African metro with the second-largest economy, and makes the second-largest contribution to the country's economic output. In 2010, the city contributed 11,12% of national gross value added (GVA), compared to Johannesburg's contribution of 16,57%, and eThekwini's contribution of 10,74%. Cape Town's contribution to the national economy has grown from 10,5% in 2001 to 10,9% in 2009.

Cape Town's economy has a number of key positives on which to build. It is known to have solid economic infrastructure and a good service base with which to attract international and national industry. The international airport and harbour are high-standard strategic economic infrastructure, supporting import and export industries. The quality and beauty of the natural environment raise Cape Town's profile as a liveable city with the potential to attract high-skilled and creative labour as well as international and national companies.

While Cape Town's economy is relatively strong and diverse, it is also experiencing shifts and trends that have significant implications for maintaining economic growth into the future as well as the ability to absorb residents with diverse skills.

Major trends in the Cape Town economy

The city's economy is progressively shifting towards the services industries, with the largest areas of growth being finance, business services, trade, catering, accommodation, tourism, transport and communication. The shift to a service economy, especially one focused on financial services, forecasts a proportionate decline in employment opportunities for semi-skilled and unskilled workers – even if the absolute number of semi-skilled and unskilled jobs increase – as the economy will increasingly require skilled and highly skilled employees.

Unless concerted attempts are made to create opportunities for work or skills enhancement at scale, targeting semi-skilled and unskilled workers, the largest proportion of the working-age population in Cape Town will become unemployable and, therefore, economically and socially marginalised.

Cape Town's population grew by 22,26% between 2001 and 2009, which implies an impending increase in the demand for jobs amidst a decline in labour-absorptive sectors such as manufacturing. However, Cape Town lost close to 90 000 jobs from 2008 to 2010, and the number of unemployed in the city increased by about 28% compared to the approximately 6% increase at national level, excluding discouraged work seekers and (other) not economically active. Cape Town has a young population that can drive the demand for consumer goods and services, provided they have the ability to earn an income and have the requisite disposable income.

Approximately one in every two economically active Capetonians between the age of 15 and 24 is unemployed. In Cape Town, the youth unemployment rate is pushed higher as the skills produced by both the secondary and tertiary education system diverge from what the Cape Town economy requires.

The increased availability of bandwidth will benefit Cape Town's growing knowledge-based economy and will help attract foreign investment, which could mean major economic and social benefits for the city. Internet uptake in South Africa remains constrained by price, and has not been high enough to push South Africa up international broadband ranking indices. South Africa's penetration of 2,8 per 100 persons significantly lags behind that of other middle-income countries to which it is often compared, such as Mexico (7,2 per 100 people), Poland (10,5 per 100 people) and Turkey (7,8 per 100 people). In the World Economic Forum's Global Competitiveness 2010–2011 Report, South Africa is ranked 54th, which is nine places down from its 45th position in the 2009–2010 rankings.[2]

The informal economy in Cape Town entails activities – mainly wholesale and retail trade, home-based catering and accommodation, and working in private households – that are not linked into the city's main economic activities. Activities in these areas are particularly vulnerable in periods of economic downturn. One consequence is that informal-sector activity is low

compared to other middle-income metro-regions around the world, where as much as 30% of these regions' labour force may be employed in the informal sector. Informal-sector activity in Cape Town is also lower than in other South African metropolitan cities.

Up to 75% of businesses in Cape Town are classified as SMMEs, and account for 50% of the city's economic output. As much as 93% of the total number of small and micro-sized firms are low-tech operations in mature, traditional industries, with very little interaction with large firms. As such, they are effectively cut off from access to research and development networks, and the potential for process and product innovations. A 2009 global entrepreneurship survey found that SMMEs in South Africa have low growth expectations compared to those in China, Peru and Chile. While Cape Town has the highest rate of early-stage entrepreneurship in South Africa, only about 15% of start-ups expect to grow and employ at least ten people within five years.

Into the future

These trends present both challenges and opportunities for economic and social innovation in the city and, specifically, for creating opportunities for employment and social integration. The opportunities include the following:

- SMMEs predominate in the Cape Town economy. These enterprises are ideally located in close proximity to four tertiary education institutions, but have so far not drawn on these knowledge resources and potential linkages to international research and development, whether to design unique and better-quality products or to engineer more efficient and/or cheaper production processes. As cutting-edge knowledge is often held in large companies in high-income countries, linking SMMEs to these firms or relevant research institutes is an important area for action to support economic development.
- The economy must create and build opportunities for people to find work. While the Cape Town economy predominantly consists of SMMEs, research shows that few aspire to grow and create jobs. SMMEs must be encouraged to grow and employ more people, and calls for the City of Cape Town to engage the business community and social entrepreneurs on how to support SMMEs' efforts to create a cross-section of job opportunities at scale, from entry-level and unskilled to highly skilled, through the private sector and/or the Expanded Public Works Programme (EPWP).
- Growth in the services sector – particularly the financial and business services – has surpassed growth in other sectors, and the sector has proven itself a key pillar of Cape Town's economic growth strategy going forward. The services sector should continue to receive support and be consulted on how government can assist to create a business environment – focused on the sector's social needs (such as business advice services and/or training in business skills), physical infrastructure requirements (such as communications technology) as well as key policy interventions[3] – that will bolster the sector's growth potential and value add to the local economy.
- Broadband penetration[4] is tied positively to gross domestic product (GDP) and employment growth.[5] For the finance and business services sector in Cape Town to continue its growth trajectory, it will need ever-greater capacity for processing and transmitting

KEY FACTS

- Up to 75% of businesses in Cape Town are classified as SMMEs
- These contribute up to 50% of the city's economic output
- Growth in the services sector – particularly the financial and business services – has surpassed growth in other sectors
- SMMEs in South Africa have low growth expectations compared to those in China, Peru and Chile
- 93% of the small and micro-sized firms are low-tech operations in mature, traditional industries

2. South Africa moved up by four places to attain 50th position in the 2011–2012 report, remaining the highest-ranked country in sub-Saharan Africa, and the second-placed among the Brazil, Russia, India, China, South Africa (BRICS) economies. (See World Economic Forum. 2011. *South Africa ranked 50 for global competitiveness – WEF.* [Online] Available: http://www.bkcob.co.za/index.php/news/556-world-economic-forum-global-competitiveness-report-2011-2012.)
3. These might include adjusting barriers to formal market entry, investing in business skills and experience, facilitating market and finance access, and using the opportunity of service delivery extension to build experience.
4. Broadband penetration is generally measured at household level.
5. The ITU Broadband Commission recently released its second report, showing a positive correlation between access to internet and GDP growth: 10% increase in broadband penetration (at the household level) in China contributes to a 2,5% growth in GDP; 10% increase in broadband penetration in low-income and middle-income countries contributes to a 1,4% increase in economic growth; access to broadband in Brazil added approximately 1,4% to employment, whereas broadband will create two million jobs by 2015 in Europe. (See ITU Broadband Commission. 2011. *Broadband: A Platform for Progress.* [Online] Available: http://www.broadbandcommission.org/report2/overview.pdf.)

information. To this end, skilled people, greater computer processing capacities as well as access to high-speed broadband fibre-optic cable are critical.

With respect to the broader public, greater access to broadband internet could lead to the development of a local 'maker's market' by linking SMMEs, DIYers and hobbyists to relevant knowledge and experience across the globe, all of which can add to economic growth and job creation. In turn, learners' access to broadband will supplement knowledge gained through formal curricula, and will build skills – such as information literacy – that are crucial in a knowledge-based economy.

In the medium to long term, support for learners' access to broadband internet can help reduce the gap between the skills graduates have to offer and those employers require and, in so doing, may reduce the high incidence of youth unemployment.

- While Cape Town's economy has grown steadily, inequality has stubbornly persisted, and the benefit of this economic growth has not filtered through to poorer communities. Income inequality in Cape Town continues to display a racial dimension, where the average annual income of a white household is roughly seven times that of a black African household, and nearly three times that of a coloured household.

  While City support for facilitating the conditions to grow the local economy is vital, it is not enough in itself. It requires that the City explores and engages strategic partners and stakeholders on how best to coordinate and deliver social programmes with a view to reducing inequality and amplifying programmes and activities that break down old patterns of racial inequality and discrimination.

"Cape Town is vulnerable both to the effects of climate change – such as rising sea levels and changes in rainfall patterns – and to resource limitations – such as water scarcity and the depletion of oil."

Natural wealth[6]

The facts

Globally, communities are spatially concentrated in cities – and cities are increasingly the sites of some of the worst ecological transgressions. Equally, however, cities also present the opportunities for innovation to address the social-economic-ecological challenges we currently face.

Cape Town is vulnerable both to the effects of climate change – such as rising sea levels and changes in rainfall patterns – and to resource limitations – such as water scarcity and the depletion of oil reserves. One of the social challenges associated with climate change, global warming and resource depletion is the potential rise in fuel and food prices, which threaten social and economic stability and advancement.

With their high population densities and concentration of human activities, cities are significant generators of carbon emissions and major contributors to climate change. To prepare itself for climate change and post-oil environmental challenges, the City of Cape Town has developed a climate change strategy, and is exploring alternative forms of energy generation – particularly wind and solar energy – to reduce dependence on fossil-fuel-based oil.

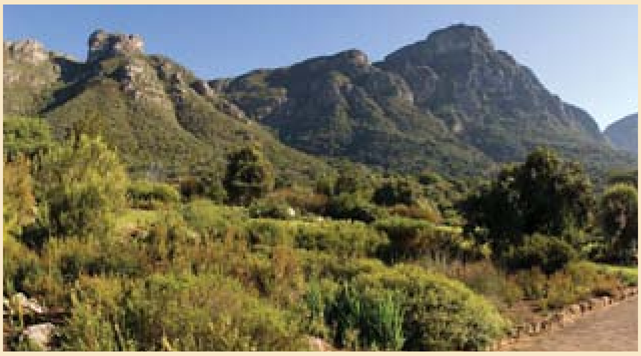
The City of Cape Town's Energy and Climate Action Plan (ECAP) for 2010–2012 includes about 130 projects that are either being planned or already under way across the city. These projects target energy use, and are intended to reduce the city's carbon footprint in line with national and international obligations, increase the uptake of renewable energy such as solar and wind, create new employment opportunities (including in the energy sector), and boost the overall resilience and robustness of the economy, the city and its (vulnerable) communities[7].

Cape Town's dispersed spatial form creates an environment of increasing cars on the road, rising traffic congestion and higher energy consumption. A more compact city form in Cape Town will also reduce the financial costs of providing municipal services to the still-growing population, and will increase the city's financial sustainability and resilience.

The environmental challenges that the City of Cape Town faces, and its responses to these challenges, can be summarised as the following three imperatives:

- Climate change adaptation and/or mitigation

6. The issues in this section are treated comprehensively in the City's State of the Environment Report series, and are therefore treated in much less detail in this report.
7. City of Cape Town. 2010. *What is the City of Cape Town doing about energy security and climate change?* Presentation by Sarah Ward, Department of Environmental Management. September. [Online] Available: http://locs4africa.iclei.org/files/2011/03/Sarah-Ward_City-of-Cape-Town.pdf.



- Conservation of unique natural landscapes or ecosystem goods and services
- Mitigating resource depletion.

Climate change adaptation and/or mitigation

The *State of the Environment Report 2009* shows that although the national air quality standard is being met, PM_{10} levels[8] – i.e. small particles suspended in the air – in Cape Town far exceed the recommended guideline by the WHO[9]. Air quality remains a matter of concern for the City, especially in poorer areas.

For example, Khayelitsha has an above-average TB incidence, which could be significantly exacerbated by air pollution. The Khayelitsha Air Pollution Strategy was initiated to address this problem, and interventions that succeed in Khayelitsha could be extended and applied to other densely populated informal and semi-formal settlements in the city.

PM_{10} pollution across the city as well as vehicle-emissions-related nitrogen dioxide (NO_2) pollution in the city centre are of particular concern. Global emission agreements require the City to pay more attention to greenhouse gas emissions, such as carbon dioxide (CO_2).[10] Cape Town's CO_2 footprint (measured in tons per capita) has tended to increase in line with energy use, and was most recently, in 2007, calculated at approximately 6,7 tons per capita.[11]

South Africa is one of the top 20 carbon polluters in the world, and it is therefore imperative that action is taken to reduce Cape Town's contribution to these emissions. The City of Cape Town aims to source at least 10% of the metro's energy from renewable sources by 2020, thereby reducing its dependence on coal-based energy. One way to achieve this is to reduce CO_2 and other harmful emissions from private cars.

The City is currently implementing an integrated rapid transit (IRT) system that is designed to promote the use of public transport in the city, and to integrate all modal options.[12]

Conservation of unique natural landscapes or ecosystem goods and services

Cape Town encompasses no fewer than six endemic national vegetation types, which means that these six types can only be conserved within the boundaries of Cape Town, as they occur nowhere else in the world. The City of Cape Town has taken a decisive step towards ensuring that its biodiversity is conserved in the future, and these goals are incorporated into the City's Spatial Development Framework (SDF).

The City's Environmental Agenda 2014 target is to see 60% of the Biodiversity Network formally conserved. Currently, approximately 40% of the Biodiversity Network is under formal conservation management. Critical biodiversity areas are under constant threat from development, and, if developed, could result in a failure to meet South African national biodiversity targets.[13] Cases in which the City and/or the Western Cape Provincial Government ('Province') are required to mediate between conflicting property development and environmental interests are increasing.[14]

Water quality is another important conservation issue, especially maintaining the quality of coastal water and inland water bodies.[15] Overall, the greater majority of coastal water points on the False Bay and Atlantic coast comply with coastal water quality guidelines. With respect to inland water, however, most of the city's rivers and water bodies are recreationally unsafe due to rising *E.coli* levels, largely as a consequence of polluted stormwater runoff (from urban, peri-urban and agricultural areas) and

> "Cape Town encompasses no fewer than six endemic national vegetation types, which means that these six types can only be conserved within the boundaries of Cape Town, as they occur nowhere else in the world."

8. Although not mandatory, the World Health Organisation (WHO) guideline for PM_{10} is a target to strive towards.
9. It should be noted that many developed countries are unable to meet this guideline.
10. Carbon dioxide (CO_2) is a greenhouse gas that harms the environment, as it artificially traps the earth's heat in the atmosphere, and has been identified as the leading cause of climate change.
11. Calculating the CO_2 footprint is a complicated process and does therefore not take place every year.
12. Among the modes to be integrated are Metrorail services, road-based services on main routes, conventional bus services, minibus taxis, feeder bus services, improved pedestrian and bicycle access, metered taxis and park-and-ride facilities.
13. Some vegetation types have already suffered such great losses that it is no longer possible to meet national targets, even if 100% of the remnant area is conserved.
14. The City of Cape Town Spatial Development Framework Technical Report intends to help reduce the impact of development and assist property developers to make sound investment decisions. The SDF has been approved by the Cape Town City Council, and, at the time of writing, was with Province for ratification.

breakdowns and spillages in the wastewater system.

Natural biota collapse has occurred in certain heavily affected systems, such as Zeekoevlei and the Noordhoek wetlands. However, while the quality of these water bodies is still poor, some improvements are taking place.

Mitigating resource depletion

Increased recycling by Capetonians and improvements in solid waste disposal could potentially decrease the demand for landfill. The amount of waste disposed at landfills declined dramatically in 2008 and 2009. Among others, voluntary recycling may account for a portion of this reduction. However, a very small percentage of Cape Town residents have taken to recycling their waste, and there is enormous scope for improving recycling practices among Cape Town households, thereby further reducing the demand for landfill space.

Water use per capita has decreased significantly since 1996 and is currently (in 2009/10) at its second-lowest level, at 223,4 ℓ per capita per day,[16] or roughly 6,75 kℓ per month. According to the per-capita figures for 1995/96 to 2009/10, usage has remained more or less at the same level following the 2004 water restrictions, which indicates that the people of Cape Town have taken the water conservation message to heart.

> "Given that Cape Town may run out of easily accessible water by 2016, if current rainfall patterns persist, the City will need to find alternative water sources, and may have to monitor the use of non-potable water and its impact on underground water levels more carefully."

Given that Cape Town may run out of easily accessible water by 2016 (if the current rainfall patterns persist), the City will need to find alternative water sources, and may have to monitor the use of non-potable water (through the use of boreholes) and its impact on underground water levels more carefully.

The City of Cape Town has set an organisational target to reduce overall water usage to 290 billion ℓ per year, and to reduce per-capita usage to 180 litres ℓ per day.[17]

Into the future

- Globally, renewable and nuclear energy will constitute up to 36% of total power generation by 2020.[18] The City of Cape Town has set a target of 10% use of renewable and clean-energy sources by 2020. The development of renewable-energy sources – solar and wind – will facilitate more local control over energy generation as well as enhanced energy security. The City would need to tap into and/or support investment in technologies for more effective storage and distribution of renewable energy.

  Cape Town is well placed to draw on the local expertise in the four tertiary institutions in its immediate vicinity as well as local knowledge of the emerging green economy. Innovations in solid waste management technologies and practices can reduce the need for ever-increasing landfills, and have the potential positive outcome of generating energy from waste.

  The City will also need to consider how to encourage larger numbers of people actively to recycle their household waste, and how to collect

15. Drinking-water quality has been monitored through an incentive-based monitoring programme called Blue Drop certification since September 2008. The Blue Drop system is a regulatory tool used by the national department responsible for water to monitor the status of drinking-water quality management in South Africa. In 2010, the national Blue Drop rating was a good 71%. At municipal level, 13% of municipalities had an excellent performance rating (i.e. above 90%). Together with two other municipalities, the City of Cape Town scored the highest rating of 98%, and ended among the ten water services authorities or municipalities with the highest Blue Drop ratings in 2010. The introduction of the Blue Drop certification may have led to an improvement in drinking-water quality. However, it is evident that water quality still needs some improvement, as only 13% of municipalities nationally received an 'excellent' rating.
16. The WHO recommends a per-capita minimum of 50 ℓ of water per day for basic cooking, drinking and hygiene requirements. However, it is important to note that this is a basic level of service. The City provides 6 000 ℓ of free water to all households. At an average household size of four people, this works out at 50 ℓ per person per day. The Urban Environmental Accords recommend that cities with a consumption of more than 100 ℓ per capita per day implement measures to reduce consumption by 10%. (City of Cape Town. 2009. State of the Environment Report 2009. p 53. [Online] Available: http://www.capetown.gov.za/en/EnvironmentalResourceManagement/publications/Documents/State_of_Environment_Report_2009_2010-08.pdf.)
17. City of Cape Town. 2009. *State of the Environment Report 2009.* p 55.
18. Frost & Sullivan, 2010. *World's Top Global Mega Trends to 2020 and Implications to Business, Society and Cultures.* For more information on this report see http://www.frost.com/prod/servlet/report-toc.pag?repid=M65B-01-00-00-00

recyclable waste as part of its regular municipal services.

- South Africa is a semi-arid country and is already beginning to display the signs of water stress predicted by climate change researchers. The possibility of an impending water crisis in Cape Town by 2016 to 2020 necessitates innovation in finding new water sources and managing existing water sources more carefully. The City has begun investigating technologies and opportunities for harvesting new water sources and desalination, as well as upgrading water reticulation systems to minimise leaks and water loss.

  While the City is already implementing these initiatives, the seriousness of the situation calls for further improvements in the sustainable use of existing water (including better wastewater treatment solutions, and their potential use to generate biogas energy from wastewater) as well as continued water demand management initiatives. Water scarcity awareness initiatives targeting consumers and encouraging careful use of this precious resource continue to be important.

  These resource concerns also suggest that the City will need to look carefully at the type of economic activities it would like to encourage. Future economic activity should ideally be low-carbon, compact, smart-technology-driven, low in waste generation, and low in water consumption.[19]

Food security and local food supplies will become an increasingly critical issue as climate change affects rain patterns and the rising cost of fuel drives up food prices. Low-income and impoverished households will be most affected by food price hikes.

All cities – and Cape Town is no exception – will increasingly have to source food locally. It is in the interest of all the residents of Cape Town – and the resilience of the city – to make better, more productive use of land (or roof space in a more compact city) by planting and cultivating more food plants.

The City's urban agriculture policies will need to take far greater prominence, and should insist on the preservation of green spaces on the outskirts of the cities for productive use.

Living in the city
Challenges of urban growth and form

The facts

With cities being the present locus of production and employment opportunities, innovative growth management strategies are required to ensure that development is sustainable.

South Africa's population is rapidly urbanising. With an estimated population of 3,7 million in 2010, Cape Town is significantly smaller than most world cities. However, it faces similar development challenges, and will need to focus on physical and economic infrastructure as well as human capital development – especially in social, governance and technical capabilities – to achieve equitable and inclusive growth.

In 2010, there were 1 060 964 households in Cape Town. Of these, 72,5% lived in formal housing, 17,1% in informal housing, 10,4% were backyarders, 0,4% occupied traditional structures, and 0,6% other types of housing. The 2010 figures more accurately reflect the increase in informal structures in formal townships – i.e. the backyarder phenomenon – as one of the outcomes of the growing demand for low-cost housing.

Currently, the City builds fewer than 10 000 units per year, while – as at March 2011 – there were approximately 340 000 households on the waiting list for low-income public housing. The City has undertaken to upgrade informal settlements – especially in the south-east of the city (including Khayelitsha and Mitchells Plain) – and use an integrated settlements approach. Nationally, there has also been slow progress in providing affordable housing options for those in the 'gap housing' market – households excluded from fully subsidised 'Reconstruction and Development Programme (RDP) housing', though also not catered for by the mortgage-financed housing market.

For 2009, approximately 19,5% of Cape Town households had a monthly income of between R3 500 and R7 000, and found themselves in the gap housing market. From the perspective of creating more resilient cities into the future, housing design, production and delivery mechanisms may need to be more participative, flexible and responsive to household needs and capacities (including budgets).

“Food security and local food supplies will become an increasingly critical issue as climate change affects rain patterns and the rising cost of fuel drives up food prices. Low-income and impoverished households will be most affected by food price hikes.”

19. See chapter 4 of this report.

> Cape Town's spatial structure remains fragmented, despite dramatic political changes as well as growth and development over the past 20 years, but it is making some progress with respect to developing a more compact city form, with mixed-use, more integrated and accompanying social development having been made a priority.

The poorest households live on the outskirts of the city: They are furthest away from potential employment opportunities, and are least able to afford the costs of urban sprawl. Most often, poorer residents have to commute longer distances and times by means of public transport modes that are currently not optimally integrated.

Almost 43% of black African commuters use public transport (bus and train), and about 50% of black African commuters have to travel between 30 and 60 minutes between home and work. This is in stark contrast with the 21,69% of coloured commuters and 2,24% of white commuters who use public transport.

Private cars and freight are responsible for more than 50% of the city's energy use, and 65% of the city's brown haze (the brownish layer of smog caused by pollutant chemicals combined with airborne particles). Air pollution levels exceed health guidelines more frequently than in the past, and a significant reduction in the use of private cars in the city is required to generate a positive spin-off for air quality.

Much awareness raising and incentivising still have to take place before Cape Town commuters will come close to the targeted 53% use of public transport by 2015, as outlined in the City's Integrated Transport Plan.

For the last ten years at least, the City closed some of the service delivery gaps in informal settlements by connecting them to municipal services as well as phasing in the provision of on-site services to backyarders. The demand for new housing and access to municipal services has put some pressure on bulk infrastructure.

In the context of resource constraints, meeting this magnitude of needs has unfortunately meant that maintenance of the existing (bulk) infrastructure was inadequate and has now become an urgent priority. Therefore, the budget needs to be balanced between expenditure to support new service roll-outs (in the short and longer term) and the maintenance of existing infrastructure.

The city grew by 40% in developed land area over the period 1985–2005. Compared to the development rate of 701 ha per year over the period 1977–1988, the city has more recently been developing at an average rate of 1,232 ha per year. Cape Town's geography – its long coastline and mountains – the airport and hazardous and noise-generating activities limit the developable land available, and makes it essential that developable land is used effectively and efficiently.

While the average population density for the city is low, at 39 persons per hectare, it varies between 100 and 150 in the informal settlement areas of Khayelitsha and between four and 12 in the former white suburbs. Each creates a severe challenge for service delivery: Low-density suburbs geared to motor-vehicle-based commuting are costly to service with public transport and other infrastructure, while the pressure on land for housing in townships complicates the provision of bulk infrastructure, community facilities, public and safe open spaces, and formal economic activity.

If not tackled proactively, the historical legacy may also create the conditions for replicating the spatial effects of the apartheid past.

One of the city's challenges is to transform its spatial and social form into a more integrated and compact one, with mixed-use zoning areas that bring residents closer to work, and offer opportunities to break down the social barriers between different social and racial groups in the city.

In practice, this has been difficult to achieve, as the cost of centrally located land and the need for large-scale low-income housing developments have merged to push affordable housing developments to the periphery of the city. Increasingly, brownfield sites – former industrial sites along existing development corridors and closer to the city centre – may have to be considered for low-income and gap housing, and be rehabilitated accordingly.

Spatially fragmented cities need to be knitted together more effectively through strategic investments in transport, housing and economic development. Failure to address the fragmentation and low-density patterns of the city may deepen existing inequalities and social marginalisation in Cape Town.

Into the future

- The City will have to quicken the pace of integrated housing delivery to meet the growing backlog and the number of new households migrating to Cape Town. This is both a challenge and an opportunity for social innovation to make housing more affordable (using sustainable and more participative delivery methods) and for technological innovations using new building technologies that integrate waste

recycling and renewable materials to boost energy efficiency and recycling at the household level. Apart from reducing the actual building costs, the residential units incorporating these innovations will in the long term be more affordable to run, and will reduce monthly service charges.

- Cape Town's spatial structure remains fragmented, despite dramatic political changes as well as growth and development over the past 20 years. Despite post-apartheid policies, new state-subsidised housing and market-driven development continue to reinforce existing spatial patterns, and perpetuate the peripheral location of low-cost housing.

  Cape Town is making some progress with respect to developing a more compact city form, with mixed-use, more integrated and accompanying social development having been made a priority. The City of Cape Town has approved its SDF, in which urban growth management, spatial integration and social integration constitute some of the key building blocks.

  A high-quality integrated transport system used by a cross-section of Cape Town residents – in which public transport plays a key role – may help integrate parts of the city that are on the social and spatial margins.

Strategies and plans

The City of Cape Town has initiated a number of strategic and integrated planning, strategy and framework development processes to address the urban challenges outlined above. These include the following five key strategies – all of them currently work in progress and at different stages of development:

- The development of an *urbanisation strategy*, with a framework that outlines an approach to integrated settlements (including a pro-poor and coordinating function) to respond more coherently to the myriad of challenges, including poverty, inequality, unemployment, inadequate housing, overcrowding in existing informal settlements, and lack of access to essential services and resources[20]
- An *economic development strategy* that outlines the options for economic development drivers and strategies over the next five to ten years
- *A spatial development framework* that sets out proposals for developing a more integrated, compact city form, and that will guide the city's infrastructure development over the next 15 years or so
- *A social development strategy* to guide the City from 2012 to 2022 as it seeks to meet communities' development needs
- A longer-term – 30-year – *city development strategy* process that, together with different stakeholders, will include a vision for Cape Town in 2040, and the strategic levers and interventions to achieve it.

These are supplemented by a range of plans that seek to take forward some of the key components outlined in the overarching strategies. These include the following:

- The City's five-year *Integrated Development Plan* (IDP) for 2012–2017, which will also support the City's focus on creating conditions conducive to economic and social development, and facilitating universal access to municipal services
- The *Energy and Climate Change Action Plan* to prepare the city and its inhabitants for the effects of climate change, and to try and influence the collective behaviour of Cape Town residents to help mitigate the potential effects and risks. Among others, the City of Cape Town-owned buildings are being retrofitted with automatic meter-reading electricity consumption devices in order to monitor and improve energy use in these buildings. Publicly owned low-income houses are being retrofitted with solar geysers and ceilings to improve energy efficiency and use in the long term.
- The *Integrated Transport Plan* (ITP) is a statutory requirement and part of the IDP, and provides an overview of the transport context in Cape Town, identifies transport needs and initiates select transport projects in line with such needs. The 2006/11 ITP outlines plans to upgrade the public transport network in the city, and is also linked into the Energy and Climate Change Action Plan targets to reduce carbon emissions in the city.

  The implementation of the IRT system forms a big part of the ITP. In March 2011, the City of Cape Town was awarded accreditation by the National

"A resilient Cape Town cannot be attained without the collaboration of Cape Town's residents in particular, and engagement has been shown to flourish in a relationship of trust."

20. City of Cape Town. 2011. *Draft Urbanisation Strategy Framework*.

“The input and engagement of residents, business and other stakeholders in addressing these challenges and advancing a more ‘fit for the future’ Cape Town, are crucial.”

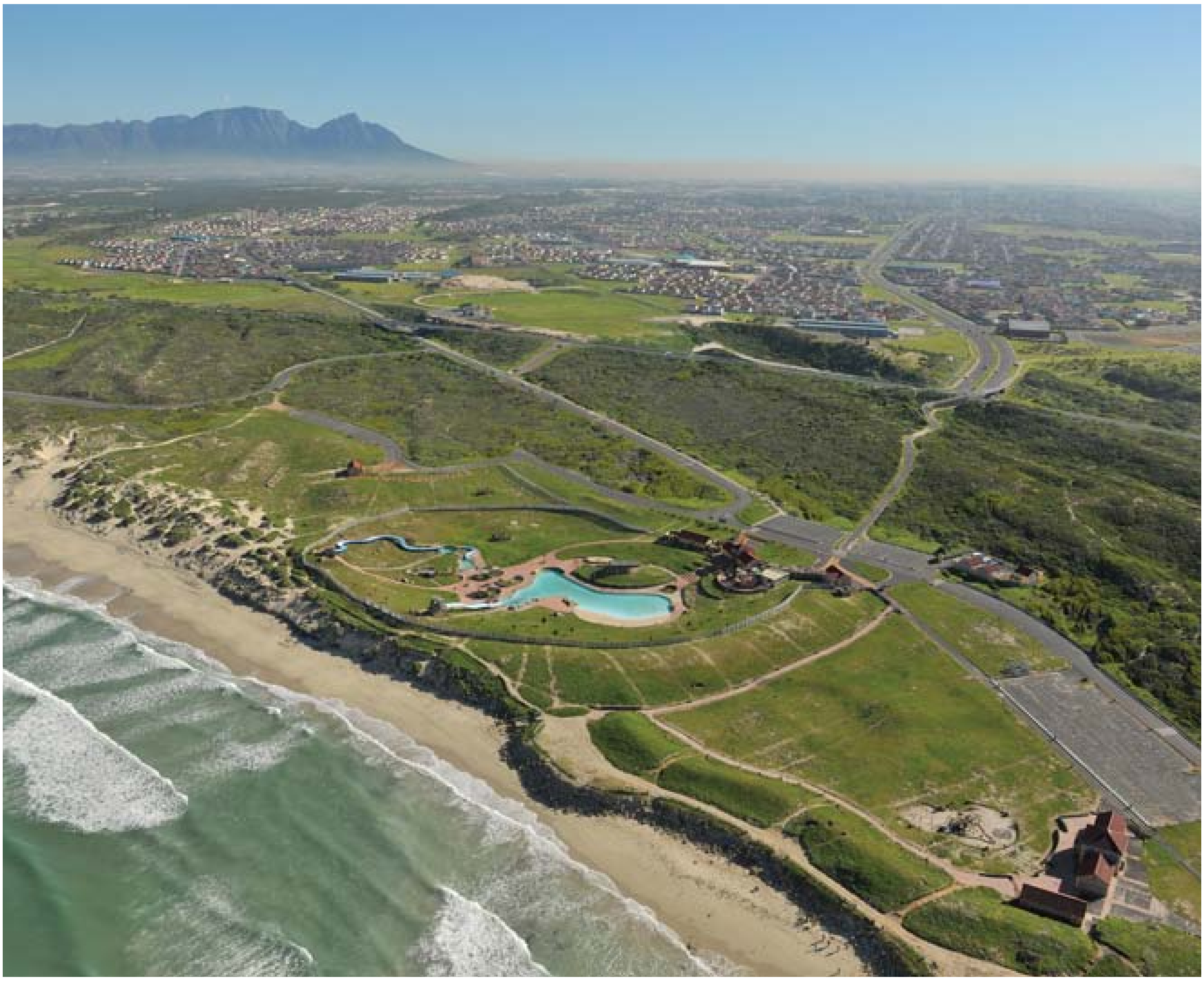
Department of Transport to operate and maintain the Metrorail system (with funding from National Government). This will contribute to better planning and alignment of the different modes of transport in the city. The current ITP is being reviewed, and an ITP for 2012–2017 is being developed in line with the City’s IDP and other strategies.

Conclusion

One of the aims of this *State of Cape Town Report 2010* is to collate up-to-date information and analyses that will support and assist in deepening the understanding of the challenges facing Cape Town and its people.

Combined, the identified 12 main challenges outline the need for a development path for Cape Town that promotes economic growth, reduces poverty and social marginalisation, and builds residents’ engagement in making the city more resilient as far as its economy, natural and cultural landscapes, households and communities and ecosystems are concerned. In other words, the city as an integrated whole.

In light of the above, it is clear that the input and engagement of residents, business and other stakeholders in addressing these challenges and advancing a more ‘fit for the future’ Cape Town, are crucial. A resilient Cape Town cannot be attained without the collaboration of Cape Town’s residents in particular, and engagement has been shown to flourish in a relationship of trust. The resilience of the city as an integrated whole comes down to, among others, the City’s ability to build that trust through inclusive social processes that recognise, validate and draw on the experiences and viewpoints of the cross-section of Cape Town’s diverse communities.



Introduction

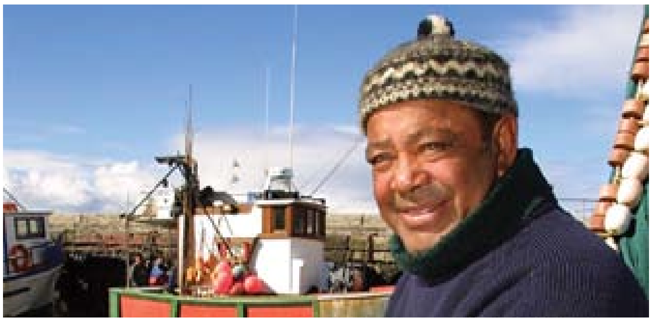
The purpose of the report is to sketch a picture of Cape Town – a snapshot of the vital issues, key challenges and concomitant opportunities facing the city and its stakeholders. The report is premised on the idea that each challenge facing the city poses an opportunity for innovation and the chance to create new targeted solutions.

This *State of Cape Town Report 2010* is the third report in this series, following on reports in 2006 and 2008. The City of Cape Town publishes the report biennially. It seeks to provide information on and analysis of the current challenges facing Cape Town, while also highlighting issues that we need to keep track of and attend to as we move forward.

The purpose of the report is to sketch a picture of Cape Town – a snapshot of the vital issues, key challenges and concomitant opportunities facing the city and its stakeholders. The report is premised on the idea that each challenge facing the city poses an opportunity for innovation and the chance to create new targeted solutions. These challenges and opportunities are contextualised within global, national and local dynamics, as is appropriate.

The *State of Cape Town Report 2010* covers four themes: people, the economy, the natural environment, and a final chapter on "Living in the city" from the perspective of infrastructure accessibility and quality.

Each of the thematic chapters contains a review of the current context, including comparisons with other South African metros, some of the key trends and emerging challenges facing the city , as well as an "Into the future" section that picks up on some of the issues that all stakeholders will need to attend to in the short to medium term.



> Strategic partnerships between different spheres of government, civil society, business – both local and global – as well as the non-profit sector are critical for meeting the various needs.

This report does not purport to be a comprehensive overview of all the possible challenges that will shape the future Cape Town, but rather selects those most pertinent to increasing economic development, diminishing social marginalisation, advancing social inclusion and cohesion, and building the city's resilience. The report underscores the view that the inevitable growth of Cape Town is both a challenge and an opportunity for social, institutional, economic as well as materials/technology innovation.

In addition, this report does not seek to duplicate existing reports and as such does not report on future detailed plans or past achievements which – correctly so – are covered in more detail in the City of Cape Town's Integrated Development Plan (IDP) and the annual report respectively.

Rather, the *State of Cape Town Report 2010* forms part of an 'ecosystem' of reports, where the annual report recounts progress made against the objectives set out in the annual IDP which, in turn, constitutes the City of Cape Town's five-year principal strategic planning instrument. (The year 2011/12 is the final year of the current five-year IDP, and the five-year IDP for 2012–2017 is being prepared.)

Forming the backdrop to the discussion of some of Cape Town's challenges and opportunities, is an overview of some of the key global trends that will shape Cape Town's development dynamics, some in ways that are not yet clear.

These include the effects of climate change and the emerging resource constraints in Cape Town, energy insecurity and the concomitant impact of the city's economy as the prices of fossil-based fuels increase and the projected rapid urbanisation at an heretofore unprecedented scale, which will affect developing countries in emerging economies in particular (a development that is bound to touch South African cities, at least in as so far as they are seen as beacons of socio-economic development).

The report attempts to provide a basis for informed engagement and reflection by highlighting the most pertinent urban challenges facing Cape Town in 2010 and into the future, including possible actions. It is aimed at policy makers and decision makers, senior managers and other stakeholders, as well as researchers and ordinary residents concerned about the diverse set of developmental challenges and opportunities facing the city.

This report is not a City policy document, but rather an informant to policy, strategy and, importantly, implementation and improved service delivery. In places, the report addresses issues that are admittedly not part of the City's mandate, such as the education system challenges and youth unemployment, but that are fundamental to the challenges the City faces. In raising these issues, the intention is not to add to the list of things the City should do. Rather, it is to encourage reflection (and hopefully action) on how we should go beyond seeing the City's mandate as service delivery only and also explore how best to deliver those services.

Does the way the City engages with its mandate take account of how it can help address the social, educational and sustainability (community as well as environmental) challenges? For example, how can the City support local social programmes that tie in with national and provincial efforts to address the education system challenges? Raising these questions calls for a broader interpretation of the City's mandate; a reorientation from merely delivering services to helping deliver a more robust and more inclusive City, built on more robust and inclusive communities. Thus, how the City delivers on its mandate becomes as important as what constitutes its mandate.

Inevitably, the question of funding arises. In the context of growing social challenges and needs, how can metros and municipalities garner more – if not sufficient – resources to respond to the range of needs of both local residents and businesses? While large capital expenditure grants to municipalities increased in importance between 2006 and 2009, the bulk of South African cities' revenue is still generated from local residents and businesses. Own revenues are indeed important, as the City is directly responsible for them.[21]

However, how can the City increase its financial resilience, and insulate itself against the worst effects of a declining rates base as more people and businesses default on payments, all of this in the context of growing unemployment and slow recovery from a

21. South African Cities Network. 2011. *Towards Resilient Cities: A reflection on the first decade of a democratic and transformed government in South Africa 2001-2011.* [Online] Available: http://www.sacities.net/what/strategy/reporting/projects/607-towards-resilient-cities. p 146.

global economic downturn? Given the importance of 'own revenues', and the increasing debt burden that defaulting residents and businesses will bring, it is critical that the City seeks to facilitate economic growth in ways that draw on all its potential economic resources, including the currently unemployed residents – men and women – of Cape Town.

Strategic partnerships between different spheres of government, civil society, business – both local and global – as well as the non-profit sector are critical for meeting the various needs. The City may need to tap into the tens of thousands of unemployed residents and mobilise their 'sweat equity' in responding to the city's social, economic, infrastructural and environmental challenges. Over and above mobilising additional resources, there is the question of how to maximise gains from existing resources.

How can the City make it easier for potential partners to work together? How can it maximise the use of existing information and knowledge so that the correct decisions are made at the right – or most optimal – time? And what systems are required to monitor and evaluate the outcomes of these strategic partnerships so that processes can be continually adjusted to better deliver on their development objectives?

This report does not address the resourcing question beyond echoing a call for more and more effective strategic partnerships. Currently, experience of such partnerships is limited and uneven, and the challenge is to upscale and replicate the successes and learn from the difficulties.

"Strategic partnerships between different spheres of government, civil society, business – both local and global – as well as the non-profit sector are critical for meeting the various needs."

Contextualising the *State of Cape Town Report 2010*

The 21st century will not be dominated by America or China, Brazil or India, but by the city. In an age that appears increasingly unmanageable, cities rather than states are becoming the islands of governance on which the future world order will be built. This new world is not – and will not be – one global village, so much as a network of different ones.[25]

More than 50% of the world's population now lives in urban areas. This significant tipping point was achieved in 2010. The global urban population is growing by 65 million annually, equivalent to an annual growth of seven new Chicagos (which had an estimated 2010 population of 9,2 million).[22,23] Urbanisation is projected to continue well into the next century and the United Nations predicts that if current urbanisation trends continue, it is likely that the urban share of the global population could reach 60% or about five billion of the world's 8,1 billion people by 2030. By 2050, over 70% of the world's people will be urban dwellers. By then, only 14% of people in rich countries and 33% of those in poor countries will live outside cities.[24]

Cities of the developing world will absorb roughly 95% of the total population growth expected

22. United Nations, Department of Economic and Social Affairs, Population Division: *World Urbanization Prospects, the 2009 Revision: Highlights.* New York, 2010, p 44.Available at esa.un.org/unpd/wup/doc_highlights.htm
23. McKinsey Global Institute. 2011. *Op. cit.*
24. The world's first mega-city, comprised of Hong Kong, Shenzhen and Guangzhou, is home to about 120 million people. *State of World Cities 2010.*
25. Khanna, Parag 2010. "Beyond City Limits. The age of nations is over. The new urban age has begun." *Foreign Policy*, September/October 2010. Online available at http://www.foreignpolicy.com/articles/2010/08/16/beyond_city_limits?page=full


worldwide in the next two decades – a result of rural-to-urban migration, the transformation of rural settlements into urban places, and natural population increases.[26] In all, over 1,5 billion residents will be added to developing-country cities by 2030, many of whom will be poor.[27,28]

Of the current global urban population, about 84% live in small and intermediate-sized cities. The rest live in large or so-called 'megacities' – cities with more than ten million residents – that are themselves morphing into mega-regions that may stretch for kilometres and even cross national borders. Mega-regions have formed in Japan and Brazil and are developing in India and West Africa among others.[29]

Economies of scale make concentrated urban centres more productive. This productivity improvement from urbanisation has already delivered substantial economic growth and helped radically reduce poverty in countries such as China. The expansion of cities has the potential for further growth and poverty reduction across many emerging markets, and developing countries more broadly. Urbanisation will be one of this century's biggest drivers of global economic growth.

Two city concepts regularly appear in literature on this topic: The notions of a 'global city' and a 'megacity'. Global cities are cities that have influence beyond their boundaries.[30,31] In contrast, megacities are populous cities in developing country contexts – like Lagos and Sao Paulo – which, despite their many inhabitants, still have little influence outside their national borders.

While some of the global cities are very large, such as Tokyo or Shanghai, these are distinguished from cities that are simply huge as there are some very large cities that are not necessarily global cities.[32] The development of megacities and mega-regions and urbanisation in general is increasingly regarded as positive as these entities – more so than countries – are now driving wealth creation.[33]

However, the potential of middleweight cities[34] is said to overshadow that of current megacities, and middleweight cities in emerging markets are reportedly poised to deliver nearly 40% of global growth by 2025 – more than the entire developed world and emerging market megacities combined.[35]

Country-level strategies are no longer sufficient for

> "The expansion of cities has the potential for further growth and poverty reduction across many emerging markets, and developing countries more broadly. Urbanisation will be one of this century's biggest drivers of global economic growth."

26. However, there is a significant association between population movement from rural to urban areas and declines in average family size.
27. UNFPA 2007, *State of the World Population: Unleashing the Potential of Urban Growth*, http://www.unfpa.org/swp/2007/english/introduction.html
28. See http://www.unesco.org/education/tlsf/TLSF/theme_c/mod13/uncom13t01s009.htm
29. Vidal, John, 2010. UN report: World's biggest cities merging into 'mega-regions.' Posted in *The Guardian* on Monday 22 March 2010 17.50 GMT. Available at http://www.guardian.co.uk/world/2010/mar/22/un-cities-mega-regions
30. Quite often, in countries around the world, it is the most global city, especially New York, where new national and international norms are made. According to Sassen, a global city makes new norms... [a]nd two requirements for that happening are complexity and diversity.
31. The 2010 Global Cities Index – a project of Foreign Policy, management consulting firm A.T. Kearney, and The Chicago Council on Global Affairs – is developed based on an assessment of cities' influence beyond its borders. Four African cities make it onto the list of 65 global cities, even if at the bottom end of the list: Cairo (43), Johannesburg (52), Nairobi (56) and Lagos (59). The index aims to measure how much sway a city has over what happens beyond its own borders – its influence on and integration with global markets, culture, and innovation.
32. Larson, C. 2010. "Swoons Over Miami: Interview with Saskia Sassen." Posted in *Foreign Policy*, on August 27, 2010. Available at http://www.foreignpolicy.com/articles/2010/08/27/miami_swoon?page=full
33. Vidal, John. 2010. "UN report: World's biggest cities merging into 'mega-regions,'" http://www.guardian.co.uk, Monday 22 March 2010 17.50 GMT. The world's largest 40 mega-regions cover only a tiny fraction of the habitable surface of the planet and are home to fewer than 18% of the world's population, but account for 66% of all economic activity and about 85% of technological and scientific innovation. The top 25 cities in the world account for more than half of the world's wealth while the five largest cities in India and China now account for 50% of those countries' wealth.
34. These are defined as emerging region cities with current populations of between 150 000 and ten million inhabitants. These middleweight cities are then divided further into three categories based on population size. Large middleweights have populations of five million to ten million, midsize middleweights two million to five million, and small middleweights 150 000 to two million. See the McKinsey Global Institute 2011, p 44.
35 McKinsey Global Institute 2011, *op cit*.

many companies looking for growth, and cities are now competing (alongside states) for advantage over other cities and to increase global influence. Some argue that cities – rather than states – are the true test for whether communities and households can build a better future. Through climate change mitigation strategies, for example, cities are where communities are most actively experimenting with efforts to save the planet from harm inflicted by human beings, and to prepare cities to deal with the impact of climate change. It has been estimated that if India pursues urbanisation in an eco-efficient manner, it would make the country a healthier place and add an estimated 1-1,5 percentage points to its gross domestic product (GDP) growth rate. Competition on this basis could then generate a "cycle of virtuous competition".[36]

The duality of cities: cities as the locus of problems and solutions

A major global challenge is the fact that most of these large cities or agglomerations are – and will in the future be – situated in the developing world. With urban poverty and inequality characteristic of many cities in the developing world, rapid urban growth is becoming virtually synonymous with the formation of informal settlements.

While the current and predicted growth in cities in developing countries is leading to cities with informal settlements – and will continue to do so – analysts and commentators view the fact that more people are now living in urban areas as a positive development as cities are important engines of growth that could create certain benefits:

> "much migration to urban areas has had a positive impact both on the economy and on the migrants themselves. Many are comparatively poor, especially on arrival, yet migrants generally express a preference for the city over the rural life they left behind".[37]

Also, in spite of some of the pejorative views of informal settlements, these settlements often depart from the negative stereotype: 'The millions of urban squatters pouring into megacities each year are not simply a new global migrant underclass, consigned to live in chaos and work in the shadow economy. Instead, they often form functional, self-organising ecosystems that are "off the grid".' And while some may be marginalised from mainstream urban dynamics, there are those that engage daily with people and entities in the formal economy looking for opportunity to improve their living conditions in a sustainable manner.[38]

Cities are also the laboratories for bringing about social upliftment and social cohesion involving millions of people:

> "What happens in our cities, simply put, matters more than what happens anywhere else. Cities are the world's experimental laboratories and thus a metaphor for an uncertain age. They are both the cancer and the foundation of our networked world, both virus and antibody. From climate change to poverty and inequality, cities are the problem – and the solution."[39]

This argument has found some resonance in the South African context. In an assessment of the impact of the first South African *State of the Cities Report 2004*, the authors note that the tone and content of the report signalled a departure from earlier government policy positions in that it argues that "the urban question is at the heart of achieving a national vision of a productive, democratic and non-racial society based on a vision of sustainable human settlements." Thus, in the national context, cities are central to meeting the national development objectives.[40]

Locating the *State of Cape Town Report 2010*

State of cities reports are a growing way of focusing attention on urban issues and their significance. Over the last five years there have been a range of publications on cities including: global reports (such as *State of the World's Cities* and *Global Report on Human Settlements*) and continental or regional reports (such as *State of African Cities* and similar reports for other

"With urban poverty and inequality characteristic of many cities in the developing world, rapid urban growth is becoming virtually synonymous with the formation of informal settlements."

36. Khanna, Parag 2010, *op cit.*
37. UNFPA 2007. *State of World Population 2007: Unleashing the Potential of Urban Growth.* Available at http://www.unfpa.org/swp/2007/presskit/pdf/sowp2007_eng.pdf
38. Khanna, Parag 2010 *ibid*
39. Khanna, Parag 2010 *ibid*
40. Boraine et al 2006. 'The State of South African Cities a Decade after Democracy," in *Urban Studies* Vol 43, No 2, pp 259-284.

> The value of state-of-cities reports lies in cities and organisations' increasing ability to benchmark and track progress against national and city-specific development targets as well as against other global cities.

regions like Asia and Latin America). In the case of South Africa, the third national report on South African cities entitled *Towards Resilient Cities: A reflection on the first decade of democratic and transformed local government in South 2001- 2011* was recently released by the South African Cities Network (SACN).[41]

As a cluster, these reports seek to assess the opportunities and threats of urban growth in relation to poverty alleviation, sustainable and people-centred development and reducing disparities in living conditions – a strain of analysis that sees the city as both the problem and the solution to these complex challenges.

Nationally, state of cities reports provide a basis from which to start looking at how to make South African cities better places in which to live, work and play. The first national report, of 2004, was seminal and provided a first-of-its-kind overview of how the nine largest cities in South Africa had performed between 1996 and 2001 against the thematic ideals of productivity, inclusivity, sustainability and good-governance. It became a key reference work for public policy development across the spheres of government, strategic planning (particularly by provinces and the cities) and further academic work by a range of researchers.

The third issue has recently been published in 2011 and in addition to its ten year review of city development in South Africa, is focused on the sustainability of the current pace and nature of current social, economic and spatial transformations. The challenge for South African cities is to become better able to respond to changes whether these are the effects of climate change, shifts in the global political economy, diminishing resources (like oil), high unemployment and persistent poverty among urban inhabitants, and a growing need for basic access to municipal services. In short, the report attempts to establish how South African cities can become sustainable and more resilient – especially around the economy, environment, society, in governance frameworks and practice – in the face of emerging global and national challenges.

The value of state-of-cities reports lies in cities and organisations' increasing ability to benchmark and track progress against national and city-specific development targets as well as against other global cities. Until now, a lack of global data at the city level has prevented companies and policy makers from tracking the deepening (and evolving) role of cities in the global economy and positioning their business and policy activities accordingly.

However these data gaps are increasingly being closed with each published report and newly emerging global indices.[42] As more city-level data emerges, companies will be able to decide where to set up office based on cities' position on (inter)national indices as well as their competitive edge over other cities in the country, region or world.

Increasingly, also, the lines between (local) government and the private sector are being eroded in this strategy to locate cities globally and ahead of other cities in the country or region.[43] Nationally, for example, South African cities are increasingly competing with one another to host international events – one of the most recent being competition to host the annual Conferences of the Parties (17^{th} conference in 2011, or COP17) linked to the United Nations Framework Convention on Climate Change (UNFCCC), Cape Town, Johannesburg and eThekwini bid to host this event, and eThekwini won.)

Local government leaders need city-level information to improve their ability to manage their cities successfully; residents need detailed city-level information to understand the diversity of challenges their cities face and which issues to prioritise when appealing to their leaders; national departments,

41. South African Cities Network 2011. Available at http://www.sacities.net/what/strategy/reporting/projects/607-towards-resilient-cities
42. The McKinsey Global Institute (MGI), McKinsey & Company's business and economics research arm, has built on its extensive body of research on the urbanization of China, India, and Latin America to develop the MGI Cityscope, a database of more than 2 000 metropolitan areas around the world that is among the largest of its kind. By analysing demographic, income, and household trends in these cities, the database offers actionable insights on the choices facing companies looking for new markets and policy makers seeking to improve their urban management and the alignment of their diplomatic efforts with their countries' trade interests.
43. Sassen, Saskia. 2001. The global city: New York, London, Tokyo. Princeton University Press.

including the Department of International Relations and Cooperation (DIRCO) need detailed city-level information to align their various diplomatic efforts to support trade within the realities of the 21st century urban world.

Approach to this report

This report was developed alongside a number of key strategic processes in the City of Cape Town, and has therefore drawn and reflected on these in different places. Chief among these processes is the development of a strategic framework to guide a 30-year City Development Strategy (CDS) in order to develop a vision and urban growth management strategy for Cape Town 2040, whatever that vision will ultimately entail. In the meanwhile, the framework posits some desirable outcomes for a 2040 Cape Town, ideas of which are captured in the sub-sections entitled "Into the future" in particular.

Another city-wide process that has affected this report is the development of the Spatial Development Framework (SDF), which is required by law as part of the five-year IDP which is meant to guide strategies and programmes undertaken by the City of Cape Town. Also, this report is influenced by the City's Economic Development Strategy (EDS), which is currently being prepared, especially as far as its insights into the employment and growth challenges and opportunities of the city over the next five years and beyond are concerned. Finally, this report also draws on existing reports published by the City of Cape Town, particularly the *State of the Environment Report 2009*, which tracks improvements in the quality of the environment including air and water quality, as well as biodiversity.[44]

In short, therefore, the *State of Cape Town Report 2010*, in addition to the presentation of data and trends on Cape Town, also draws on the aforementioned strategic processes and existing City reports and tries to integrate with its analysis all the current and future key issues and debates as we move into the short and medium-term future. In turn the *State of Cape Town Report 2010* will inform the City of Cape Town's next IDP for the 2012-2017 term of office.

The key challenges for Cape Town that this report highlights include the following:

- Rapid urbanisation and the increased need for access to basic municipal services (while also maintaining the existing urban infrastructure)
- The challenge of youth unemployment, and the need for improvements across the education system to produce – at scale – quality graduates who are better able to meet the needs of the future Cape Town economy
- An ongoing need to address social and economic inequality, and for measures that will advance social cohesion and aid the integration of marginalised communities with the city by, for example:
  - creating employment opportunities for unskilled, low-skilled and semi-skilled workers through, for example, creating an enabling environment for job creation in the informal and the small, medium and micro-sized enterprise (SMME) sectors; and
  - bringing socially and spatially marginalised communities closer to work opportunities by facilitating more compact and mixed-use urban growth, with people able to transfer seamlessly between work and living (and shopping and leisure) spaces via high quality public transport
- Ongoing tension between the need for developable land and the conservation of natural and cultural landscapes that help shape Cape Town's identity
- Being prepared for the effects of climate change – including the potential negative impacts on water and food security – as well as the energy security challenges in a 'post oil' world.

With respect to data, this report is not without its challenges. The most recent set of directly comparable data at a detailed sub-city level for all municipalities in South Africa was Census 2001, with some data available from the 2007 community survey. All other data available from Statistics South Africa are only from sample surveys and at city level. Some of the results from analysing the data from the sample surveys are very different from data from other City sources – such as the number of households living in informal

“This report also draws on existing reports published by the City of Cape Town, particularly the *State of the Environment Report 2009*, which tracks improvements in the quality of the environment including air and water quality, as well as biodiversity.”

44. This is compiled and written by Amy Davison in the Environmental Resource Management (ERM) Department. Other reports that this department published include the Sustainability Report (published more or less annually from 1998 until 2006, and then rebranded as the State of Environment Report) and the State of Energy Report 2003 while the next one is being prepared for publication in 2011.

dwellings. In some instances it would be misleading to draw comparisons across metros as the entities may have very localised definitions of a data category, such as for example the definition of 'indigent households'. This definition determines who qualifies for certain levels of free services, and will continue to vary depending on how much the different municipalities are prepared to budget to cover the costs of these free services.

This report has also sought to discuss Cape Town's challenges in relation to those of other major metropolitan cities in the country, specifically Johannesburg and eThekwini – particularly in order to establish where the City of Cape Town may draw lessons from these other cities in order to enhance its own practice. In taking this approach we have not sought to duplicate the national state of the cities reports, but have maintained our focus on the four key areas – people, the economy, the natural environment, and living in the city – from the perspective of a Cape Town that is thriving, but has room for improvement.

> "A key challenge was accessing all the relevant data for all the cities as well as for Cape Town."

A key challenge was accessing all the relevant data for all the cities as well as for Cape Town. As a consequence, the report is somewhat uneven in the extent to – and the issues around – which it is able to draw comparisons between the different metros. For example, the report contains less data in the chapter on natural environmental wealth than in the chapters on the economy or people. However, we can expect this challenge to resolve as more cities seek to benchmark themselves nationally and internationally as we move forward.[45]

The report uses population or racial categories in the analysis. This is not intended to offend or to be read as an endorsement of their veracity or the immutability of these categories. However, as the four population groups in South Africa, broadly speaking, experience different socio-economic conditions and are at different stages of the demographic transition – for example reflecting different fertility and mortality rates, different migration trends, and different HIV-prevalence rates – it remains important for any analysis of South African development trends and challenges to continue distinguishing between the racial groups in order to target strategies for maximum impact, and to track and monitor progress against development objectives.[46]

The local government elections in May 2011 brought a number of new councillors into the leadership and governance of the city. It is hoped that this report assists in furthering an understanding of the issues that face the city in its entirety, both now and into the future. It is hoped that it will urge all stakeholders to be bold in envisaging and planning a Cape Town that all its residents will be proud to feel part of and identify with. Furthermore, the report will be used in the short term to inform city planning processes and at all levels and to inform decision-making, with the view to improve service delivery.

45. For more on the data challenges see Annexure 1 and the insert on Census 2011.
46. Haldenwang, BB. 2011. Projections of the South African population, 1985–2040 (with AIDS and no AIDS projections), Occasional Paper, March 2011. University of Stellenbosch: Institute For Futures Research.

The people of Cape Town

This chapter provides an overview of the people of Cape Town, who they are and some of the factors which characterise them. It concludes with a review of some of the main concerns and opportunities for residents as the city moves into the future.

"Concentrations of human activity in urban and peri-urban areas present such opportunities, and as trade flows increase and migration accelerates, cities become increasingly important arenas for managing the effects of globalisation.

"However, they also pose significant collective action challenges in what are often complex social and political environments: complex because they involve multiple and more diverse interest groups than are in evidence in rural areas, operating via both formal and informal institutional arrangements and social relationships.

"Nevertheless, building inclusive cities is a goal worth pursuing, and can in addition contribute to the broader objective of building better governance and stronger states, equally essential in addressing poverty and inequality."[47]

This chapter provides an overview of the people of Cape Town, who they are and some of the factors which characterise them. Specifically the chapter reviews the demographic make-up of the city's residents, their educational profile and its impact on their employment and unemployment profile as well as their major health concerns. The chapter concludes with a review of some of the main concerns and opportunities for the people of Cape Town as the city moves into the future.

Why is it important to understand the people in any place, and specifically in Cape Town?

Rapid population growth necessitates the planning of regions, cities and towns on a scale that has never before been required or seen. Demographic trends – including the population growth rate, mortality rates, fertility rates, as well as in-migration- and out-migration (or the movement of people) – typically informs the planning process, with the view to catering for current and future needs, including basic services as well as opportunities for economic and social development – of

47. Beall, Jo and Sean Fox. 2007. Urban Poverty and Development in the 21st Century. Towards an Inclusive and Sustainable World. Oxfam GB Research Report. Development Studies Institute, London School of Economics, p 20. Available at http://www.oxfam.org.uk/resources/policy/trade/downloads/research_urban_poverty.pdf

"Cape Town is a socially and spatially fragmented city, with real limitations that the geography imposes on where development can take place, and with world-status endemic botanical species that the City is obligated to protect."

all the diverse people in a city.

Furthermore, the rate and scale at which cities are growing – globally and nationally – requires attention to the geographical location of people in relation to the services needed for the cities to work optimally and effectively for all involved, thereby enhancing cities' long-term sustainability. In the context of envisaging and planning the future development of Cape Town, it is therefore vital that we are aware of the exact nature of the diverse groups of people and interests in the city, the development needs of the most vulnerable and marginalised communities, and how best we can meet the divergent needs, while also attending to the overall health and long-term sustainability of the city as a whole.

Based on global trends, it is expected that by 2030, more than 61% of the world's 8,1 billion people will live in cities.[48] The overwhelming majority of new urban dwellers will be located in developing countries. Migration into cities will continue as cities are seen as synonymous with opportunities for employment and improving one's living conditions.

Equally for the city, urbanising populations represent an opportunity for renewal and innovation. The receptor of new skills and people eager to find and capitalise on opportunity, the city is challenged to innovate and meet the needs of new residents in the context of limited resources and currently, also, the imperative of climate change adaptation and mitigation.

Cape Town is a socially and spatially fragmented city, with real limitations that the geography imposes on where development can take place, and with world-status endemic botanical species that the City is obligated to protect. The residents are confronted with a range of challenges, including high levels of unemployment (especially among youth), high drug use and crime incidence, uneven access to social and municipal services, and limited uptake of (advanced) higher education, despite the city's proximity to four higher-education institutions.

The challenge for policy makers and planning practitioners is how to manage this growth and direct it in ways that are optimal for the city's future economic development as well as the well-being of all its residents, old and new.

It is in this context that spatial development frameworks and other city policies and strategies become critical policy and planning tools through which to pursue a balance between developing a vibrant economy, advancing human development and establishing settlement patterns that bring people closer to work and provide them with good access to open space and leisure, while also conserving the natural environment. The challenge lies in keeping the needs of the economy, people and the environment in a fine balance so that the sustainability of all three is enhanced.

It is the coalescing of these elements, all within the context of advancing the human development agenda for Cape Town, which frames the challenges of bringing about a sustainable, resilient city in the next decade and beyond.

Cape Town's population in the national and provincial context

South Africa is a nation of diversity, with over 49 million people and a wide variety of cultures, languages and religious beliefs. The mid-2010 estimates from Statistics SA, pegged the country's population at 49,9 million, up from the Census 2001 count of 44,8 million.[49] Black Africans constitute the majority, making up 79,4% of the population, while the white population makes up 9,2%, the coloured population 8,8%, and the Indian/Asian population 2,6%. According to the 2010 mid-year estimate, 51,3% were female and 48,7% male.

According to the Statistics South Africa 2010 Quarterly Labour Force Survey, Gauteng is South Africa's

48. UNFPA 2007, *State of the World Population: Unleashing the Potential of Urban Growth.*
49. There have been two official censuses since South Africa's first democratic election in 1994, the first in 1996, the second in 2001, and a third in October 2011. The population increased from 40,6 million in 1996 to 44,8 million in 2001 – a growth of 10%. From 2001 to 2010, the population grew by an additional 11,54%.
50. Between 2001 and 2010, Gauteng shifted from being the second-most to the most populous province in South Africa, rising from 19,7% to 22,4% of the total, with its actual numbers increasing by 26,6%. KwaZulu-Natal shifted from the most to the second-most populous province, although its share of the total has risen from 21% to 21,3%, and its population by 12,94%.
51. Statistics SA mid-2010 estimates, http://www.statssa.gov.za/

economic powerhouse and the most populous of the country's provinces, with 22,4% of the total population (although it is geographically the smallest).[50] The Western Cape has a population of 5 223 900 (10,4% of the total South African population),[51] the majority of whom are Afrikaans-speaking.[52] The province makes the second largest contribution to the country's GDP, and has the third-lowest unemployment rate in South Africa, officially at 21,9%.[53]

Cape Town is located on the southern peninsula of the Western Cape and covers a geographical area of 2 461 km² (or 2% of the province's total size) and accommodates about 66% of the total population of the Western Cape. Cape Town's population was estimated to be 3,65 million people in 2009, with women (at 52,4%) outnumbering men (47,6%).[54]

In 2007, the estimated total population of Cape Town was 3,5 million[55], 3,65 million for 2009, and 3,7 million for 2010. In terms of population trends, the population of Cape Town grew by 36,4% between October 1996 and March 2007, and by 20,9% between October 2001 and March 2007. In 2010, the estimated annual population growth was 3%.

Between 2001 and 2007, Cape Town's population growth rate was consistently higher than the total population growth rate for the country, which was 8,2%. For this period, Cape Town's population grew slightly faster than that of Johannesburg (with a comparative growth rate of 20,55%) and significantly faster than that of eThekwini (with its growth rate of 12,2%).[56]

From the beginning of 1997 until March 2007, 348 666 people moved to Cape Town from areas other than the Western Cape, with 46,7% having come from the Eastern Cape, 19,5% from Gauteng and 7,8% from KwaZulu-Natal. During this same period, 10,2% of those who moved to Cape Town are known to have come from outside South Africa. Using the average household size for Cape Town for these years, the estimated number of households that moved to Cape Town over the ten years were 92 086.

Of all people known to have moved to Cape Town between 1997 and 2007, 55,3% were black African, 32,2% were white, 9,9% were coloured and 2,6% were Asian. The province that lost the highest percentage of black Africans to Cape Town was the Eastern Cape at 87,9%, followed by Limpopo at 44,2%. Gauteng lost the highest percentage (65,1%) of whites to Cape Town, and the Northern Cape the highest percentage (48,1%) of coloureds. Of those who moved to Cape Town from outside South Africa, 60,7% were white and 31% were black African.

Population statistics and growth trends

Restrictions under apartheid limited urbanisation among black Africans. In terms of its racial composition, Cape Town still bears the effects of these apartheid policies and specifically the previous regime's Coloured Labour Preference Policy. In terms of this policy, employment for black Africans in the province was limited.

In order to discourage black Africans from moving to the city, very little public housing was built for African families up until 1991, when the acknowledgement of the general failure of this policy led to the establishment of Khayelitsha. The impact of this policy is still evident, though, in the majority of coloured people in relation to all other racial groups in the province. Generally, the proportion of urbanised black Africans is expected to increase into the future, and specifically so in Cape Town.

In 2009, coloured people made up nearly half of the population of Cape Town – showing little change from the proportionate numbers in 1998, and have remained at around 48% of the total Cape Town population. From 25% in 1996, black Africans in Cape Town increased to 32,4% of the population by 2005 and 36,2% in 2009. There were no Asians in the 2005 sample but the Asian population has since increased to just over 1% of the total. The white population declined from about 21% in 1996 to just over 14% in 2009.

“Between 2001 and 2007, Cape Town's population growth rate was consistently higher than the total population growth rate for the country, which was 8,2%.”

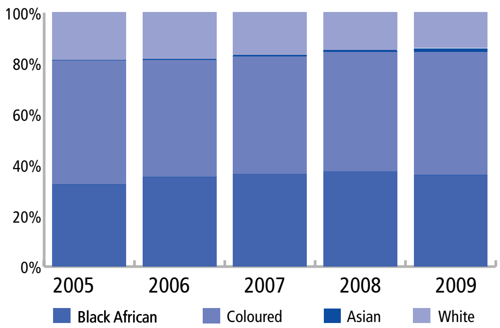
52. Other major languages are English and Xhosa.
53. Statistics South Africa, Quarterly Labour Force Survey, Quarter 4, 2010. Limpopo and KwaZulu-Natal have lower unemployment rates at 16,9% and 19,8% respectively.
54. Statistics South Africa, General Household Survey 2009.
55. Statistics South Africa, Community Survey 2007.
56. City of Cape Town, 2011. Analysis by SDI & GIS, using Statistics South Africa data.

Table 1: *Cape Town population by population group for 1996, 2001, 2005 to 2009*

Population group	Census 1996		Census 2001		2005	2006	2007	2008	2009
	Total	%	Total	%	%	%	%	%	%
Black African	644 181	25,1	916 584	31,7	32,42	35,43	36,48	37,63	36,15
Coloured	1 239 943	48,4	1 392 594	48,1	48,76	46,05	46,48	46,97	48,59
Asian	37 882	1,5	41 516	1,4	0,00	0,26	0,31	0,64	1,08
White	543 425	21,2	542 555	18,8	18,82	18,25	16,73	14,75	14,18
Unspecified	97 664	3,8	–	–	–	–	–	–	–
Total	2 563 095	100,0	2 893 249	100,0	100	100	100	100	100

Source: Statistics SA Census – 1996 and 2001, and General Household Survey 2005 to 2009

Figure 1*: Cape Town population growth by population group for 2005 to 2009.*



Source: Stats SA General Household Survey 2005 to 2009

The clearest trend that emerges from table 1 and figure 1 (overleaf) is the steady growth of the number and proportion of black Africans in Cape Town and the decline of the proportion of whites in Cape Town between the years 1996 and 2009.

Based on the current population growth rates, Cape Town's population is expected to grow to just over 4,25 million people in 2030 (see table 2 and table 3), from both natural births[57] and in-migration (predominantly from the Eastern Cape and Gauteng, but also other countries in Africa and the rest of the world).

Over the last few years, the number of households in Cape Town has increased from 902 278 in 2007 to an estimated 1 019 395 in 2009 – both as a by-product of in-migration and new household units splitting off from existing ones (see table 3 on the adjoining page).

The estimated population for Cape Town in 2010 was 3,7 million, with an estimated 1 060 964 households. As at 2010, the estimated population growth rate for Cape Town was 3% per annum. At the same time, average household size is slowly decreasing, from 3,92 in 1996 to a 2009[58] average of 3,75, which downward trend is likely to continue into the future as fertility rates drop.

Table 4 on the adjoining page reflects Cape Town's 2009 mid-year population estimates by age in percentage. Almost half (46%) of the population is

Table 2: *Medium growth projection for Cape Town population (Dorrington, 2000)[59]*

Medium growth projection	2001	2006	2011	2016	2021	2026	2031
	3 154 238	3 547 055	3 820 847	3 997 718	4 119 504	4 208 444	4 255 857

Source: City of Cape Town SDI & GIS Department, Dorrington 2000 and 2005.[60]

57. Although at a slower rate with a declining birth rate.
58. Statistics South Africa, General Household Survey 2009.
59. Dorrington's medium projections in 2000 most closely match that of the actual population growth in Cape Town, and are used here.
60. This is the best information available at the time of writing and will be updated in 2012, using the results of Census 2011.

Table 3: Cape Town population growth by, number of households and household sizes

Year	Total population (in millions)	Number of households (estimated)	Average household size
1996	2 563	653 085	3,92
2001	2 893	777 389	3,72
2007	3 497	902 278	3,88
2009	3 650	1 019 395	3,75

Table 4: Cape Town population estimates by age, in percentages

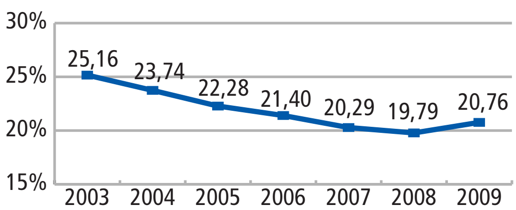
Age	1996	2001	2005	2009
Under 15	28,18	26,65	27,73	28,26
15 – 24	18,99	19,98	18,20	17,86
25 - 64	46,78	48,39	49,85	48,64
Over 64	5,00	4,98	4,13	5,24

Source: Statistics SA, Census 1996, Census 2001, Community Survey 2007, General Household Survey 2009

under the age of 25 years, with about 5% of the population over 64 years of age. The economically active population (those between 25 and 64 years of age) comprise 49% of the total population.

These ratios suggest significant growth in the proportion of Cape Town residents who will be seeking employment in Cape Town in the next three to five years, i.e. the approximately 18% of residents in the 15-24 year age group. While this will be balanced by members of the current workforce who will retire, the challenge remains for the City of Cape Town, together with other public sector organisations and the private sector, to help facilitate access to gainful employment and income generation opportunities, in particular for youth. Prospective entrants into the workforce need to be equipped with the appropriate skills and knowledge required by local industries, so that they can participate in the city economy more effectively.

***Figure 2:** Cape Town infant mortality rate*



Source: City of Cape Town Health Directorate, 2010

The health challenges of Cape Town's people

HIV/Aids and TB are the key health challenges facing Cape Town residents. This section reviews the current-state data, facilitating an understanding of the city-wide trend with regard to these health challenges. Also included is a discussion of the infant mortality rate (IMR) across the city, which is used as an indicator of the state of health services. The city's health infrastructure currently includes 82 clinics, four community health centres, 24 satellite clinics and four mobile clinics in Cape Town.[61] Among others,[62] these facilities ensure the provision of:

- women and child health services (preventive and promotive services such as: family planning and immunisation and treating sick children under 13 years of age), as well as
- HIV/Aids/sexually transmitted infections and control.

Infant mortality

IMR can be defined as the number of infants dying before reaching one year of age, per 1 000 live births. The IMR is commonly included as a part of standard-of-living evaluations and indicates a country's – or city's – level of health or development. The national IMR has been in steady decline, from 81,9 in 1975 to 48,2 in 1995, and 43,1 in 2009.[63]

Cape Town's IMR declined considerably between 2003 and 2009, and indicates good overall health in the

61. These facilities are operated by the City's Health Directorate in partnership with the Provincial Health Department, according to a service level agreement (SLA).
62. These clinics also provide services relating to substance abuse.
63. World Bank. 2011. World Development Indicators. Last updated Feb 10, 2011. Available at http://www.google.com/public data?ds=wb-wdi&met=sp_dyn_imrt_in&idim=country:ZAF&dl=en&hl=en&q=infant+mortality+rate

“Although Cape Town has the lowest prevalence of HIV/Aids and STIs of all South African cities, it remains a challenge to reduce the spread and impact of these diseases.”

city, as well as improved living and social conditions. However the 2009 increase in the IMR will need to be closely monitored (see figure 2 on preceding page).[64]

Cape Town's IMR significantly outperforms the national figure at 20,76 in 2009, a decline from the rate of 21,4 in 2006, although slightly higher than the rate of 19,79 in 2008. Of major concern, however, is the significantly higher IMR in the poorer areas of the city such as Khayelitsha. In 2003, the IMR in Khayelitsha – at 42,1 – approached the national rate. Though it has seen a considerable decrease over the last six years, the rate in 2009 – at 35,0 – is still unacceptably high compared to the other sub-districts and continues to require a focused approach in terms of access to health services and education.

HIV/Aids prevalence

South Africa has the largest burden of HIV/Aids globally, with 5,7 million people living with HIV according to 2007 figures,[65] and is currently implementing the largest antiretroviral treatment (ART) programme in the world.

According to the 2009 National HIV Survey, the estimated HIV prevalence for the Western Cape was 16,8% of the total population. At sub-district level,[66] the 2009 survey estimated that five of the eight sub-districts in the metropole had an HIV prevalence of greater than the provincial prevalence of 16,8%, with three sub-districts exceeding the city's prevalence of 18,3 in 2009.[67] In 2009 this rate improved slightly to 18,2 (refer table 5 below).

Although Cape Town has the lowest prevalence of HIV/Aids and STIs of all South African cities, it remains a challenge to reduce the spread and impact of these diseases. The City of Cape Town realises that such severe health issues impede sustainable development, and has therefore made the mitigation of HIV/Aids, STIs and TB a priority by adopting a multi-sectoral strategy to contain, reduce and treat these diseases, as well as address the underlying causes of their continued spread.

In line with global trends, Cape Town has higher HIV prevalence rates in informal settlement areas than in formal areas, with women in informal areas particularly at risk. For example, since 2004, the Khayelitsha sub-district in the metropole has had an HIV prevalence estimate consistently higher than the national prevalence of 29,4 (30,1 in 2009). The highest HIV prevalence estimates remain among the age groups of 25-29 and 30-34 years of age.[68]

Although the city-wide data reflected in table 5 suggest that HIV prevalence is stabilising, the stabilisation is at quite high levels in particular areas, which means that the HIV/Aids epidemic continues to be one of the major challenges facing the city.

This stabilising trend may be attribute to increased HIV mortality rates, as evidenced from city mortality trends, with increasing HIV deaths offsetting the

Table 5: *Trend HIV/Aids prevalence, 2004–2009*

Year	Eastern	Khayelitsha	Klipfontein	Mitchells Plain	Northern	Southern	Tygerberg	Western	CoCT
2005	11,3	32,5	23,7	5,1	20,5	12,4	15,1	10,1	17,0
2006	17,3	32,7	21,6	11,3	23,1	12,5	10,1	16,2	18,2
2007	18,3	31,4	23,2	11,7	22,7	9,9	9,9	15,9	17,6
2008	18,9	33,4	22,4	13,9	21,4	9,9	11,3	16,6	18,3
2009	19,8	30,1	24,0	13,9	18,0	11,9	10,2	17,0	18,2

Source: City of Cape Town, Health Directorate 2010

64. City of Cape Town, Five-Year Plan for Cape Town 2007–2012, Integrated Development Plan (IDP) 2010/11 Review.
65. UNAIDS Aids Epidemic Update 2009. Available at http://www.unaids.org/en/media/unaids/contentassets/dataimport/pub/report/2009/jc1700_epi_update_2009_en.pdf.
66. There are 8 City Health sub districts: Northern, Southern, Mitchells Plain, Khayelitsha, Western, Klipfontein, Tygerberg, Eastern.
67. Provincial Government of the Western Cape Department of Health, 2009. *HIV and Syphilis Prevalence in the Western Cape. Results of the 2009 HIV and Syphilis Antenatal Provincial and Subdistrict Surveys.*
68. Western Cape Provincial Department of Health, 2009.

Table 6: *Number of ART facilities[69] and people registered for treatment in Cape Town*

	Dec 2006	Dec 2007	Dec 2008	Dec 2009
Number of ART-dispensing facilities	28	35	44	50
Number of people registered for ART	17 646	25 544	37 355	52 141

Source: Western Cape Department of Health, 2010

Table 7: *Trend TB new smear positive cure rate, Cape Town, 2003-2009*

	2003	2004	2005	2006	2007	2008	2009
TB new smear positive cure rate (%)	71	67	69	76	77	78	80

Source: City of Cape Town Health Directorate, 2010

number of new infections. Alternatively, it could also be the result of an increased number of infections averted as a consequence of various HIV prevention interventions. Lastly, the stabilisation at high prevalence rates in health sub-districts with a high HIV burden may also in part be due to declining mortality as a result of better access to ART.

Cape Town's HIV/Aids prevalence rate has remained largely unchanged between 2004 and 2009, at an average of approximately 18% of the total population. What is more encouraging, however, is the increase in the number of facilities dispensing ART over the last five years, as well as the number of people registered for treatment. In three years the number of people registered for ART has increased more than three-fold from 17 646 in December 2006 to 52 141 in December 2009 (refer to table 6).

Tuberculosis

South Africa ranks seventh among the 22 countries with the highest burden of TB disease (which account for 80% of all cases in the world). The Western Cape bears the brunt of the TB epidemic, exacerbated by the high incidence of HIV/Aids, with 25% of the national case load, while only about 11% of South Africa's population lives in the province.

In line with other socio-economic trends, Cape Town's lower-income areas, with their higher population densities and poorer access to healthcare and basic services, bear a higher burden of the disease (especially HIV-related TB). Most patients with TB also fall into the economically active group.

Focusing on high-burden areas, and in partnership with the Provincial Government of the Western Cape (hereinafter 'Province'), the City of Cape Town has dedicated significant resources to healthcare interventions in order to curb the spread of the disease. This has borne positive outcomes as evidenced in the increase in the new smear positive cure rate from 71 in 2004 to 80 in 2009 (against the national target of a new smear positive cure rate of 85) (see table 7). This is the best of all the metropoles in South Africa.

TB incidence per 100 000 of the city's population has been fairly stable between 2003 and 2009 – at under 900 – although the number of TB cases have increased from just below 25 000 to just under 29 000 during the same period.

Education

Literacy

Many South African children face considerable barriers to learning, such as poverty, poor facilities, oversized classes, a lack of facilities and resources, illness and family challenges. With so many of their parents themselves struggling with illiteracy and poverty, the learning environment at home and in the community is less than ideal. It is estimated that between 7,4 and 8,5

"The Western Cape bears the brunt of the TB epidemic, exacerbated by the high incidence of HIV/Aids, with 25% of the national case load, while only about 11% of South Africa's population lives in the province."

69. City of Cape Town Directorate of Health, 2010. The facilities include City Health and MDHS clinics and CHCs, secondary and tertiary level hospitals and correctional services, but not private facilities.

million adults are functionally illiterate[70] – that is, with an educational attainment below grade 7 and without the reading and writing skills necessary for everyday living and the workplace – and that between 2,9 and 4,2 million people have never attended school. One million children in South Africa live in a household where no adult can read.[71]

Based on 2005 General Household Survey data, 96,49% of the adult population in Cape Town had achieved grade 4. Thus, 3,51% were illiterate. In comparison, the data for South Africa as a whole show that 85,25% had completed grade 4 or higher. The 2009 General Household Survey data show very little change for Cape Town, while, at the national level, the percentage of people with at least grade 4 in 2009 increased to 88,67%.

Adult illiteracy and functional illiteracy are major contributors to the still unacceptably high levels of unemployment in Cape Town, as many illiterate people are unable to find jobs. Combating adult (functional) illiteracy is a vital part of building a strong workforce with better skills and greater access to economic opportunity, and of creating better prospects for social inclusion and social cohesion in Cape Town in the medium to long term. (See the think piece on social cohesion later on in this report.)

“Adult illiteracy and functional illiteracy are major contributors to the still unacceptably high levels of unemployment in Cape Town, as many illiterate people are unable to find jobs.”

Education, youth and inequality

A 2010 study of trends in South African income distribution and poverty[72] found that, at a national level, younger people are most exposed to poverty, a state of affairs that has not improved notably over the period 1993 to 2008. When comparing different age groups, young people are the least likely to have a regular job, the least likely to be self-employed, and the most likely to have casual employment.[73] This highlights the problem of youth unemployment and young working-aged people's struggle to integrate with the labour market successfully.

Table 8 shows that, for 2009, about 49% of the total number of youth in Cape Town between the ages of 15 and 25 were unemployed, compared to a (still high) unemployment rate of 24% among working aged people between the ages 25 and 65. More importantly, youth unemployment is more prevalent among certain population groups in Cape Town. Close to 65% of black African and 44% of coloured youth in the 15 to 24-year age group are unemployed, compared to less than 10% for Asian youth and 5% for white youth.

The fact that better-educated young people remain poor suggests that the labour market is not successful in absorbing new entrants and in alleviating poverty.[74] It further suggests that the education system is not

***Table 8:** Youth (aged 15 to 25) unemployment in Cape Town, third quarter 2009 (%)*

Status	Black African	Coloured	Asian	White	Total
Employed	35,11%	55,81%	90,75%	94,55%	50,97%
Unemployed	64,89%	44,19%	9,25%	5,45%	49,03%
Total	100,00%	100,00%	100,00%	100,00%	100,00%

Source: Statistics SA, General Household Survey, 3rd Quarter 2009

70. Functional literacy is regarded as the means to have the reading and writing skills necessary for everyday living and the workplace. (See Van Wyk, Johann. 2008. *Majority of SA school leavers are functionally illiterate.* [Online] Available: http://edulibpretoria.wordpress.com/2008/04/14/majority-of-sa-school-leavers-are-functionally-illiterate/.) Also, Aitchison and Harley (2006) associate functional illiteracy with educational attainment of below grade 7.
71. Aitchison, J & Anne Harley "South African illiteracy statistics and the case of the magically growing number of literacy and ABET learners" in *Journal of Education*, No. 39, 2006, pp 89 – 112. Available atdbnweb2.ukzn.ac.za/joe/.../JoE%2039%20aitchison%20and%20harley.pdf; Also "The Family Literacy Project – South Africa" in UNESCO, 2008, Family Literacy: A global approach to lifelong learning" pp 16-17. Available at www.unesco.org/uil/litbase/?menu=4&programme=43
72. Leibbrandt, M. et al. (2010), "Trends in South African Income Distribution and Poverty since the Fall of Apartheid", OECD Social, Employment and Migration Working Papers, No. 101, OECD Publishing.
73. Ranchod, 2009.
74. Social assistance grants rather than the job market have driven the relative improvement in poverty levels over time.

delivering the (quality of) skills needed in the labour market. Rising wage inequality can be directly attributed to returns on educational investments, and while the general trend is that schools in Cape Town perform well relative to national trends, the quality of schooling remains inadequate compared to international standards.

Declining and racially differentiated performance in grade 12 (matric) produces a shrinking pool of applicants eligible for intermediate and high-level qualifications in the tertiary education and training sector. Table 9 shows the highest level of education obtained in Cape Town, focusing on the matric and post-matric qualifications. Two things are evident: Firstly, the number of people with matric qualifications increased substantially from 1996 to 2009. Secondly, however, there are remarkably few people with post-matric qualifications in the city, despite the number of higher-education institutions in and around Cape Town.[75]

This progressive decline over the last ten years is not likely to be arrested in the short term, given the deep-rooted problems in primary schooling that are evident from the declining quality of basic numeracy and literacy skills. While the majority of young people may be in school, the problem lies in what does (or does not) happen while they are there. This is a major constraint on laying the foundations for an educated citizenry and skills development in the city region.[76]

The challenge for the education system – nationally – is how to turn the system around and instil basic skills. For the City of Cape Town, the challenge is how to facilitate and support interventions that supplement the formal schooling and build pupils to become better skilled and employable.

Education and a competitive workforce

The higher-education sector in the Cape Town region is typically regarded as a locational asset that represents significant potential and capacity for high-level skills development and research in order to support technological upgrades and global competitiveness.

There was steady growth in enrolments in tertiary education institutions between 2000 and 2008 to a total of 91 800 students in 2008. Considering that the schools in Cape Town produced some 27 000 matriculants in 2008, of whom about a quarter passed with university exemption, it is clear that the Cape Town-based institutions are indeed national institutions serving a wider reach than the city region or the province.[77]

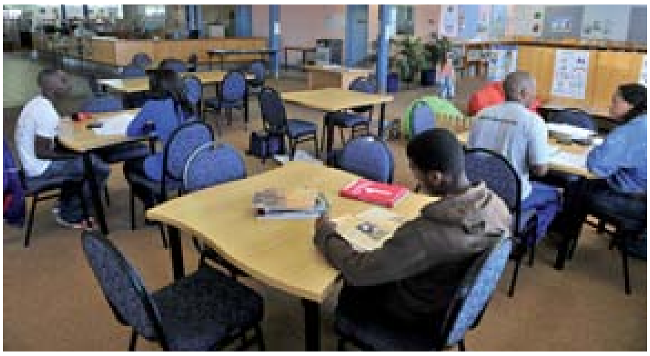
"Rising wage inequality can be directly attributed to returns on educational investments, and while the general trend is that schools in Cape Town perform well relative to national trends, the quality of schooling remains inadequate compared to international standards."

Table 9: *Highest level of education completed – Cape Town population 20 years and older*

	2009	2005	2001*	1996**
Grade 12	30,15%	25,71%	25,42%	19,57%
Certificate with Grade 12	1,17%	2,68%	1,99%	1,71%
Diploma with Grade 12	4,92%	5,76%	5,08%	4,65%
Higher diploma (technikon/university of technology)	1,91%	–	–	–
Post-higher diploma (technikon/university of technology masters, doctorate)	0,94%	–	–	–
Bachelors degree	3,42%	2,59%	2,26	2,89%
Bachelors degree with post-graduate diploma	0,72%	0,76%	1,13	0,43%
Honours degree	1,05%	0,40%	1,01	0,44%
Higher degree (masters, doctorate)	1,45%	1,19%	1,13	0,84%

*Source: Statistics SA General Household Survey, 2005 and 2009; * 2001 Population Census; ** 1996 Population Census*

75. The flip side of this table is that the vast majority of the working-age population has quite low levels of education or is illiterate – and would not be captured in Table 11.
76. Kruss et al, 2010. Cape Town Global Competitiveness Project: Education, training and skills development in the Cape Town City Region: Background Paper. Available at *www.hsrc.ac.za/module-KTree-doc_request-docid-6261.phtml*
77. Kruss et al 2010, ibid.



However, the poor level of uptake of tertiary education among Cape Town residents (see table 9) calls for some innovative responses – by schools, communities and the tertiary institutions, among others, to develop a system to identify, nurture and eventually recruit academically promising pupils for local institutions, at scale.

The four universities perform very well relative to their institutional type nationally – whether research university or university of technology. However, performance of the universities in relation to the high-level skills that graduates require for key economic sectors is evidently insufficient. The extent of linkages and networks between firms and universities in Cape Town is still embryonic and the potential for expansion and deepening of these linkages as well as capacity building initiatives – is significant.[78]

Education and greater intermediate skills supply

A critical problem in South Africa is the absence of a coherent and credible post-school system that offers a wide range of education and training opportunities to young people in order to equip them to enter the labour market. Contrary to the international trend, South Africa has very few young people in vocational and occupational-related education and training.

Nationally, there has been a steady decline in the number of trained artisans. While in 1975 there were 33 000 registered apprentices nationally – largely white, with a few coloureds and Indians (while Africans were not allowed to be artisans at the time) – this figure dropped to 3 000 artisans of all races in 2000. The lack of artisans has been identified as an obstacle to economic growth, and National Government has set targets to have 30 000 engineers and 50 000 artisans trained by 2014/15.[79]

The situation in Cape Town does not differ significantly from the national gap in intermediate skills supplies. The learnership system – managed by the sector education training authorities (SETAs) – has been found wanting in terms of its ability to have a significant impact on the supply of skills at the intermediate level to firms in priority sectors in Cape Town.[80]

Few of the SETAs provide education and training opportunities at any significant scale, and the learnership system does not provide opportunities for many young school-leavers to advance to high-level skills training. At minimum, the learnership qualification has the potential to increase the chances of employment, if it were expanded to a larger scale and offered more credible education and training opportunities.

Relative to national trends, the Cape Town region has a strong set of four public further education and training (FET) institutions that perform well, have, infrastructure, and show emergent responsiveness to the labour market. Total enrolments were steady in 2007 and 2008, and grew in 2009, so that annually, a sizable cohort of almost 39 000 students enrolled in the five institutions. An encouraging trend is that the majority of enrolments at the FET colleges remain related to engineering. However, the colleges need to grow significantly and improve the quality of their programmes, if they are to have greater impact and more fully service the current and future skills needs of Cape Town's economy more fully.

"Relative to national trends, the Cape Town region has a strong set of four public further education and training (FET) institutions that perform well, have, infrastructure, and show emergent responsiveness to the labour market."

Under the right conditions, these FET institutions have the capacity to provide a distinct locational advantage. Problems of racially skewed and low participation rates, low enrolment in critical fields, poor-quality programmes, attrition and low completion or graduation rates may limit this advantage and need to be attended to.[81]

Poverty and inequality

A 2008 revision of poverty estimates published by World Bank researchers reveal that one in four people in the developing world were living on less than US$1,25 a day in 2005, down from one in two persons in 1981. In this period, the number of poor fell by 500

78. Kruss et al, 2010 *op cit.*
79. Polity.org.za, "Concern over artisan training," Published 16 Feb 2011. Available at http://www.polity.org.za/article/concern-over-artisan-training-2011-02-16.
80. Kruss et al, 2010 op cit.
81. Griesel. H. and Ben Parker. 2009. *Employment and employability: Expectations of higher education responsiveness in South Africa. Journal of Education Policy,* 19(6), pp.673-689). See www.saqa.org.za/docs/pubs/general/graduate_attributes.pdf

million. Yet it is estimated that, even at this rate, about a billion people will still live on less than $1,25 a day in 2015, and many of those who escaped $1,25 a day poverty across 1981-2005 would still be poor by the standards of rich or even middle-income countries."[82]

Globally then, the developing world has done well to reduce poverty though the impacts have been uneven across the different global regions. Sub-Saharan Africa, for example, has much to do still in order to reduce poverty levels in the region.

In line with global trends, poverty levels in South Africa decreased only slightly between 1993 and 2008, and remain unacceptably high. And although there have been continual improvements in access to piped water, electricity and formal housing over the post-apartheid period up to 2008, income poverty in urban areas has increased.[83]

In addition to high poverty levels, South African cities are the most unequal in the world. Of the South African cities, Cape Town is the least unequal. The 2010 Gini coefficient for Cape Town was still unacceptably high at 0,58, but marginally better than other major South African metros – including Johannesburg and eThekwini (Durban) – with Gini coefficients of 0,62 and higher (such as Ekurhuleni with a Gini coefficient of 0,63).[84]

Social assistance grants – mainly the child support grant, the disability grant and the old-age pension – help to reduce the levels of inequality only slightly, but have been crucial in reducing poverty among the poorest households. Rising inequality in the cities (and beyond) is fuelled by increasing unemployment levels as well as increasing disparities in the income earnings of people in the South African labour market.

Furthermore, a consequence of a younger population profile is that more working-age people are entering the employment market than retirement-aged people exiting the workforce. If the employment market is unable to absorb them unemployment levels increase, and poverty reduction efforts are impeded.[85] These labour market trends have prevented the labour market from playing a positive role in poverty alleviation and households have had to find other ways to make ends meet.

"The 2010 Gini coefficient for Cape Town was still unacceptably high at 0,58, but marginally better than other major South African metros."

Table 10: *Monthly household income, by population group, Cape Town, 2009*

Monthly household Income	Black African	Coloured	Asian	White	Total
None	1,16%	1,01%	0,00%	0,79%	1,01%
R1 - R1 440	11,46%	10,60%	8,49%	7,22%	10,12%
R1 441 - R2 880	28,19%	11,85%	21,43%	5,14%	16,10%
R2 881 - R3 500	11,39%	6,25%	0,00%	3,63%	7,40%
R3 501 - R7 000	23,56%	22,32%	4,69%	8,50%	19,50%
R7 001 - R19 999	14,01%	31,00%	15,53%	25,07%	23,63%
R20 000 and more	3,06%	9,96%	39,64%	26,85%	11,60%
Unspecified	7,16%	7,01%	10,22%	22,79%	10,64%

Source: Statistics SA, General Household Survey, 2009

82. Chen, S. & M. Ravallion (2008) "The developing world is poorer than we thought, but no less successful in the fight against poverty." Washington DC: The World Bank. Available at http://ideas.repec.org/p/wbk/wbrwps/4703.html.
83. National household survey data from 1993, 2000 and 2008 show that South Africa's high aggregate level of income inequality increased between 1993 and 2008. The same is true of inequality within each of South Africa's four major racial groups, with intra-African inequality and poverty trends increasingly dominating aggregate inequality and poverty in South Africa. A lower poverty line of $2 per day (R91 per person per month in 1996 purchasing power parity terms) and an upper poverty line of R250 per person per month (in 1996 Rands) are used to show that the leftward shift of incomes in the middle and lower-middle areas of the 2001 distribution is indeed a reflection of a slight but unambiguous increase in measured poverty between 1996 and 2001. And from 2001–2008 – what is the trend? Leibbrandt et al 2010.
84. Data extracted from Regional Explorer, Global Insight on 13 July 2011.
85. Leibbrandt et al, 2010.

The proportion of black African households registered as indigent was almost twice the number of indigent coloured households, and three times the number of indigent white and Indian/Asian households.

Income poverty

South African cities continue to host some extremely poor and some extremely rich people. Decades of distorted development in the city has manifested in highly skewed distribution of income and wealth. In 2009, about 5% of the estimated total of 1 019 395 households in Cape Town listed social grants as their main source of income, and for 3% of the total number of households, social grants were their sole source of income.[86]

Table 10 shows that, as in the rest of the country, poverty levels are highest among the black African population in Cape Town, with 40% of black African households earning R2 880 a month or less – and therefore classified as 'indigent' in terms of the City of Cape Town classification[87] – compared to almost 30% of Asian (though the number of Indian/Asian households is small), 23,5% of coloured and 12% of white households.

These monthly household income figures are mirrored in the number of households – and racial variations – in Cape Town that are registered as 'indigent'. According to the General Household Survey 2009, the proportion of black African households registered as indigent was almost twice the number of indigent coloured households, and three times the number of indigent white and Indian/Asian households[88] (refer to table 11).

While the total number who indicated that they are registered as indigent amounted to 8,65% (in table 11), the City of Cape Town's records reflected about 19% of all households as indigent in 2009, partly because all developed residential properties with a value of below R88 000 are also considered indigent for the purposes of providing municipal services.

The annual Statistics SA General Household Survey also provides an indicator of income levels through its monthly expenditure figures. Figure 3 shows expenditure brackets for 2007, 2008 and 2009 in Cape Town. Assuming that the poor spend almost all of their monthly income, then their expenditure closely approximates their income levels. Figure 3 shows that for 2007 to 2009 there is a discernible drop in the number of poor households in Cape Town with a monthly income below R1800 and that, concomitantly, households are experiencing an increase in monthly income (especially for the brackets R1 800 to R4 999, and the R10 000 or more categories).

If household expenditure of R2 500 per month or less is considered closest to a poverty line, the proportion of households in Cape Town living below this line was approximately 46% in 2009. Encouragingly, the percentage of households with an income below R2 500 dropped by 2% from 48% in 2008.

While lack of income is in itself debilitating, it is but one aspect of poverty. More broadly, poverty is about the lack of opportunities and choices that are widely regarded as essential to leading a healthy and creative life, as well as enjoying a decent standard of living, freedom, dignity, self-esteem and the respect of

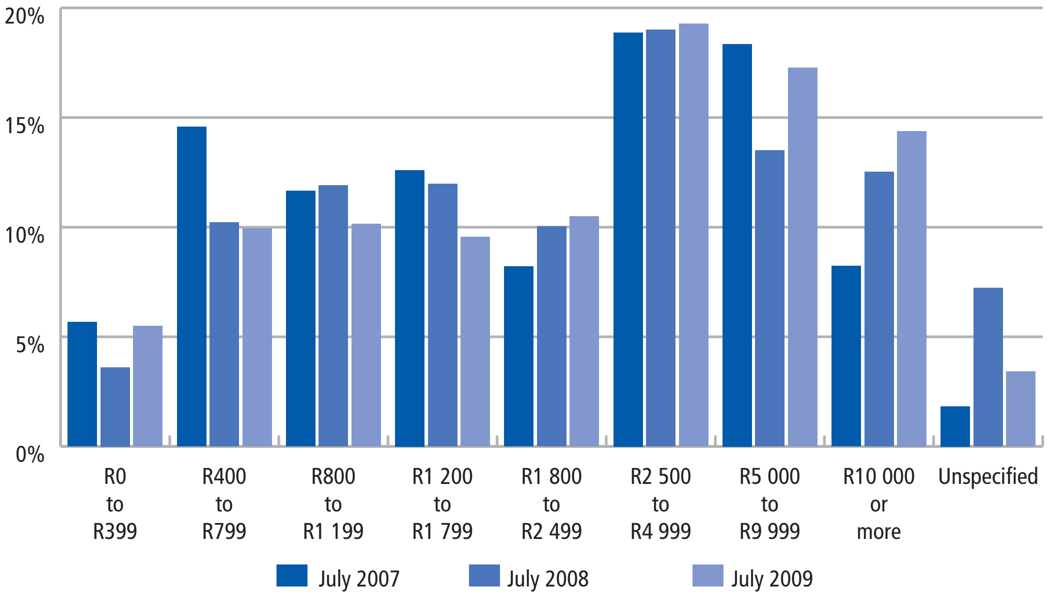
***Table 11:** Percentage of households indicating that they are registered with the City as indigent in 2009*[89]

Indigent household	Black African	Coloured	Asian	White	Total
	13,48%	7,03%	4,69%	4,34%	8,65%

Source: Statistics SA General Household Survey 2009

86. CCT, Department of SDI & GIS 2011, Statistic derived from the General Household Survey, 3rd quarter 2009.
87. In the Urbanisation and Poverty report, any household with a monthly income not exceeding R3 500 is regarded as living in poverty.
88. Up until 30 June 2011, a household could register as indigent and qualify for the City of Cape Town indigent grant if it had a monthly household income of R3 000 or less. As of 1 July 2011, the cut-off is R4 000 per month. (City of Cape Town, Indigent Relief Policy).
89. Ratepayers who own a single home and whose total household income is R2 880 a month or less, or a minor managing a household registered in the name of his/her deceased parent/s, will qualify for a 100% rates rebate when they register themselves as indigent.

Figure 3: Monthly household expenditures for Cape Town, 2007, 2008, 2009



Source: Statistics SA, General Household Survey 2007, 2008 and 2009

> High crime levels – above the national averages – constitute one of Cape Town's strategic challenges.

others.[90] 'Human development', therefore is about more than earning an income:

"It (human development) is about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. People are the real wealth of nations. Development is thus about expanding the choices people have to lead lives that they value. And it is thus about much more than economic growth, which is only a means – if a very important one – of enlarging people's choices… Fundamental to enlarging these choices is building human capabilities – the range of things that people can do or be in life. The most basic capabilities for human development are to lead long and healthy lives, to be knowledgeable, to have access to the resources needed for a decent standard of living and to be able to participate in the life of the community. Without these, many choices are simply not available, and many opportunities in life remain inaccessible."[91]

The key challenges (among others) for the people of Cape Town relate to accessing adequate shelter, maintaining their health (especially in the light of HIV/Aids and tuberculosis infections), gaining access to quality education and skills, and employment or access to opportunities to create a legal income.

Crime

High crime levels – above the national averages – constitute one of Cape Town's strategic challenges. In Cape Town the rates for murder, total sexual offences (including rape and indecent assault), and drug-related crime (excluding driving under the influence of alcohol and drugs) were 41, 156, and 1 056 per 100 000 people respectively for 2009/10. The rate for aggravated robbery was 295, while the rates for business and residential robberies were 24 and 27 respectively.

The highest crime rate out of all the selected crimes was for Cape Town's drug-related crime (excluding driving under the influence of alcohol and/or drugs) at

90. See Amartya Sen (2001), Development as Freedom.
91. *What is Human Development?*, *Human Development Reports*, United Nations Development Programme, http://www.globalissues.org/article/4/poverty-around-the-world#InequalityinCitiesAroundtheWorld.

“Cape Town’s future population will continue to increase rapidly, and given the current population profile – specifically the large proportion of people under the age of 24 – will experience a substantial injection of working-age people entering the economy in the next five to 15 years.”

1 056 incidents.[92] Such statistics have earned Cape Town a reputation as one of the world’s most dangerous cities. The police are on record as saying that the homicides usually occur in the poorer districts and suburbs of the town, demonstrating the link between crime and poverty.

The current crime level in Cape Town obviously has a deleterious effect on the quality of life of those living in close proximity to it, and those who feel targeted by it. Furthermore, it has consequences for the local economy and skills base as it may inhibit international and national investment, as well as the ability to attract and retain skilled human capital.

The City’s focus is on integrating the efforts of all spheres of government, business and the public in order to strengthen and align the activities of law enforcement agencies.

To attract private sector investment and relevant skills, the City must provide a safe business and living environment, which in turn requires an improvement in the social conditions of the poor and unemployed. Given the high levels of youth unemployment, it is critical that the City implements a range of community and youth development interventions geared toward keeping young men and women from engaging in criminal activities and lifestyles.

Such interventions will need to include activities that will address student performance and will get more students into the four tertiary education institutions in Cape Town as well as youth entrepreneurship training programmes.[93] These development activities would supplement any improvements in law enforcement coordination involving the three spheres of government.

Into the future

One of the key future trends is continued *rapid urbanisation* and the increase in the number of poor people living in developing country cities. Cape Town is not exempt from this trend and in the South African context, the city already has the fastest population growth rate among the metropolitan areas.[94]

Hence, Cape Town’s future population will continue to increase rapidly, and given the current population profile – specifically the large proportion of people under the age of 24 – will experience a substantial injection of working-age people entering the economy in the next five to 15 years. This will cause an increased demand for employment, and services and facilities.

The key issues to address in the next five to ten years include:

- The rapid population growth that is predicted for many developing-country cities – and which Cape Town already displays – will require more efficient public transport systems for people to travel between home and work and to reduce congestion and negative environmental impacts.

  Efficient mass transport facilities, i.e. public buses and trains – will become critical infrastructure, alongside facilities for non-motorised transport. The imperative is to create infrastructure that respond to the need for a low carbon and resource efficient system. This issue is discussed further in the chapter ‘Living in the city’.
- Meeting the related goals of *youth development* and addressing youth unemployment and poverty will require a stronger and proactive alignment between the quality of education and skills generated throughout the education system on the one hand, and the employment demands and capacity of the local economy on the other. The positive spin-offs of this are likely to be seen in a reduction in drug abuse and gangsterism among youth, as well as an injection of skills and energy into the economy.

  Addressing youth unemployment and youth development across all communities and areas in Cape Town are key components of a strategy to mitigate the pull of disaffected and unemployed youth into an exploding drug crime environment, and potentially enhance social development and cohesion.
- A persistent and more rapid influx of poor citizens into the city will certainly escalate the demand for shelter, low-cost housing and related services, and

92. SAIRR/European Union/Friedrich Naumann Foundation for Liberty, “Which municipality is safest?” Fast Facts for Local Government, Issue 8/2010, August 2010, http://www.sairr.org.za, or www.eumunicipaloutreach.org.za.
93. See also the objectives for Strategic Objective 5 in the IDP that deals with safety and security challenges. IDP 2007-2012, SFA 5 Objectives, p 20.
94. City of Cape Town, 2011. Analysis by SDI & GIS, using Statistics SA data.

will put added pressure on already limited developable land and scarce resources in Cape Town, in particular energy, water and affordable food.

- In order to prepare itself to compete in the global economy, Cape Town will have to invest substantially in broadening access to high-speed connectivity, especially in libraries, schools and universities. The future working population of Cape Town will need to be highly skilled in accessing, filtering and processing large amounts of data, and must also be familiar with and have a flair for experimenting with new technologies. Over the next decades, our youth will need to compete globally with their highly educated and technology literate peers.
- Finally, Cape Town will continue to host multiple family forms and residents with different needs and services requirements, all of whom need to be catered for. The majority of the city's inhabitants will be poor. Substantial investments in low-cost housing, education and health, with a particular focus on improved child and maternal health, will help *build a more inclusive society* and, in the long term, facilitate equal access to opportunities.

The City has to consider how it will balance the needs of an expanding population, a fragile natural environment, the imperative to implement strategies to mitigate the effects of climate change, as well as the need to stimulate economic growth. In short, the challenge for Cape Town as we move into the future, is how to become more resilient and sustainable given its unique natural environment and social and demographic dynamics. This issue is discussed in more detail in the chapters on 'Natural wealth' and 'Living in the city.'

> "Cape Town will continue to host multiple family forms and residents with different needs and services requirements."

Advancing social cohesion in Cape Town[95]

Socially cohesive urban areas tend to be those that share common values, a civic culture and a territorial belonging and identity.

'Social cohesion' is generally considered to be a good thing. Harmonious groups, communities and societies are often described as 'socially cohesive'.[96] This has prompted considerable interest in understanding how groups achieve greater social cohesion, so that this potentially transformative condition can be managed towards developmental ends. Socially cohesive urban areas tend to be those that share common values and a civic culture; maintain social order and social control; foster social solidarity while reducing wealth disparities; build social networks and generate social capital; as well as develop a territorial belonging and identity[97] with which Cape Town is uniquely and historically endowed.

From an urban governance perspective, social cohesion is that much sought after condition when the component parts of a city somehow contribute to a collective urban project and enhanced well-being, ensuring that there is tolerance and understanding among diverse social groups. Social cohesion among different communities within the city can contribute to all stakeholders buying into a shared vision for the city and how to approach city-wide challenges such as persistent poverty and inequality, high unemployment, social marginalisation, high crime activity and so forth.

Cape Town is one of the fastest growing metros in the country. About 16 000 to 18 000 households – an estimated 50 000 people – migrate into the city every year.[98] Based on the growing demand for developable land – which is in excess of 9 000 ha per annum – it is clear that more and more people require this rapidly diminishing resource. As more people move into Cape Town – and into spaces with low entry barriers – informal settlements and townships are becoming increasingly dense. In turn, the lower middle classes are moving further from the city – towards the urban fringes – as the diminishing developable land pushes up housing prices and affordable housing options are pushed further away from the city centre.

Thus, the predominantly black urban communities remain settled along the spatial delineations of the apartheid era[99] – on the urban fringes. This perpetuates an environment where different socio-economic groups are settling in spaces that are still largely racially identified and that limit social interactions between the various groups. Khayelitsha, Nyanga, Langa, Gugulethu, Mitchells Plain, and Elsies River are the poorest communities with regards to provision of infrastructure and health care, and contain some of the highest population densities as well as considerable social infrastructure

95. This piece was written by Creative Consulting & Development Works, April 2011. with inputs from Jeremy Marillier from the City of Cape Town.
96. Anton De Witt in his contribution to the National Social Cohesion Concept identifies five dimensions – belonging, inclusion, participation, recognition and legitimacy – which, if enacted, will most likely produce social cohesion.
97. Kearns, A & Forrest,R. 2000. 'Social cohesion and multi-level urban governance' in Urban Studies. Vol. 37, No. 5–6, 995–1017.
98. Adlard, G, 2010, *Poverty, Urbanisation and Informal Settlements in Cape Town: A Handbook for Local Government Policymakers and Practitioners*. Cape Town.
99. Swilling, 2010.

backlogs. The persistence of such inequalities detracts from social cohesion in the city.

The concentration of lower income populations in particular locations also exacerbates levels of crime in these areas. High crime rates challenge the building of a consensual social order and control, fragment value systems, threaten the achievement of a common civic culture, and allows for accruement of informal political and economic power. The absence of a consensual and maintained social order may lead to a breakdown of relations giving rise to vigilante groups who aim to monopolise violence if there is a perceived absence of effective local government, especially when there is a failure to maintain a degree of social control. This trend is consistent with international urban trends, and poses a threat to the social cohesion of these communities.

These challenges have quite deep structural roots, such as the apartheid legacy, and a dysfunctional education system that feed the large numbers of insufficiently skilled, unemployable youth.

Economic and political tensions in the region have created an influx of economic immigrants and political refugees into South Africa, including Cape Town. Refugees and the majority of the international economic migrants in the city compete for the same limited number of informal job opportunities. Hence, despite an increase in awareness and education programmes, there is limited evidence that these have reduced xenophobic sentiment. Foreign economic migrants continue to be victimised in informal settlements such as Du Noon, a long-standing hot-spot for xenophobic violence.

Growing divisions and disparities between income groups, ethnicities, political parties, language groups, or any other demographic variable (such as nationality), can constitute social cleavages vulnerable to exploitation for political (or other) purposes. Alternatively, demographic diversity can be harnessed to positively shape a future Cape Town that responds to its residents' diverse needs and aspirations, and can be used in the pursuit of the City's development goals.

Acknowledging and understanding the state of community relations across the metropolitan area and the threats to social cohesion are therefore useful when crafting policies, interventions, and institutions that hope to shape the urban environment towards identified developmental objectives.

There is some progress towards achieving greater social cohesion in Cape Town. Empirical evidence suggests that the City of Cape Town has improved its service delivery in a number of areas over recent years. Even if some claims of socio-economic improvements are contested, there is a growing perception that the City of Cape Town has improved its service delivery record and increased trust among its varied constituencies over the past three years.

The City of Cape Town expanded its presence across the city through the establishment of 22 permanent offices, including in informal settlements. These help to formalise civic engagement in these communities and contribute to more accountable, citizen-orientated and community-based participation. Further expansion of permanent urban governance structures to informal settlements will provide access to non-partisan conduits for addressing social issues.

The success of big international events such as the 2010 FIFA World Cup™ and the annual Cape Town International Jazz Festival is a reminder that the advancement and achievement of a socially cohesive Cape Town are the work of everyone – individuals, households and communities. The challenge is how to make this an ongoing, collective awareness and concern; how to reflect continuously on the local policies, institutional and governance approaches, strategies and mechanisms (including municipal budget prioritisation) that are to be put in place with a view to:

- leveraging local economic growth and development efforts to combat social exclusion and, instead, help lay a basis for social cohesion;
- orientating infrastructure planning as a strategy to reduce social exclusion and strengthen social cohesion;
- motivating and supporting workplaces and communities to embrace openness and diversity, to strengthen relations, nurture solidarity within and between neighbourhoods, and go beyond combating social exclusion between individuals of different races, genders, cultures, religions and national/geographic origins; and
- strengthening social fabric at the community and city level, for example through community organisations, to create strong networks, build levels of trust and habits of cooperation (also referred to as social capital) within and between neighbourhoods and communities across the city.

These social goals give rise to a number of questions about how best to nurture them: How can the City of Cape Town best address these challenges? How can it best create (and locate) a programme that is cross-cutting and multi-dimensional, including political, economic and socio-cultural aspects,[100] to advance social cohesion? And how can the political leadership in Cape Town best support such a programme by building trust in local governance structures and processes, as well as among politicians? How can businesses in Cape Town support these social goals, going beyond race and cultural integration in the workplace? And can corporate social investment (CSI) programmes support social cohesion challenges in a more coherent way?

Non-governmental organisations (such as the Centre for Conflict Resolution or IDASA) are able to provide local expertise to build cross-cultural understanding and cooperation, going beyond diffusing sporadic conflicts involving migrant communities such as the Somali and Bangladeshi traders. At a community level, civic associations have a key role to play, and need to revitalise themselves as instruments for (re)building a social fabric that is inclusive and respectful of the constitutional rights of all current and future Cape Town residents.

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100. See Jenson, J. 2009. Defining and Measuring Social Cohesion. *Social Policies in Small States Series No 1*. London: Commonwealth Secretariat & UNRISD. [Online] Available: http://publications.thecommonwealth.org/Uploaded/Products/ProductInfoPDF/Defining%20and%20Measuring%20Social%20Cohesion825.pdf.

Cape Town's economic outlook[101]

As the world becomes more and more urbanised, the successful city of the future will need to aggressively pursue two goals: managing resources from a sustainable perspective, and creating an attractive economic and social environment in which citizens, companies and governments can live, work and interact.[102]

A growing economy that benefits all the people of Cape Town is a prerequisite for attaining and achieving the objectives of a more resilient and sustainable city. A key challenge for Cape Town is to build a competitive economy that is also inclusive.

A more competitive economy which fosters labour-absorbing growth and social entrepreneurship opportunities in order to respond to Cape Town's unique challenges is also a resilient economy that drives and supports economic development into the future.

Cape Town's functional economic area extends beyond its municipal boundaries, and includes Saldanha, Malmesbury, Paarl, Stellenbosch and Hermanus. The interdependencies include a common consumer catchment base, a commuting labour force, four tertiary education institutions, agriculture and tourism, as well as the regional economic infrastructure, including Cape Town International Airport, the Port of Cape Town, Cape Town Stadium, Cape Town International Convention Centre, Cape Town Film Studios, Robben Island (a world heritage site) as well as a second harbour at Saldanha.[103] That said, this chapter reviews some of the key dynamics of the economy of Cape Town, and the main challenges it faces in seeking to build a competitive and resilient economy.

101. Organisation for Economic Development and Cooperation (OECD). 2008. *Territorial Reviews: Cape Town, South Africa.* Paris: OECD. [Online] Available: http://www.oecd.org/document/60/0,3746,en_2649_37429_42268732_1_1_1_37429,00.html.
102. This chapter draws heavily on the work done for the City of Cape Town EDS especially in relation to the analysis of the city's economy and of the key issues to focus on in the short to medium term future. The EDS is still in draft. (City of Cape Town, 2011, *Draft Economic Development Strategy*)
103. Berthon, Bruno & Guittat, Philippe. 2011. Rise of the Intelligent City. *Accenture Outlook No 2*. [Online] Available: http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture-Outlook-Rise-of-the-Intelligent-City-Sustainability.pdf.

> With its growing attraction as a design, energy and technology business hub, Cape Town is well-placed to become the leading entrepreneurial innovation hub in Africa.

The chapter focuses on the growing challenge of youth unemployment, the skills mismatch between (prospective) workers and the emerging needs of the local economy, the low informal-sector activity, global competitiveness specifically in relation to positioning itself as a centre for knowledge-based industry, and more effectively integrating the SMME sector with the Cape Town economy and value chains.

Although relatively strong, the economy is also experiencing some shifts that have significant implications for the ability to absorb residents with diverse skills. This presents challenges and opportunities for economic and social innovation in the city, and specifically, for creating opportunities for employment and social integration.

A study on Cape Town's global competitiveness emphasises the need for the City to use its expenditure decisions and regulations to advance investment in the city, create a more robust local economy with increased capacity to absorb labour, and reduce high unemployment levels. While Cape Town is better known as a lifestyle and tourism destination, it will need to strengthen its profile as a place of production, commerce and trade. A concomitant survey of views among businesses in the city highlighted the potential for strengthening economic activity clustered around themes of innovation, knowledge and technology, design and creativity, low-carbon/resource efficiency and niche engineering, among others.[104]

With its growing attraction as a design, energy and technology business hub, Cape Town is well-placed to become the leading entrepreneurial innovation hub in Africa. It needs to bring together large corporate entities, business incubators, funders, industry experts and academic specialists in order to create an environment that stimulates, supports and nurtures entrepreneurs, enables start-ups to find mentors and funding, allows venture capitalists to engage with cutting-edge, frontier ideas, and creates employment opportunities.

Cape Town's economy has a number of key positives on which to build. It is known to have solid economic infrastructure and a good service base – electricity, water – with which to attract international and national industry. The airport and harbour are high-standard strategic economic infrastructure that support import and export industries. The quality and beauty of the natural environment raises Cape Town's profile as a liveable city, with the potential to attract high-skilled and creative labour, and international and national companies.

Cape Town – as the rest of South Africa – experienced a number of positives during 2009 and 2010, linked primarily to the preparations leading up to, and then the demand for services during the 2010 FIFA World Cup™. Infrastructure-led growth has underpinned Cape Town's economic development strategy over the last few years. Both the construction and tourism industries experienced high growth and took the lead in terms of job opportunities created over this period.

In many respects, the infrastructure-led growth path and the city's diverse economy cushioned Cape Town (and the South African economy in general) from the worst effects of the global economic crisis that commenced in 2008. Semi-skilled and unskilled workers were in fact able to obtain jobs in the construction industry amid heavy job losses in the manufacturing industry and declines in the demand for the traditional exports to developed economies around the world.

However, the job opportunities in the construction industry have unfortunately not been sustainable in the long term, and have diminished again. Government spending on social programmes also declined as development aid and foreign direct investment slowed due to the contraction of developed economies.

Following the 2010 FIFA World Cup™, the tourism industry, in turn, has also felt the effects of the global financial crises and the decline in tourism spending. The Cape Town economy will need to find ways to support the development of diverse channels for people to build sustainable livelihoods, including through support for the informal economy.

The danger of not addressing Cape Town's specific economic and social challenges is that it may deepen existing feelings of marginalisation and disconnection from the city may deepen. If nothing is done to address these challenges, the implications of these trends could include:

104. Turok, B. et al. 2011, *Cape Town's Global Competitiveness.* Synthesis Report for the City of Cape Town.

- Increased disparities between rich and poor; when cities already have high levels of inequality, spatial and social disparities may increase with economic growth.
- High levels of urban inequality could have a dampening effect on economic growth, and could contribute to a less favourable environment for investment.
- Low incomes and thresholds create challenges for retailers to market and sell sufficient volumes to maintain growth.
- Where spatial and social divisions are pronounced, a lack of social mobility could reduce Cape Town's poorer residents' participation in the (formal) economy and their integration with society.
- High levels of unemployment in the formal economy combined with low access to other livelihood opportunities and limited access to social services could have a negative impact on human development and quality of life, including health, nutrition, gender equality and education.

Cape Town's economic footprint within the national context

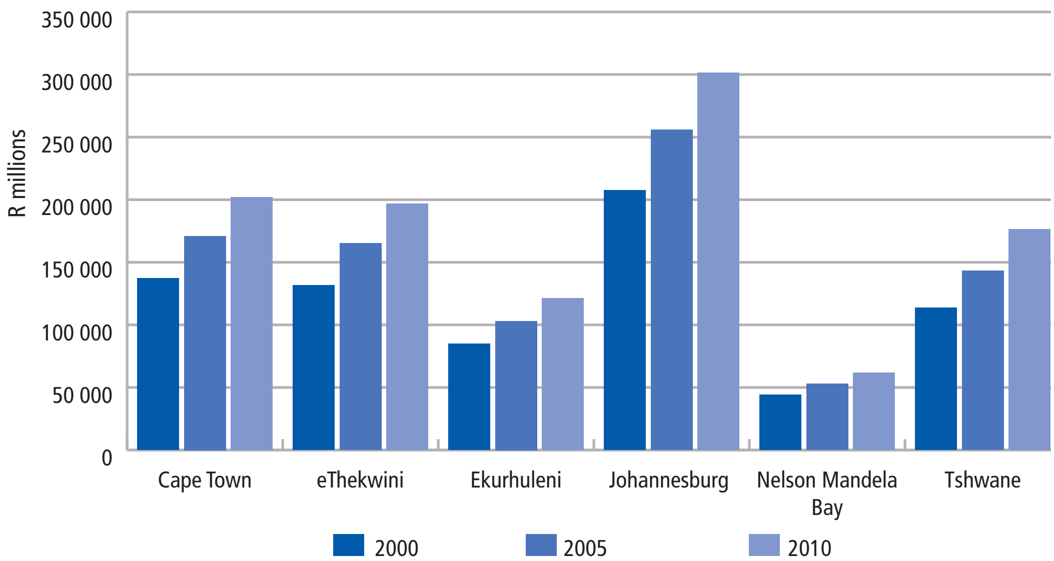
Cape Town's economic performance has remained relatively strong over the last decade and has grown steadily from 2000 to 2009. This is reflected in the GDP for the city as well as in a rising GDP per capita (figure 4 and figure 5).

From 2000 to 2010, Cape Town's contribution to the regional and national economic output has also increased steadily. The city has consistently contributed between 71% and 75% of economic output, as measured by gross value added (GVA)[105] – to the Western Cape's economy, while contributing between 10% and 11% to the national economy (see table 12, and illustrated in figure 6).

Together, the six major South African metropoles contributed 57,86% of the total national economic output in 2010, illustrating two things: (i) the geographic concentration of economic output in South African cities – and (ii) the role of cities in national economic development. Among the metros,

> "Cape Town's economic performance has remained relatively strong over the last decade and has grown steadily from 2000 to 2009."

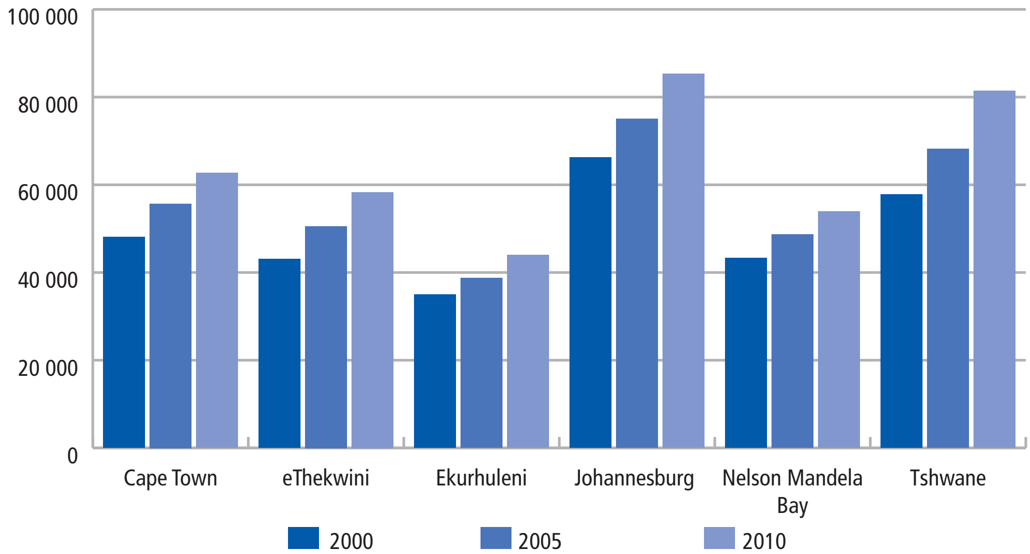
Figure 4: Gross domestic product of select metros for 2000, 2005, 2010, with 2005 constant prices, in R' millions.



Source: Regional Explorer, Global Insight, 13 July 2011

105. "Gross value added (GVA) is an important measure of economic activity (or net economic output) at local or regional level. It can indicate the state of the local economy, including its size, rate of growth and average incomes, which makes useful comparison between different areas possible. GVA is also available for individual sectors and can be used to show the industrial composition of different areas." SACN 2011, p 20.

Figure 5: *GDP per capita for select metros 2000, 2005, 2010, with 2005 constant prices*



Source: Regional Explorer, Global Insight, 13 July 2011

Johannesburg had the largest economic footprint, contributing 16,57% to South Africa's gross value added of R271 644 million. With a GVA of 11,12%, Cape Town made the second largest contribution to the national economy in 2010, compared to Tshwane (9,64%), Ekurhuleni (6,47%) and eThekwini (10,74%), while Nelson Mandela Bay contributed 3,31% to the national economic output for 2010.[106]

The data and figures show that Cape Town's contribution to the national economy has grown incrementally – from 10,5% in 2001 to 10,9% in 2009. The key challenge is to maintain such growth into the future and support a concomitant increase in job opportunities for the variety of skills sets in the city's economy. This challenge (discussed in more detail below) requires a better match between the skills supply and the industry demands, especially the supply to the growing finance and business services industries, as well as creating multiple new streams for semi-skilled and unskilled workers to earn a living.

While the city's economy has grown steadily and Cape Town was the second biggest economy in 2010 after Johannesburg, inequality has stubbornly persisted and the benefit of this economic growth has not filtered through to the poorer communities. The city's Gini coefficient,[107] which measures the degree of income

"While the city's economy has grown steadily and Cape Town was the second biggest economy in 2010 after Johannesburg, inequality has stubbornly persisted and the benefit of this economic growth has not filtered through to the poorer communities."

Table 12: *Gross value added for Cape Town in R' million at constant 2005 prices, 2000-2010*

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
National total	1 157 491	1 191 042	1 236 270	1 273 129	1 330 390	1 401 067	1 478 492	1 561 410	1 619 175	1 594 337	1 639 371
Western Cape	162 523	169 453	176 363	182 316	192 912	204 661	216 711	230 619	241 023	237 653	243 544
Cape Town	122 285	128 391	132 655	136 831	144 747	153 192	162 370	172 569	179 747	177 926	182 280

Source: Regional Explorer, Global Insight, 13 July 2011

106. Data extracted from Regional Explorer, Global Insight, on 13 July 2011.
107. A Gini coefficient of 0 represents perfect equality while a Gini coefficient of 1 represents total inequality.

inequality among the city's inhabitants, was 0,58 in 2010, which, while high by international standards in terms of which anything above 0,5 is unacceptably high, is low compared to the 2010 national Gini coefficient of 0,65 and the coefficient of other major South African cities (having ranged between 0,61 for Tshwane and 0,63 for Ekurhuleni).[108]

Income inequality in Cape Town continues to display a racial dimension, where the average income of a white household is roughly seven times greater than that of a black African household, and nearly three times that of a coloured household. The racial profile of poverty also finds expression in the city's spatial dimensions. The city's poorer black and coloured population live on the city's outskirts where access to affordable quality services and amenities is limited and from where it is more expensive and time-consuming to commute to areas where the city's employment opportunities are located.

Challenges to address

Multiple factors characterise the city's economy. The following section examines some of the key challenges that will need to be addressed.

These include:

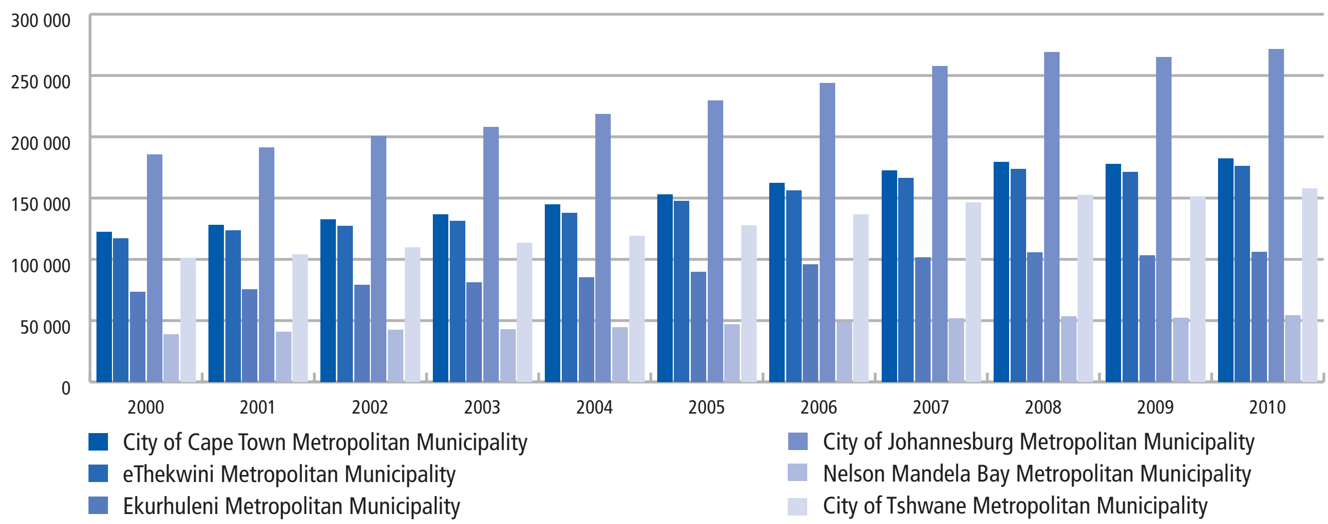
- supporting the creation of a cross-section of jobs, from highly skilled to semi-skilled and unskilled;
- addressing youth unemployment;
- addressing the skills mismatch;
- establishing infrastructure for a knowledge economy;
- integrating the informal sector
- supporting SMMEs with the local economy; and
- considering the spatial implications of shifts in the sectors that drive the Cape Town economy, encouraging a closer alignment between spatial location of employment opportunities and the areas where people with targeted skills reside.[109]

Shifts in the key sectors that drive the economy

Cape Town's economic make-up is relatively well diversified, and constitutes a range of industries, including manufacturing, agriculture, construction, finance and business services (such as call centres), and retail. General government (with Parliament, Province and the City of Cape Town) also provides a sizeable proportion of jobs in the city. The economy is, however,

"Cape Town's economic make-up is relatively well diversified, and constitutes a range of industries."

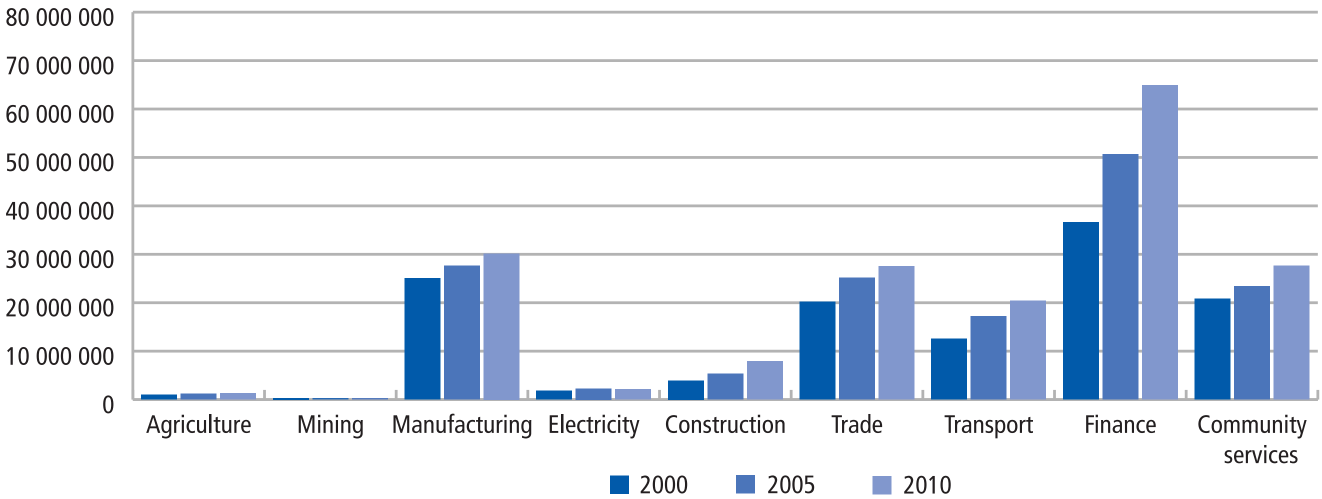
Figure 6: *Gross value added (GVA) at 2005 constant prices, in R' million for select South African metros.*



Source: Regional Explorer, Global Insight, 13 July 2011

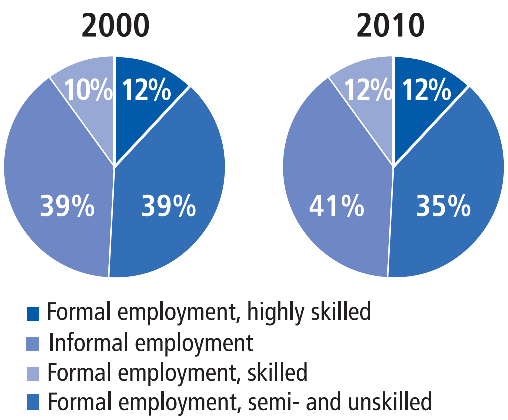
108. Data extracted from Regional Explorer, Global Insight, on 13 July 2011.
109. City of Cape Town. 2010. Draft Analysis of the Cape Town Spatial Economy: Implications for Spatial Planning. Unpublished paper. [Online] Available: http://www.capetown.gov.za/en/sdf/Documents/Nov2010/AnalysisOfSpatialEconomyS.pdf.

Figure 7: *Cape Town gross value added (GVA) in R' million for 2000, 2005 and 2010, at 2005 constant prices.*



Source: Regional Explorer, Global Insight, 13 July 2011; City of Cape Town, A general overview of the Economic Development Strategy, 3 February 2011, Courtesy of Dilshaad Gallie, Economic and Human Development Department.

Figure 8: *Employment by skill levels in the Cape Town economy, 2000, 2010.*



Source: Quantec Report: Standardised Regional: Labour: Employment by industry and skill level 2000–2010 (23 industries).
Accessed: 26 July 2011 courtesy of Dilshaad Gallie, Economic and Human Development Department.

dominated by the financial services industries that are increasingly setting the pace for economic growth in the city.

Figure 7 shows that Cape Town is progressively shifting towards the services industries, with the largest areas of growth being finance, business services, trade, catering, accommodation, tourism, transport and communication. It is clear from figure 7 that the service sector now drives the Cape Town economy, with the biggest contribution to the city economy coming from the finance and business services.

The finance, insurance, real estate and business services industry is one of the city's largest employers, and the sector is the largest employer of highly skilled and skilled labour. In 2010 the services sector employed 36% of the city's highly skilled labour and 29% of the city's skilled labour, as well as 11% of the city's semi-skilled and unskilled labour. Important to note is that the services sector's growth is capital intensive: In 2009, this sector accounted for 27% of the city's gross domestic fixed investment and capital stock, and employed 21% of the city's labour force.[110]

110. *Quantec Report: Standardised Regional: Labour: Employment by industry and skill level 2000-2010 (23 industries)*. Accessed 26 May 2011.

By comparison, the manufacturing sector's means of production is more labour intensive than the finance, insurance, real estate and business services sector, and in 2008 accounted for 19% of the city's gross capital formation and employed 15,48% of the city's labour force. Approximately 51% of this labour force was unskilled and semi-skilled workers.

In turn, the wholesale and retail trade, catering and accommodation sector is the city's largest employer and employs more unskilled and semi-skilled workers than any other sector. It is one of the economy's least capital intensive sectors as it accounted for 8,8% of the city's gross capital formation in 2008 and employed 17,66% of the city's labour force.[111]

The shift to a service economic sector – especially one focussed on financial services – forecasts a proportionate decline in employment opportunities for semi-skilled and unskilled workers – even if the absolute number of semi-skilled and unskilled jobs increases – as the economy increasingly requires skilled and highly skilled employees. Figure 8 already shows the decline in formal employment of semi-skilled and unskilled labour from 39% in 2000 to 35% in 2010, and the growth in formal employment of skilled labour from 39% in 2000 to 41% in 2010.

Unless concerted attempts are made to create employment or skills enhancement opportunities for semi-skilled and unskilled workers, the largest proportion of the working age population will become unemployable in Cape Town, and will be economically and socially more marginalised.

As far as the predicted increased demand for skilled and highly skilled employees is concerned, the beauty, climate and recreational amenities of Cape Town will help firms to attract these workers from the rest of South Africa and the world. A second advantage is the availability of matriculants and university graduates, particularly for companies in the financial services sector. However, as noted further below, there needs to be a closer match between the quality of graduates the tertiary institutions produce and the skills sets that employers require.

"Unless concerted attempts are made to create employment or skills enhancement opportunities for semi-skilled and unskilled workers, the largest proportion of the working age population will become unemployable in Cape Town, and will be economically and socially more marginalised."

Table 13: *Employment and unemployment in Cape Town, 2008-2010*

	Cape Town			Change 2008 to 2010	
	Jul-Sep 2008	Jul-Sep 2009	Jul-Sep 2010	Number	%
Population 15-64 years	2 232 920	2 330 793	2 300 344	67 424	3,0
Labour force	1 499 001	1 573 826	1 553 664	54 663	3,6
Employed	1 185 871	1 197 323	1 152 568	-33 303	-2,8
Formal sector (non-agricultural)	993 555	988 394	954 800	-38 755	-3,9
Informal sector (non-agricultural)	120 714	134 240	123 202	2 488	2,1
Agriculture	13 161	3 932	9 940	-3 221	-24,5
Private households	58 441	70 756	64 626	6 185	10,6
Unemployed	313 130	376 503	401 096	87 966	28,1
Not economically active	733 919	756 967	746 680	12 761	1,7
Discouraged workseekers	5 504	5 682	5 233	-271	-4,9
Other not economically active	728 415	751 285	741 447	13 032	1,8
Unemployment rate (%)	20,9	23,9	25,8	4,9	–
Employed/population ratio (absorption %)	53,1	51,4	50,1	-3,0	–
Labour force participation rate	67,1	67,5	67,5	0,4	–

Source: Statistics SA, Quarterly Labour Force Survey, Quarter 3 (Sept) 2010

111. City of Cape Town, *Draft Economic Development Strategy. Data sourced from Quantec. Report: Standardised Regional: Labour: Employment by industry and skill level 2000-2010 (23 industries). Accessed: 26 July 2011*

Furthermore, these aforementioned advantages are countered by the challenges with regard to social cohesion and the prevalence of drug and violent crime in Cape Town. Also, Cape Town's attraction for highly skilled workers is set against the wider choice of employer, better career prospects and higher salaries in Gauteng and globally. Poor social cohesion, mainly racially based, may also render Cape Town a less open and less inviting social environment for black Africans.

> "Poor social cohesion, mainly racially based, may also render Cape Town a less open and less inviting social environment for black Africans."

Growing demand for jobs

Cape Town has a growing (young) population who may drive the demand for consumer goods and services, provided they have access to the ability to earn an income and have the requisite disposable income. Cape Town's population grew by 22,26% between 2001 and 2009, largely due to domestic in-migration from the broader Western Cape (66%), Eastern Cape (17%) and Gauteng (7%).[112] This implies an impending increase in the demand for jobs amid shrinking labour absorptive sectors (such as manufacturing).

Table 13 shows that, in Cape Town in 2010, 82,8% of the total number of employed persons worked in the formal sector, with 10,6% in the informal sector and 5,6% in private households. Between 2008 and 2010 – the city's rate of unemployment edged higher than the national unemployment rate. According to Statistics SA's Quarterly Labour Force Survey, Quarter 3 of 2010), the city's unemployment rate was 28,1%, compared to the national unemployment rate of 25,3% (see table 13 and table 14). From 2008 to 2010, the city lost 3,9% of jobs in the formal sector (non-agricultural), close to 25% in the agriculture sector, and about 2% in the informal sector, compared with the national economy's shedding of 5,6% of jobs in the formal economy and 1,5% of jobs in the informal economy.

In summary, Cape Town lost close to 90 000 jobs from 2008 to 2010, and the number of unemployed in the city increased by about 28%, compared to the approximately 6% increase of the unemployed at the national level (see table 1).

This raises questions as to how people who dropped out of the employment market managed to support themselves, and how the City can create an environment that supports alternative livelihood strategies, including higher reliance on the informal sector.

Table 14: *National employment and unemployment figures, 2008-2010*

	Cape Town			Change 2008 to 2010	
	Jul-Sep 2008	Jul-Sep 2009	Jul-Sep 2010	Number	%
Population 15-64 years	31 032 000	31 562 000	32 072 000	1 040 000	3,4
Labour force	17 965 000	17 374 000	17 371 000	-594 000	-3,3
Employed	13 811 000	13 133 000	12 975 000	-836 000	-6,1
Formal sector (non-agricultural)	9 575 000	9 291 000	9 043 000	-532 000	-5,6
Informal sector (non-agricultural)	2 205 000	2 029 000	2 172 000	-33 000	-1,5
Agriculture	776 000	660 000	640 000	-136 000	-17,5
Private households	1 255 000	1 154 000	1 119 000	-136 000	-10,8
Unemployed	4 154 000	4 241 000	4 396 000	242 000	5,8
Not economically active	13 066 000	14 188 000	14 702 000	1 636 000	12,5
Discouraged workseekers	1 081 000	1 654 000	2 033 000	952 000	88,1
Other not economically active	11 985 000	12 534 000	12 669 000	684 000	5,7
Unemployment rate (%)	23,1	24,0	25,3	2,2	
Employed/population ratio (absorption %)	44,5	41,6	40,5	-4,0	
Labour force participation rate (%)	57,9	55,0	54,2	-3,7	

Source: Statistics SA, Quarterly Labour Force Survey, quarter 3 (Sept) 2010

112. Boraine et al., 2006 cited in OECD, 2008:53.

Youth unemployment and a skills mismatch
In South Africa, unemployment figures among youth, i.e. those between 15 and 24 years of age, are exceptionally high, and are linked both to the low through-put of learners to tertiary education institutions as well as the decreasing employment opportunities for semi-skilled and unskilled labour.

Approximately one out of every two economically active persons between 15 and 24 years of age in Cape Town is unemployed (see table 15). Youth unemployment in Cape Town is marginally lower than in Johannesburg, although the two cities are more or less on par in terms of the number of employed youth as a proportion of the population. While eThekwini has a much lower youth employment rate, this must be read against the backdrop of a much higher number of discouraged work-seekers and much lower absorption of youth (16,5%) into the eThekwini economy.

Nationally, the education system continues to produce learners with low-level competencies, while the number of job opportunities for low-skilled and semi-skilled persons is contracting. Thus, the youth unemployment rate in Cape Town is pushed higher as the skills produced by both the secondary and tertiary education system diverges from those required by an economy that is progressively shifting to finance and business services, requiring good communication skills, the ability to process and evaluate large amounts of data, and the conceptual skills to apply information and knowledge to new situations.

A good proxy indicator of the quality of education is students' performance in mathematics and sciences. In general, South African learners' science and maths performance has been poor. In 1995, pupils from 41 countries, including South Africa, were assessed at three different grade levels to compare their mathematics and science skills. South African pupils performed significantly below the international average across all the grade levels, and attained scores below those of other, comparable newly developed countries, such as Malaysia, the Philippines, and Chile.

Up until 2007, only 5-6% of all matric candidates passed higher-grade mathematics, while the country needs about double that through-put.[113] Government has since instituted the Dinaledi programme, which targets around 500[114] select black schools nationally for focused resource-injections, including building

"The youth unemployment rate in Cape Town is pushed higher as the skills produced by both the secondary and tertiary education system diverge from those required by an economy that is progressively shifting to finance and business services."

__Table 15:__ Youth employment and unemployment in the three major metros, 2010

	Cape Town	eThekwini	Johannesburg
	Jul-Sep 2008	Jul-Sep 2009	Jul-Sep 2010
Population 15-24 years (Youth)	628 564	758 186	749 343
Labour force	265 328	178 041	338 678
Employed	130 221	125 302	155 198
Unemployed	135 107	52 739	183 480
Not economically active	363 236	580 145	410 665
Discouraged workseekers	848	46 449	11 425
Other not economically active	362 388	533 696	399 240
Unemployment rate (%)	50,9	29,6	54,2
Employed/population ratio (absorption %)	20,7	16,5	20,7
Labour force participation rate (%)	42,2	23,5	45,2

Source: Statistics SA, Quarterly Labour Force Survey, Quarter 3 (Sept) 2010

113. http://transcripts.businessday.co.za/cgi-bin/transcripts/t-showtranscript.pl?1191451767.
114. The number of schools in the programme continues to grow as corporates have begun to sponsor specific schools and bring them into the Dinaledi programme. *Volkswagen 'adopts' Dinaledi school.* Available online: www.southafrica.info/about/education/vwdinaledi-140109

knowledge and skills among mathematics and physical sciences teachers – with a view to getting more (black African in particular) higher-grade maths passes.

Western Cape and Cape Town schools are part of this programme, which is supplemented by the Western Cape Education Department's creation of a new public school specifically aimed at learners with special talents in mathematics, science and technology, called the Cape Academy of Mathematics, Science and Technology in Constantia, Cape Town.[115]

However, to have any kind of significant impact, these types of programmes will have to be replicated more widely, while qualified and skilled maths and science teachers are needed in every school. Given that employment opportunities in finance and business services are increasing, the challenge for Cape Town is to ensure that it can meet the demand for these skills sets.

"Given that employment opportunities in finance and business services are increasing, the challenge for Cape Town is to ensure that it can meet the demand for these skills sets."

It may well be in the interest of the City of Cape Town to explore how it can encourage local businesses to support maths and science skills upgrade in more Cape Town schools, and nurture the skilled (and knowledge-industry) workers of the future. This could include short workplace-based internships, or competitions that challenge schools and pupils to design products that meet specified needs.

Connectivity in schools has elsewhere been shown to make a significant impact on student achievement in all subject areas and grades while also providing unprecedented opportunities for ongoing and sustainable professional development. Also, access to connectivity is a stepping stone towards developing information literacy, and, in today's media-rich environment and in preparation for a more connected future world, schools need to be connected to high-speed broadband.

To date, very few South African schools have access to the internet, let alone a (high-speed) broadband connection.[116] State-owned Sentech announced plans to spend R814 million over the next three years to build a national wireless broadband network. The plan will involve providing internet access to schools, clinics and underserviced rural and municipal areas. With European Union support, the national Department of Science and Technology is also looking to connect rural communities and schools using wireless mesh networks.[117]

***Table 16:** South African employers' rating of attributes associated with basic skills and understanding*

Attribute	Satisfaction rating ("what you get")	Importance rating ("what you expect")	GAP
Ability to access and find information	3,5	5,0	1,45
Written communication skills	3,2	4,5	1,34
Ability to use information	3,4	4,6	1,23
Oral presentation skills	3,1	4,3	1,20
Ability to handle large amounts of information	3,4	4,5	1,17
Technical ability	3,3	4,4	1,08
Numeracy or quantitative literacy	3,5	4,5	1,01
Ability to use new information	3,5	4,5	0,99
Computer literacy	3,6	4,6	0,99
Proficiency in English	3,5	4,4	0,98
Prior exposure to work	3,5	3,8	0,81
Knowing the organisation	3,1	3,8	0,77

Source: Griesel, H & Ben Parker, 2009

115. For more information on the academy see http://www.capegateway.gov.za/eng/yourgovernment/gsc/4186/services/11473/48401.
116. None of the Dinaledi programme schools have been connected to date.

While this is a step in the right direction, schools should ideally be getting high-speed fibre connections.[118] Meanwhile, learners in Cape Town can access the internet at the 103 libraries across the city. (More below on connectivity and its importance to Cape Town's economy and growth.)

While a number of factors affect student performance, the quality of education constitutes a major challenge in preparing students for work. The current education system is effectively failing students, especially those from black African and coloured communities, and is reproducing new generations of poor citizens, while it should actually be building skills and knowledge to enhance young people's capacity to improve their quality of life.

The growing surplus pool of unskilled and semi-skilled labour places strain on social services and sparks tension between communities competing for scarce resources. Furthermore, a lack of skilled labour constrains the economy's growth and social development.

A national study of what employers expect and what they perceive they get shows that employers have a nuanced understanding of the role of higher education, and that graduates currently fall short of their expectations.[119] Table 16 suggests some of the areas where the tertiary education sector could improve in preparing students for the world of work.

While some proficiencies can best be developed in the practice of work, such as exposure to work and knowing the organisation, the study reveals that the skills of graduates, and by implication also matriculants, fall short in areas that are of key importance to employers, notably communication skills, the ability to apply information and knowledge, as well as computer literacy. These are also precisely the skills needed by the finance and business services sector, which is and will be generating more and more employment opportunities in Cape Town.

“Learners in Cape Town can access the internet at the 103 libraries across the city.”

Table 17: *Cape Town households with internet access, 2007*

2007 Community survey	Black African	Coloured	White	Total
Internet at home	3%	9%	51%	19%

Source: Statistics SA Community Survey 2009

Table 18: *Cape Town households with internet access, 2009*

2009	Black African	Coloured	White	Total
Use internet services	20,13%	39,71%	71,08%	40,24%
Access only at home	0,36%	4,11%	18,47%	6,05%
Access at home and at other locations	3,68%	10,78%	37,99%	14,66%
Access only at other locations	16,09%	24,82%	14,62%	19,53%
Internet at home	4,04%	14,89%	56,46%	20,70%
At other locations	19,77%	35,60%	52,61%	34,19%

Source: Statistics SA, General Household Survey 2009

117. TechCentral, 2010, "Sentech outlines new broadband plan" Posted 25 March. Online available: http://www.techcentral.co.za/sentech-outlines-new-broadband-plan/22086/
118. Rasool, Farzana, 2010. "DST, EU connect rural SA," ITWeb, 21 September. Online available: http://www.itweb.co.za/index.php?option=com_content&view=article&id=37038:dst-eu-connect-rural-sa&tmpl=component&print=1
119. The study focused on a broad category of recent graduates, who mostly obtained undergraduate qualifications ranging from certificate, diploma and degree studies to honours degree. Masters and PhD graduates were not included. (Griesel, H & Ben Parker. 2009. *Graduate Attributes: A baseline study on South African graduates from the perspective of employers.*

Connectivity and access to broadband

In the World Economic Forum (WEF) Global Competitiveness 2010-2011 Report, South Africa is ranked 54th, nine places down from its 45th position in the 2009-2010 rankings.[120] From 2005 to 2010, the country dropped 14 places in the Global Competitiveness Index rankings with the biggest decline happening in one year, from 2009 to 2010.[121] In the WEF Network Readiness Index 2009-2010, South Africa is ranked 62nd (out of the 133 countries on the index), a drop of ten places from its 52nd ranking in 2008-2009.

While the report primarily ascribes South Africa's decline to improvements in the ranking of other countries (rather than the country's own poorer economic performance), the state of infrastructure is identified as one of the pillars implicated in South Africa's drop in ranking, needing upgrade beyond the recent improvements for the 2010 FIFA World Cup™.[122] Alongside concerns about secure electricity supply, special mention is made of declining access to telephone lines as a factor that has a negative impact on competitiveness rankings.

In spite of the big drop, however, South Africa remains highest ranked among African countries in terms of competitiveness and investors' confidence in the economy, and in the Network Readiness Index 2009-2010, South Africa and Mauritius are the only two African countries in the top half of the ranking.[123]

> "Internet uptake in South Africa remains constrained by price and has not been high enough to push South Africa up on international broadband rankings indices."

Internet uptake in South Africa remains constrained by price and has not been high enough to push South Africa up on international broadband rankings indices. The lowest prices for broadband in South Africa are often higher than the highest rates in Organisation for Economic Cooperation and Development (OECD) countries. These high prices not only impede the uptake of this technology by individuals and households but also mean that business uptake is less than optimal. OECD figures for 2009 show that in terms of broadband subscribers per 100 people, South Africa's penetration of 2,8 persons is significantly behind that of other, comparable middle-income countries such as Mexico (7,2), Poland (10,5) and Turkey (7,8).

Internet access at home

The 2007 Community Survey and 2009 General Household Survey show the locations where people in Cape Town access the internet. In 2009, about 40% of households had access to the internet, of whom about 20% had access at home. This represents a slight increase from the proportion of households in 2007 with internet access at home – at 19% (see tables 17 and 18).

There is no way of knowing what kind of internet connection households have at home, i.e. whether it is a high-speed DSL line, a 3G wireless connection via a cellphone, or indeed a dial-up connection (though dial-up connectivity has largely become obsolete). Given the low percentage of households in Cape Town with access at home only (6%), most people access the internet at work and/or via a mobile device (like a mobile phone). White households have the highest connectivity rates, but seem to have shifted to using (the more expensive) mobile 3G devices as their primary means for accessing the internet. This may be due to the fact that applications are processed faster than Telkom manages for landline applications.

Cape Town households with landlines at home

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120. World Economic Forum (WEF), 2010. *The Global Competitiveness Report 2010–2011*. Geneva. Online available http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2010-11.pdf.
121. South Africa moved up by four places to attain 50th position in the 2011-2012 report, remaining the highest-ranked country in sub-Saharan Africa and the second-placed among the Brazil, Russia, India, China (BRICs) economies. See "South Africa ranked 50 for global competitiveness – WEF," Available at http://www.bkcob.co.za/index.php/news/556-world-economic-forum-global-competitiveness-report-2011-2012.
122. The report is based on data and surveys involving 12 'pillars' , namely institutions, infrastructure, macro-economic stability, health and primary education, higher education and training, goods market efficiency, market size, labour market efficiency, technological readiness, financial market sophistication, business sophistication, and innovation WEF 2010, ibid, p.4.
123. World Economic Forum 2009, Africa Competitiveness Report 2009, p 21.
124. Claasen, Larry "Cities go in-house", *Financial Mail*, 12 October 2008. Online available: http://mybroadband.co.za/news/Telecoms/5547.html; Joburg awards broadband contract, http://www.southafrica.info/business/economy/infrastructure/broadband-030309.htm.

declined from 55% in 2001 (Census data) to 42% in 2009. This is a major concern as landlines are critical for facilitating affordable access to broadband internet, while fibre optic cable (to the home) remains extremely expensive for the majority of households, and mobile internet remains at the current inflated prices.

Expanding telecommunications infrastructure in Cape Town

In 2008, South Africa's four major cities – Tshwane, Johannesburg, eThekwini and Cape Town – initiated projects to deploy their own telecommunications networks.[124] The networks were expected to cost ratepayers about R1 billion. These municipal connectivity projects are part of the cities' new strategy to run their municipalities more efficiently.[125]

Municipalities are self-provisioning in order to reach underserviced areas within the city and the City of Cape Town, for instance, has connected all its libraries to the internet. Other municipalities have also encountered capacity constraints in trying to deploy similar services and paying commercial prices, and see the business case for providing its own networks. These networks bring potential costs-saving for the cities. eThekwini, for example, saved about R15m on telecom costs in 2006 through reduction in the municipality's phone bills.[126]

The broadband network also shows the municipalities' commitment to align with international trends in municipal broadband deployment. It is envisaged that the networks would reduce the carbon footprint of the cities through tele-networking, video conferencing and Wi-Fi hot-spots to alleviate traffic congestion and save costs. Dark Fibre[127] Africa has also laid more than 200km of fibre infrastructure during 2010 in some of South Africa's highest-density metropolitan areas, including Cape Town.

Broadband is increasingly recognised as a key driver of economic growth and wealth generation. The increased availability of bandwidth will benefit Cape Town's growing knowledge-based economy and help attract foreign investment and that could bring with it major economic and social benefits for the city.[128]

Facilitating better integration of informal entrepreneurs into the economy

The 2008 OECD study of Cape Town observed that the informal economy in Cape Town is involved in non-base activities[129] – mainly wholesale and retail trade, catering and accommodation, and private households – and these activities are not embedded in the economy's extensive production chains. In short, the Cape Town informal economy involve informal traders in survivalist

"The increased availability of bandwidth will benefit Cape Town's growing knowledge-based economy and help attract foreign investment and that could bring with it major economic and social benefits for the city."

125. The cities anticipate that the networks would allow for greater city-wide resources such as electricity efficiency by remotely reducing households usage – shutting down geysers for example – rather than blacking out whole blocks during load shedding. Other benefits include the collection of more accurate data on households' electricity consumption as meter readings can be done remotely, controlling traffic lights and putting closed-circuit television cameras in remote locations as well. (Larry Claasen 2008 in *Financial Mail*).
126. The networks also hold the potential to boost the local economy where spare capacity can be sold to telecoms companies, and could allow local companies access to these networks at wholesale prices. In Johannesburg, residents may well be able to gain affordable access to the internet and e-services as the service will be offered to residents at a reasonable fee.
127. "Dark fibre" is optical fibre infrastructure which has been installed but is not being used. As there is no light being transmitted in dark fibre it is also described as being "unlit". Dark fibre affords telecommunications operators the choice of selecting the technology of their choice, without having to incur the massive upfront capital expenditure of constructing the entire network infrastructure or having to rent an expensive managed service from an operator that may also be a competitor. *What is dark fibre?* Available online: http://www.dfafrica.com.
128. As more international fibre-optic cables land on South African shores and international bandwidth becomes cheaper, the major challenge becomes linking the rural and remote areas to international fibre networks. Apart from the municipal networks, other commercial operators are rolling out new networks and extending the terrestrial backhaul networks. Among others, MTN, Vodacom and Neotel have set up a partnership to build fibre backhaul networks between Johannesburg and Durban and between Johannesburg and Cape Town. These are under construction. "MTN to build fibre-optic backbone." 2007, South Africa.info. 10 September. Online available: http://www.southafrica.info/business/economy/infrastructure/mtnfibre-100907.htm.
129. Base sector industries are those that form the engines of the economy, the ones that drive economic growth in a city, region or country.

“In 2010, the Cape Town economy supported only about 11% informal employment opportunities of total employment in Cape Town, compared to a national average of 17% informal employment.”

businesses, operating mainly in sectors that will shed jobs if the key sectors of the Cape Town decline and consumer spending is down (as happens in an economic downturn).

One outcome of the tendency towards non-base economic activity in the Cape Town city-region, is that the informal sector activity is low compared to other middle-income metro-regions around the world, where as much as 30% of these regions' labour force may be employed in the informal sector.[130] A second is that, during an economic downturn, as has been the case with the global economy over the last three years, informal jobs that are not tied into the formal economy are shed more rapidly.

Similar to South Africa – whose informal sector is small compared to other developing countries – the Cape Town city-region's informal economy is also relatively small. Using employment as a proxy indicator for economic activity, Cape Town 'under-performs' when one examines the ratio of informal employment in relation to total employment at the city and national levels.

In 2010, the Cape Town economy supported only about 11% informal employment opportunities of total employment in Cape Town, compared to a national average of 17% informal employment.[131] In 2008, approximately 65% of Cape Town's informal jobs were created by three sectors: 40%, in the wholesale and trade sector, 15% in the construction sector, and 10% in community, social and personal services sector.

The Cape Town economy shed 2,5% of informal jobs between 2008 and 2010, compared to a 1,5% loss of jobs at the national level (refer to table 13 and table 14). Among others, this is explained by the predominance of informal sector jobs in non-base activities and their lack of integration with the city's key economic sectors. Factors that impede the informal sector's development are poor access to capital, knowledge, business mentorship and management skills, and information technology.

The city's formal economy is faced with a challenge in that it cannot generate sufficient employment and produce the conditions that would stimulate enough consumer demand for goods and services offered by the formal sector.

Hence, Cape Town is challenged to find ways to support and integrate informal sector activity with the city's formal economy to absorb more labour. It may well be that the SMMEs provide an avenue for growth of informal-sector jobs.

Anchoring SMMEs in the local economy

The majority of Cape Town's economic activity is driven by SMMEs. According to the Department of Trade and Industry's Companies and Intellectual Property Registration Office (CIPRO), approximately 75% of businesses in Cape Town are classified as SMMEs and they account for 50% of the city's economic output.[132]

However, as much as 93% of the total number of SMMEs are low-tech operations in mature, traditional industries, with very little interaction with large firms.[133,134] Isolation from large firms (which are most linked into research and innovation networks) also separates SMMEs from potential product or process innovation spin-offs that result from being linked into companies with access to research and development (R&D) capacity and networks. By default, SMMEs largely 'learn by doing' using 'trial and error', whereas they could be saving time and costs – and producing quality outputs – with better access to local and international knowledge networks.

The 2009 Global Entrepreneurship Monitor (GEM) Report found that Cape Town had the highest rate of early-stage entrepreneurship in South Africa. However, the survey also found that the vast majority of early-stage entrepreneurs have no job-creation aspirations. In both Cape Town and Johannesburg, only about 15% of start-ups expect to employ at least ten people within the next five years.[135]

130. OECD, 2008: 67.
131. Based on the ratio of informal as proportion total employment in Cape Town and nationally. See table 13 and table 14.
132. Information gathered by the Department of Economic and Human Development (EHD) in the City of Cape Town through electronic communications with CIPRO, November 2008. See City of Cape Town. "Cape Town – a force to be reckoned with," Online available at http://www.capetown.gov.za/en/ehd/Pages/EconomicStatistics.aspx.
133. OECD 2008.
134. In 2008, the total number of companies active within the city was recorded as 349 770. (City of Cape Town, 2009, p 7).

In an international comparative study, Colombia, China, Peru, Venezuela and Chile exhibit the highest prevalence rates of high-expectation entrepreneurship (HEE), and specifically entrepreneurs' expectation to grow their businesses to employ others. South Africa, on the other hand, is among the countries showing the lowest HEE rates over the period 2004-2009.

Interventions that encourage and stimulate businesses in the SMME sector to grow are essential if they are to contribute meaningfully to mitigating high unemployment in South Africa. It is critical to find those SMME operators who are keen to grow their businesses and support their development through the necessary financing and business support services.

Cape Town, with its growing attraction as a design, energy and technology business hub, is well-placed to become the leading entrepreneurial innovation hub in Africa. Its strategy is to bring large corporate entities, business incubators, funders and industry experts together to create an environment that stimulates, supports and nurtures entrepreneurs, enabling start-ups to find mentors and funding, and venture capitalists to engage with great ideas and create employment opportunities.

This may also be an unique opportunity to link these networks of large corporates and SMMEs with the informal sector as a way to spread the benefits of economic growth and create opportunities for income generation and employment. It may well be worth exploring how to integrate the informal sector with the value chains of these three emerging sectors, and building SMMEs' capacity to manufacture and export to the rest of Africa and the world.

The GEM Report suggests a number of ways in which SMME growth in South Africa is inhibited, and which may need attention at both national and city levels:

- Few business support centres specifically targeted the informal sector while government initiatives directed towards the formal sector are largely too generic and have limited success, with the exception of the National Manufacturing Advisory Centres (NAMACs).
- The regulatory environment and government policies treat small businesses the same as a large firm, which may be a dis-incentive to growth and employment creation.
- The 2001 GEM report recognised that entrepreneurship was not sufficiently reported on and celebrated in the public press and there are therefore few role models for aspiring entrepreneurs, particularly in the black African community. The report also found a lack of 'can-do' attitude, which was partly attributed to low levels of entrepreneurial experience and informal learning opportunities. Entrepreneurship was not seen as a legitimate or desirable career choice, as corporate or professional careers represented the pinnacles of achievement.
- The 2003 GEM Report argued that problems in the education and training system may well account for the low levels of entrepreneurial activity. South Africa was the only country in which education and training were the most frequently mentioned major weaknesses by the key informants. Education – or rather better quality education – could play a powerful role in helping to bring about an increase in entrepreneurial involvement of young adults.

Cape Town's economy in space

Cape Town's economy is experiencing a shift with respect to the sectors that drive its growth, and the city's pace of economic growth is increasingly being set by the financial services industries, with the largest areas of growth being finance and business services.[136]

The rapid growth of the financial and business services sector has very particular spatial implications for the city and its people: The finance, insurance and business services sector can afford to pay high property rental costs in the large commercial centres – such as the central city, Claremont/Newlands and Bellville – and is likely to continue concentrating in these areas. Predominantly, the sector attracts highly skilled people, who are generally well paid and can afford to live in more expensive neighbourhoods close to their

“South Africa was the only country in which education and training were the most frequently mentioned major weaknesses by the key informants.”

135. Acs et al, 2008 in Global Entrepreneurship Monitor, 2009. Tracking Entrepreneurship in South Africa: A GEM Perspective. Online available at http://www.gemconsortium.org/download.asp?fid=1033.
136. While the number of jobs in the manufacturing sector increased from 2000 to 2009, this sector's overall contribution to the Cape Town economy has shrunk in relation to the financial and business services sector.

workplaces. Conversely, as the cost of land and property increases, manufacturing activities are moving to more peripheral locations, including areas like Somerset West that are less optimal in relation to the metro south-east, where the largest concentration of potential semi-skilled and unskilled workers reside.

Furthermore, private investment is declining in some of the marginally more accessible, older industrial zones, such as Epping off the Voortrekker Road development corridor, largely due to concerns about crime in the surrounding areas. The net effect is increased difficulty for those workers who depend on public transport to access a declining number of semi-skilled and unskilled jobs.[137]

This will require the City of Cape Town to incentivise private investors to create a cross-section of higher and entry-level jobs, to locate semi-skilled and unskilled jobs closer to where the potential pool of workers reside, and to plan and implement new transport routes that connect these work and residential spaces in a more integrated network, which creates a seamless travel experience for workers in the city.

Into the future

This chapter touched on a wide range of issues that constrain the current ability of Cape Town's economy to absorb larger numbers of low-skilled, unskilled and semi-skilled workers, as well as the factors that will affect its future ability to meet an increased demand for high-skilled labour.

A focus on the immediate and medium-term needs is required both to address growing unemployment in the city successfully, and to avert the potential for negative impacts on social cohesion and Cape Town's future economic growth. Such a focus will include the following:

Stimulate innovative and dynamic small and medium sized enterprises in the local economy

Small and medium enterprises predominate in the Cape Town economy, and contribute up to 50% of the city's economic output. These enterprises are ideally located, in close proximity to four tertiary education institutions, but have so far not drawn on these knowledge resources and potential networks and linkages to (large firms with) international research and development to design unique and better quality products and/or to engineer more efficient or cheaper production processes. Firms become more competitive based on how well they diffuse and apply new knowledge. It is important for firms not just to maintain existing skills and capabilities, but also to try and build new ones with which to respond to, and potentially anticipate, the opportunities that technical change engenders.

As cutting-edge knowledge is often held in large companies in high-income countries, the relationship with these firms is an important arena for policy in support of economic development. The City of Cape Town must engage with these small and medium enterprises on the kind of support and business environment they need to capitalise on new knowledge to innovate and to boost performance and growth.

New enterprises in growth opportunity areas identified by the study on Cape Town's global economic competitiveness – such as green-economy technologies (and buildings and industries), renewable energy and environmental services – will have to be actively incubated and supported, with specific attention to how they can increase opportunities for lower-level jobs.

Support the continued growth of the services sector

The services sector – particularly financial and business services – has surpassed other sectors' growth, and has shown itself as a key pillar of Cape Town's economic growth strategy going forward. This calls for the City of Cape Town to engage with this sector on how it can create a business environment – including social infrastructure (such as business advice services and/or training in business skills), physical infrastructure (such as communications technology) as well as key policy interventions[138] – that will bolster the sector's growth potential and value add to the local economy.

"The services sector – particularly financial and business services – has surpassed other sectors' growth, and has shown itself as a key pillar of Cape Town's economic growth strategy going forward."

137. South Africa's integration with the global economy led to many retrenchments in the manufacturing sector, especially in the clothing industry, and there are fewer entry-level and semi-skilled jobs available. While the manufacturing sector grew marginally, it has not been able to absorb those retrenched unskilled and semi-skilled workers or new entrants into the labour market.
138. These might include adjusting barriers to formal market entry, investing in business skills and experience, facilitating market and finance access, and using the opportunity of service delivery extension to build experience.

The services sector's offerings must be diversified by exploiting agglomeration economies and scale economies. Most financial and business service enterprises are clustered in established commercial services. This spatial proximity of like businesses reduces the cost of doing business with other service sector businesses, and could spur the development of diversified and niche services.

Enterprises in the financial and business services sector – especially SMMEs – will need to diversify more vigorously if they are to be more sustainable, profitable, and resilient to inevitable market changes, specifically to design goods and services to address different customer segments, if possible.

Support the growth of the knowledge society and knowledge economy

Broadband penetration[139] is tied positively to GDP and employment growth.[140] For the finance and business services sector in Cape Town to continue its growth trajectory, it will need ever-greater capacity for processing and transmitting information. For this, skilled people, greater computer processing access capacities as well as access to high-speed broadband fibre-optic cable are critical for creating an environment conducive to economic growth.

For local small and medium enterprises to become more competitive and access international best practice – if not through linkages with local large firms and tertiary education institutions – will require access to affordable connectivity. As manufacturers in a middle-income country, these enterprises produce components for use further up the global value chain, where competition is based on price and the quality of production of high-value goods.

To remain competitive and grow, Cape Town's firms must innovate towards progressively more knowledge-based activities. This requires knowledge of cutting-edge technologies and practices – historically more often generated in high-income countries – and a pool of skilled people continually able to upgrade their knowledge base and expertise.

Another possible spin-off of greater connectivity for the public is the potential of growing a local 'maker's market' and of developing a new manufacturing force. Greater access to the internet allows the DIY phenomenon to take on new dimensions, as hobbyists will be able both to share their own and directly tap into others' knowledge and experience on how to meet a multitude of local needs. The internet provides the means to connect with people anywhere in the world with the know-how to tackle any kind of project – from how to build a school to how to increase the yield from your garden vegetable plot.[141]

The City of Cape Town may need to explore how it can support small and medium enterprises' access to the relevant social and physical infrastructure, including their access to new knowledge with the potential to stimulate innovation, local economic growth and job creation.[142]

The future city will run on data, and will be bandwidth-hungry. Apart from the bandwidth needs of the business sector, the public will need to access government and other public data freely online, and these will have to be made available in accessible formats, including through multimedia platforms.

The City of Cape Town must therefore also consider

> "To remain competitive and grow, Cape Town's firms must innovate towards progressively more knowledge-based activities."

139. Broadband penetration is generally measured at household level.
140. The ITU Broadband Commission released its second report showing a positive correlation between access to internet and GDP growth: 10% increase in broadband penetration (at the household level) in China contributes to a 2,5% growth in GDP; 10% increase in broadband penetration in low and middle-income countries contributes to a 1,4% increase in economic growth; access to broadband in Brazil added approximately 1,4% to employment; Broadband will create two million jobs by 2015 in Europe. See ITU Broadband Commission, 2011. *Broadband: A Platform for Progress.* Available at http://www.broadbandcommission.org/report2/overview.pdf.
141. Weavind, Tina. 2011. Giving rise to a new techno force. *Sunday Times. Business Times.* 4 September. p 11.
142. The City of Cape Town has indicated that it would sell the spare capacity on its open-access fibre-optic cable network to internet service providers and telecommunications service providers, with a view to boosting overall bandwidth availability in the city and drive down costs to users, including SMMEs. The City will also allow service providers to link to its infrastructure network. These measures will go a considerable way to making bandwidth more available and affordable to end users. (See City of Cape Town. 2010. *Broadband Project: Municipal networks and the growth of the internet.* Presentation by Leon van Wyk delivered at the iWeek Conference 2010. [Online] Available: http://www.iweek.org.za/wp-content/uploads/2010/08/Leon-van-Wyk-CoCT_BIP_overview_Sept2010_ISPaudience_CoCT.pptx.

how it can help create an environment – including access to the internet and access to information – that will yield a critical mass of people who can devise solutions for local challenges, and help build engaged and sustainable communities.

> “The City of Cape Town must therefore also consider how it can help create an environment – including access to the internet and access to information – that will yield a critical mass of people who can devise solutions for local challenges, and help build engaged and sustainable communities..”

Address the skills mismatch and youth unemployment
As future innovators and/or employees, learners need affordable access to broadband internet (whether on private mobile devices or at public access points such as public libraries) to obtain new knowledge and/or share experiences and ideas. Learners' access to broadband will supplement knowledge gained through the curriculum, and will build skills – such as information literacy – that are crucial in a knowledge-based economy.

In the medium to long term, support for learners' access to broadband internet can help to reduce the gap between the skills that graduates have to offer and those that employers require and, in so doing, also reduce the high incidence of youth unemployment.

The Institute for the Future in Palo Alto, California, identified six drivers of change that will reshape the kind of workplace skills needed by 2020 in a rapidly changing and technologically advanced world. These drivers apply equally to the contexts in the global south, and include longer lifespans, which will change the nature of careers and learning; the rise of workplace automation, which will push people out of rote learning and repetitive task modes; massive increases in computer processing power, and the increased ability to digitise objects and capture them as part of a data set; the rise of new media tools; the shift from text to image, and the emergence of ubiquitous capture and surveillance of events from multiple angles; the rise of social technologies that will allow better exploitation of collective intelligence, and the reorganisation of how we produce and create value outside traditional organisations and structures, and global connectedness – especially with the global south, where innovation is outpacing that in the developed world – which integrates the values of diversity and adaptability.[143]

Based on these change drivers and broad trends, workers in 2020 will need to have a skills set that includes the following: [144]

1. Sense-making/critical thinking: The ability to determine the deeper meaning or significance of what is being expressed
2. Social intelligence: The ability to connect to others in a deep and direct way; to sense and stimulate reactions and desired interactions
3. Novel and adaptive thinking: Problem-solving capacities, and proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based
4. Cross-cultural competency: The ability to operate in different cultural settings
5. Computational thinking: The ability to translate vast amounts of data into abstract concepts, and to understand data-based reasoning
6. New-media literacy: The ability to assess critically and develop content that uses new media forms, and to leverage these media for persuasive communication
7. Transdisciplinarity: Literacy in and ability to understand concepts across multiple disciplines
8. Design mindset: The ability to represent and develop tasks and work processes for desired outcomes
9. Cognitive load management: The ability to discriminate and filter information for importance, and to understand how to maximise cognitive functioning using a variety of tools and techniques
10. Virtual collaboration: The ability to work proactively, drive engagement and demonstrate presence as a member of a virtual team.

In 2020, these skills will need to be generic and present in a broader cross-section of the workforce. Support from the City of Cape Town to facilitate learners and students' access to affordable broadband internet could catalyse the development of a number of the key skills listed above, such as new media literacy, filtering and making sense of information, socially networked individuals and virtual collaboration, and improve the quality of learners and graduates across the breadth of the education system.

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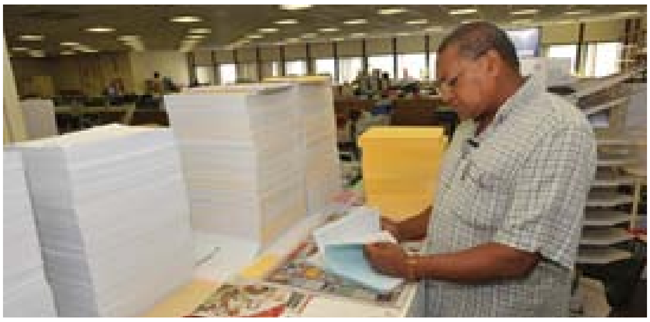
143. Institute for the Future for the University of Phoenix Research Institute. 2011. *Future Works Skills 2020.* [Online] Available: http://cdn-static.phoenix.edu/content/dam/altcloud/doc/research-institute/future-skills-2020-research-report.pdf?cm_sp=Research+Institute-_-PDFs-_-Future+Work+Skills+2020+-+Report. p 3–5.
144. Institute for the Future for the University of Phoenix Research Institute. 2011. Op cit. p 8–12.



The City may need to find ways to engage with the relevant education stakeholders on how it can support efforts to build necessary skills, and lay the basis for future graduates – and the broad population of Cape Town – to thrive in a knowledge-based economy.

Stimulate the creation of a cross-section of job opportunities, including in the informal sector

The economy must create and build opportunities for people to find work. While the Cape Town economy is predominantly constituted of small and medium enterprises, research shows that few aspire to grow and create jobs. SMMEs must be incentivised to grow and employ more people, and the City of Cape Town must engage with the business community on how it can support their efforts to create a cross-section of job opportunities – from unskilled to highly skilled – at a large scale.

However, the formal sector in Cape Town is not able to generate sufficient low-skilled, semi-skilled and unskilled jobs to make a significant dent in the current high unemployment levels in the city. In the absence of industries that can sufficiently absorb the high number of low-skilled and semi-skilled labour, the City should encourage and invest in the building of social and physical infrastructure to support the informal economy.

Building entrepreneurship by tackling social problems

In marginalised communities, the City of Cape Town can use City-owned assets to support a wide range of community, voluntary and not-for-profit activities – also called social economy enterprises.[145] Social economy enterprises play an important role in building work experience and a range of skills, and preparing people and enterprises to participate in the formal economy.

As a concept and practice, social entrepreneurship is gaining credibility. It is entrepreneurship with a social purpose that follows the logic of business, seeking to meet social needs while adapting tools and knowledge from all sectors and disciplines (including from business) to improve performance, innovate responses to social needs, and attract more resources to the social economy enterprises.

In Cape Town, high unemployment – especially among the youth – is one of the most challenging social problems. At the same time, though, unemployed youth are an untapped resource that could be instrumental in meeting some of communities' social needs.

The challenge, then, is to 'marry' a social need with the potential to build a customer base for a service, and to create jobs that deliver such service to these customers. The question is how the City of Cape Town can assist in identifying and promoting an interface between meeting communities' social needs and developing local responses that also create jobs.

In conclusion, it is clear that while the Cape Town economy is relatively strong, it does have some challenges with regard to its ability to absorb employees with a diversity of skills, especially the lower-skilled and unskilled population.

The City of Cape Town will have to be more proactive in creating the right environment for and supporting opportunities for economic and social innovation in the city, and specifically for creating opportunities for employment and social and economic integration. It needs to provide the kind of stewardship that makes the city attractive – economically and socially.

The City of Cape Town is ideally placed to combine regulatory frameworks and incentives for businesses to grow and create jobs, with more agile and coordinated deployment of the municipal budget, infrastructure, and City and citizen services.

In the final analysis, this will require more intelligent use of the information at its disposal for more efficient resource use (including budgets, land use and technologies), municipal services deployment, as well as more coordinated management and leadership.

"The City of Cape Town is ideally placed more intelligently to combine regulatory frameworks and incentives for businesses to grow and create jobs, with more agile and coordinated deployment of the municipal budget, infrastructure, and City and citizen services."

145. The primary purpose of social economy enterprises is not to obtain a return on capital, but to build solidarity and cohesion while responding to a social need. These enterprises are created by and for those with common needs, and are accountable to those they are meant to serve. They are run generally in accordance with the principle of solidarity and mutuality, and are managed by the members based on the rule of equality. They are flexible and innovative in order to meet changing social and economic circumstances. They are based on active membership and commitment and, very frequently, on voluntary participation. See John Restakis 2006, *Defining the Social Economy – The BC Context.* British Columbia Cooperative Association. Available online at http://www.msvu.ca/9BEB7D38-96E9-4BDD-9943-3B89C3AC5D89/FinalDownload/DownloadId-0C2D730D9AEA8A36A5B0AC10546C6942/9BEB7D38-96E9-4BDD-9943-3B89C3AC5D89/socialeconomyatlantic/pdfs/DefiningSocialEconomy_FnlJan1906.pdf.

Cape Town's global competitiveness: What should be done?[146]

Over the last 18 months a team of researchers has been analysing Cape Town's economic performance in order to advise Council on what might be done to boost conditions in the years ahead. Many numbers were crunched and a total of 88 companies employing over 40 000 workers as well as another 29 organisations were interviewed. The broad conclusion is that the City of Cape Town needs a much bolder approach towards economic policy because 'business as usual' will not be enough in the future.

The starting point is that the City needs to take the economy more seriously. A robust economy is fundamental to Cape Town's long-term viability and the well-being of its citizens. Delivering better municipal services can improve living conditions, but creating more jobs is the only sustainable path out of poverty. Stronger economic growth will also increase the tax base to fund better services and tackle the backlogs.

To achieve this, the City ought to put economic development at the heart of what it does and how it functions. It should be more outward-looking and engage actively with the business community so that their concerns are properly understood. The City also needs better internal coordination and clear strategic leadership so that the impact of its major spending decisions and regulations on private investment and jobs is consistently taken into account.

Second, public investment in shared infrastructure underpins competitive strength. Cape Town's infrastructure is inferior to that of many of its international rivals, with bottlenecks, ageing systems and deficient water and sanitation capacity. The transport network is particularly inefficient, unreliable and congested. Companies expect an effective supply of serviced land with a predictable regulatory framework, but complain about fragmented civic structures and complex procedures.

The City is uniquely placed to champion co-ordinated planning and management of major economic infrastructure in order to improve Cape Town's business environment. In the interest of long-term resilience and social stability, it is crucial to align land-use planning, transport and housing policies so as to promote urban integration and densification, and to facilitate jobs growth in appropriate locations.

It is also vital to boost the level of investment in Cape Town's basic infrastructure – to address the competing imperatives of future growth, current maintenance and historic backlogs. If funds aren't forthcoming from local taxes or national sources, the City should borrow externally. A cautious, ratepayer mentality is inappropriate for a city with global ambitions, as this requires consistent upgrading of its fixed assets.

Third, a unifying vision could help Cape Town to mobilise its citizens and business community around practical problem-solving and action to increase prosperity for all. The City badly needs a vision that connects the goals of competitiveness and inclusion. A new 'green growth' perspective might be just the theme required to draw together disparate strategies towards the environment, poverty and jobs.

Under a green growth paradigm, policies to promote innovation and creativity could fit with schemes to encourage better urban design and retrofitting of housing and commercial buildings to improve insulation and recycling. The greening of urban infrastructure would support developments in environmental technology and ecosystem management, creating thousands of jobs in the process. An expansion of agro-processing and related activities could connect with looming concerns about food security.

Fourth, dynamic companies with strong creative and adaptive capabilities are the bedrock of sustained growth and development, not flagship projects and one-off events. The City and its special purpose vehicles could do more to support ambition among local businesses and to encourage further investment and growth within the city. The universities, colleges and other publicly-funded institutions could also be encouraged to play a bigger part in strengthening the capabilities and output of local firms.

146. This piece was written by Professor Ivan Turok, Deputy Executive Director at the Human Sciences Research Council.

Natural wealth

As cities grow in size and population, harmony among the spatial, social and environmental aspects of a city and between their inhabitants becomes of paramount importance. This harmony hinges on two key pillars: equity and sustainability.[147]

While recognising that Cape Town's social and economic factors are interlinked with its ecological and natural resource issues, this chapter mainly reviews the ecological and resource challenges that the city is currently facing and the implications for the city's vulnerability to – or resilience against – future social, economic and environmental risks and hazards.[148]

Cape Town is vulnerable both to the effects of climate change – like rising sea levels and changes in rainfall patterns – and to resource limitations – such as water scarcity and the depletion of oil reserves. To prepare itself for climate change and post-oil environment challenges, the City has developed a climate change strategy, and is exploring alternative forms of energy generation to reduce dependence on oil (such as wind and solar) and find new ways to preserve or recycle existing yet diminishing resources (such as water).

Climate change poses a significant threat to both the natural and built environments, and could have severe consequences and impacts. Climate change also brings with it the threat of a rise in sea levels and increased water shortages, which will in turn affect the agricultural sector, and the sustainability of local ecological systems. Climate change could also result in more frequent and intense storms, which could damage or destroy city infrastructure, and worsen access to basic urban services and the quality of life in cities, with the impact felt most by the urban poor. Extreme weather events and sea level could potentially result in

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147. UNHABITAT. 2009. Introduction. *State of the World's Cities 2008/2009 – Harmonious Cities*. [Online] Available: http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=2562.
148. For more detail, see the City of Cape Town 2010, *State of the Environment Report 2008*. Available at http://www.capetown.gov.za/en/EnvironmentalResourceManagement/publications/Documents/State_of_Environment_Report_2009_2010-08.pdf.

liability issues for the City where land development has been approved in risk areas, thus diminishing the city's financial sustainability.[149]

In order to address climate change issues, two approaches are generally followed: climate change mitigation and climate change adaptation. Climate change mitigation is an attempt to slow down or stop climate change through the reduction of carbon dioxide (CO_2) emissions, particularly those related to fossil fuel-based electricity generation, transport and industry. Climate change adaptation recognises that no matter how successfully mitigation is implemented, some degree of climate change is still likely to occur.

The aim of adaptation is therefore to reduce the risk that cities face by building resilience and working towards maximising people and governments' ability to respond to climatic changes and potentially extreme weather events. One of the social challenges associated with climate change and global warming is the potential rise in fuel and food prices, which threatens social and economic order and advancement.

In the face of economic and social hardship, ecologically sustainable development has in the past often been treated as an optional luxury. The need among poor South Africans is so great that anyone who suggested consideration of the environmental impact of development was seen as unreasonable.

Increasingly however, city leaders are becoming aware of the importance of ecological sustainability and of the reality of people's dependence on the ecological system. Urban lifestyles, which are highly dependent on private transport, generate significant amounts of waste, and consume vast quantities of resources, are placing a heavy burden on the natural environment.

While one may still find climate change sceptics, there is a deepening awareness of the growing number and unpredictability of extreme weather events such as droughts and floods as well as their impact on food security. This highlights just how important ecological sustainability is for human life. Similarly, the growing awareness of the reality of resource depletion, such as the peak-oil debate, supports arguments for a new approach to building sustainable communities.

Globally, communities are spatially concentrated in cities, and cities, in turn, increasingly are the sites of some of the worst ecological transgressions. Equally, however, cities also present the opportunities for innovation to address the socio-economic-ecological challenges we currently face.

Increasingly, South African cities are implementing programmes to mitigate the negative impacts of urban settlements on the natural environment. South African city councils and managers are required by both the Constitution (Act 108 of 1996) and the Municipal Systems Act (Act 32 of 2000) to pursue social and economic development, and to broaden access to basic municipal services in environmentally sustainable ways.

More and more South African cities are taking up the challenge to build their resilience and projects are underway in a number of cities. The City of eThekwini, for example, innovated around solid waste management and is leading in creating energy from Durban's waste.

Cape Town currently is the fastest-growing metro in South Africa, and is confronted with the environmental challenges that accompany rapid urbanisation. As such, its natural environment is under threat. The city's rapid expansion and the pressure on endemic species in the Western Cape have led to the City of Cape Town being a leader in the creation and management of nature reserves within Cape Town's borders.

"The city's rapid expansion and the pressure on endemic species in the Western Cape have led to the City of Cape Town being a leader in the creation and management of nature reserves within Cape Town's borders."

The City of Cape Town's Energy and Climate Action Plan (ECAP) includes about 130 projects that are either being planned or are already under way (between 2010 and 2012) across the city. These projects target energy use in the commercial sector, the residential sector, local government, the industrial sector as well as transport, and include interventions to retrofit buildings to make them more energy-efficient – especially through efficient lighting, and water and space heating – as well as more efficient street and traffic lighting, fuel switching (from liquid to electricity), planning for modal shifts to non-motorised transport, and travel demand management.

Among others, these efforts are geared towards reducing the city's carbon footprint in line with national and international obligations; increasing the uptake of renewable energy such as solar and wind, and

149. Government of South Africa, National Climate Change Response Green Paper 2010: Draft. http://www.info.gov.za/view/DownloadFileAction?id=135920

generating energy from landfill waste – all with a view to creating a more robust economy, uncompromised employment (including through local economic development in the energy sector) and an overall resilient city and communities, even the most vulnerable.[150]

Cape Town's existing commitments

The City of Cape Town has committed itself to sustainable economic growth, while recognising that economic systems are embedded in the natural world and are ultimately dependent upon ecological goods and services. The city's economic well-being is closely linked to its natural beauty and natural assets, with tourism, the hospitality, services and creative industries and location preference for homeowners and businesses the key pillars of its economy.

Cape Town has made specific commitments to conserve the city's natural heritage as well as to lower energy use in the city, with a view to reducing its carbon footprint and support the development of a green economy in Cape Town. Some of the key commitments[151] include the following:

- The establishment of the successful international cities and biodiversity programme – Local Action for Biodiversity (LAB);
- The completion and adoption of the Biodiversity Network, a prioritised fine-scale conservation plan that aims to meet national targets for biodiversity conservation;
- The adoption of the Integrated Metropolitan Environmental Policy (IMEP) in 2001, committing itself to a more sustainable future for the city. In 2008, IMEP was revised to include the City's Environmental Agenda which committed the municipality to achieving 17 specific, measurable environmental targets between 2009 and 2014;[152]
- The adoption of the Energy and Climate Change Action Plan (ECAP), a set of over 130 smaller projects that aim to create a lower-carbon, more modern, liveable and equitable city, which builds on its competitive advantages (referenced above);
- The completion of an integrated Climate Adaptation Plan of Action (CAPA) through the development of sector-based plans that will guide relevant line functions toward building a more resilient city, with reduced climate change risks; and
- A number of successful communication and education programmes that address environmental issues such as energy and climate change:
  - the 'Smart Living' campaign which promotes smart and sustainable living, focusing primarily on the themes of energy, waste, water and biodiversity;[153]
  - through the Department of Solid Waste's Think Twice recycling programme, the City has formed partnerships with private service providers to collect recyclable household waste in select neighbourhoods in order to reduce the City's

"The City of Cape Town has committed itself to sustainable economic growth, while recognising that economic systems are embedded in the natural world and are ultimately dependent upon ecological goods and services."

150. City of Cape Town, "What is the City of Cape Town doing about energy security and climate change?" Presentation by Sarah Ward, Department of Environmental Management. September 2010. Available at http://locs4africa.iclei.org/files/2011/03/Sarah-Ward_City-of-Cape-Town.pdf.
151. In addition to these measures, the City of Cape Town also implemented greening initiatives around the 2010 FIFA World Cup™, such as the Green Goal 2010, which was recognised by the International Olympics Committee through an international award. With 42 projects under nine themes, Green Goal 2010 contributed to raising awareness, minimising waste, diversifying and using energy efficiently, consuming water sparingly, compensating for the event's carbon footprint, practicing responsible tourism, and constructing infrastructure with future generations in mind. These greening initiatives looked beyond the actual time frame of the 2010 FIFA World Cup™, and included concerns for post-event environmental, social and economic impacts on the immediate and extended environment. As one of the legacy projects, the City of Cape Town compiled a Smart Events Handbook to guide event organisers, venues and suppliers in planning and implementing events in a sustainable and responsible manner.
152. In addition to the City of Cape Town's leadership role, Province has established itself as a leader among regional governments, having developed and adopted a Climate Change Strategy and Action Plan as well as a White Paper on Sustainable Energy, which was approved by Provincial Cabinet and supports the Green Cape special-purpose vehicle.
153. City of Cape Town. 2010. *Smart Living Handbook.* Online, available at http://www.capetown.gov.za/en/environmentalresourcemanagement/Pages/SmartLivingHandbook.aspx.

demand for landfill space. First piloted in November 2007, the programme is progressively being tested in more of the city's neighbourhoods;[154]

- the integrated water leaks repair project seeks to build partnerships with poor communities and households in order to ensure that they report any leaks on their properties, streets and neighbourhoods, as well as to encourage private owners to repair leaks on their properties soonest at their own cost, to reduce any water loss;[155] and
- the Youth Environmental School (YES) programme which is an extensive and integrated youth education, awareness and capacity building programme, providing a variety of projects, programmes, activities and resources to schools in Cape Town.[156]

> "In the absence of a high-quality integrated public transport system, Cape Town's spatial form – a dispersed city that pushes mainly low-income human settlements further onto the fringes away from employment opportunities – causes the number of cars on the roads to increase, which, in turn, results in traffic congestion and higher energy consumption."

The challenges for Cape Town

Wetlands, watercourses, beaches, high-potential agricultural areas, cultural landscapes and scenic views are all being degraded by uncontrolled urban encroachment.

Some of Cape Town's key challenges include:

- rapid urbanisation with a growing number of households that need access to basic municipal services amid growing resource constraints;
- encroachment on natural environments and biodiversity loss;
- development pressure and the threat to unique cultural landscapes and productive land (for urban agriculture);
- increased environmental pollution – through among others, carbon emissions from the increasing number of vehicles on the city's roads network and water pollutants from industrial waste;
- water insecurity arising from changing rain patterns, and, in some cases, droughts;
- energy insecurity arising from global energy price shocks and the potential for electricity shortages; and
- the looming prospect of food insecurity as climate change plays havoc with agricultural output, coupled with the inevitable rise in food (and other commodity) prices as the costs of transport increases together with the oil price.

With their high population densities and concentration of human activities, cities are significant generators of carbon emissions and therefore major contributors to climate change. In the absence of a high-quality integrated public transport system, Cape Town's spatial form – a dispersed city that pushes mainly low-income human settlements further onto the fringes away from employment opportunities – causes the number of cars on the roads to increase, which, in turn, results in traffic congestion and higher energy consumption.

This has led to calls for a more compact city, which will help cut travel times, and when coupled with a more efficient and integrated public transport system will reduce the number of cars on the road as well as the costs of traversing the city. Apart from mitigating the potential negative environmental impact, a more compact city form in Cape Town will reduce the financial costs of providing municipal services to the still growing population, and will increase the city's financial sustainability and resilience.

Municipalities play key roles in regulation, land-use planning and service delivery and are thus well placed to become central actors and leaders in addressing environmental problems. Local authorities have the closest link with the population, which enables them to stimulate behaviour change among businesses and citizens.[157]

The remainder of this section examines the environmental challenges facing Cape Town, as well as the response to these challenges under the following three imperatives:

- Climate change adaptation and/or mitigation
- Conservation of unique natural landscapes or ecosystem goods and services
- Mitigating resource depletion.

154. For a project description, see http://www.capetown.gov.za/en/solidwaste/Pages/ThinkTwice.aspx.
155. For a project description, see http://www.capetown.gov.za/en/Water/Pages/IntegratedWaterLeaksProject.aspx.
156. For a project description, see http://www.capetown.gov.za/en/EnvironmentalResourceManagement/yes/Pages/default.aspx.
157. UN HABITAT 2010: Millions of Africans at Risk From Sea Level Rise, The New Dawn, 25 November. Online available: http://www.thenewdawnliberia.com/index.php?option=com_content&view=article&id=2073:special-features-un-habitat-millions-of-africans-at-risk-from-sea-level-rise&catid=50:special-feature&Itemid=85.

Climate change adaptation/mitigation:

Climate change and air pollution have, to a large extent, a common cause, namely emissions from fossil-fuel burning. Until recently, these two problems have been addressed by separate policies. Increasingly though, they are seen as intersecting issues that need integrated policy support.[158]

Air quality

The City of Cape Town is responsible for air quality management and pollution control, including noise pollution. Municipalities are required to meet the National Ambient Air Quality Standards, as set by the Department of Environmental Affairs. In some cases interim standards (valid until 2014) have been set that are slightly relaxed in order to allow sufficient time for municipalities to improve air pollution control in order to meet the more stringent standard in the future.

Until the release of these standards, the City had measured air quality according to United Kingdom (UK) government standards, which are included here for comparison purposes. The World Health Organisation (WHO) guideline for PM_{10} (particulate matter of 10 micrometres or less suspended in the air) should be seen as something to strive towards and not a mandatory standard. It should be noted that many developed countries are unable to meet this guideline.

The *State of the Environment Report 2009* shows that although the national standard is being met, PM_{10} levels in Cape Town far exceed the recommended WHO guideline. Furthermore, the central city, Khayelitsha and Wallacedene have consistently exceeded the daily UK standard value for PM_{10}. Air quality remains a matter of concern, especially in poorer areas. For example, Khayelitsha has an above average incidence of TB, which could be significantly exacerbated by air pollution.

The Khayelitsha Air Pollution Strategy has therefore been established to address this problem. Interventions that succeed in Khayelitsha could be extended and applied to other densely populated informal and semi-formal settlements in the city. Sources of PM_{10} pollution in Khayelitsha have been determined as dust, exacerbated by the presence of unpaved roads and large unplanted areas, as well as vehicle emissions and smoke from cooking and heating fires.

Since 2005, industries in the Bellville South area have spent large amounts of money to improve the area's air quality by reducing their PM_{10} and NO_2 (nitrogen dioxide) emissions. An improvement is clearly visible when comparing air quality statistics before and after the industries' intervention.[159]

In 2009, none of the sites measured exceeded the South African National Standard (SANS) amounts for sulphur dioxide (SO_2), NO_2 or PM_{10}. NO_2 levels in the city centre remain high, but below the guideline amount. SO_2 levels have dropped consistently in line with the introduction of low-sulphur diesel fuel.

It is important for prevention efforts to be maintained and stepped up in order to ensure that high standards of air quality continue to be achieved. PM_{10} pollution across the city and NO_2 pollution in the city centre are of particular concern. PM_{10} pollution varies from one year to the next, and will often increase during periods of intense construction or significant fires.

NO_2, on the other hand, is closely linked to vehicle emissions, and therefore higher levels are to be expected in an area with heavy vehicle traffic such as the city centre. This poses both a health and environmental risk, which will continue to be actively monitored. Other programmes that will reduce air pollution in the city are the promotion of non-motorised transport such as cycling and walking, and the upgrade of public transport systems, both aimed at ultimately having fewer vehicles on the road.

The City has also adopted the Air Quality Management Plan (AQMP). The vision of the AQMP is to achieve and maintain clean air in the city over the next ten to 20 years, and to turn Cape Town into the African city with the cleanest air. The plan is designed to reduce the adverse health effects of poor air quality on the citizens of Cape Town, especially during 'brown haze' episodes. As part of this plan, the City's new Air Quality Bylaw was adopted by Council on 31 March 2010 and gazetted in August 2010.

> "The City has adopted the Air Quality Management Plan, which aims to achieve and maintain clean air in the city over the next ten to 20 years, and to turn Cape Town into the African city with the cleanest air."

158. Raes, Franks. 2006. Climate Change and Air Pollution – Research and Policy. *Global Change Newsletter* No. 65 March, 2006, pp 19-21. Available at www.igbp.net/documents/NL_65_7.pdf.
159. City of Cape Town, *State of the Environment Report 2008*, p 10.

CO_2 footprint

Climate change is placing increased pressure on the environment, and global emission agreements require the City to pay more attention to greenhouse gas emissions and other pollutants. According to the *State of the Environment Report 2009*, the City has embarked on a comprehensive education campaign aimed at raising awareness of CO_2,[160] and encouraging more sustainable energy use, including the promotion of alternative technologies and green energy.

The main source of carbon emissions in Cape Town is electricity, largely due to the high carbon footprint of coal, which is the basis for the bulk of the country's energy supply. Energy use by sector is fairly evenly split between residential, commercial and transport uses, with industrial and local government uses comprising a smaller proportion.[161]

This is in line with the general mix of the city's economy – it has little heavy industry, with a significant amount of commercial and service-based economic activity. Cape Town's CO_2 footprint (measured in tons per capita), has tended to increase in line with increases in energy use, and was most recently, in 2007, calculated at approximately 6,7 tons per capita.

The City's climate change action plan includes a number of initiatives to reduce the city's energy consumption. Among others, the City of Cape Town aims to source at least 10% of the metro's energy from renewable sources by 2020 and reduce its dependence on coal-based energy.

> “The City's climate change action plan includes a number of initiatives to reduce the city's energy consumption. The City of Cape Town aims to source at least 10% of the metro's energy from renewable sources by 2020 and reduce its dependence on coal-based energy.”

Any increase in per capita CO_2 production – no matter how slight – is too much. Climate change could be the most significant event of the 21st century, and therefore all citizens have a responsibility to reduce their CO_2 footprint. South Africa is one of the top 20 carbon polluters in the world, and it is therefore imperative that action is taken to reduce Cape Town's contribution to these emissions.

However, it is important to note that 2007 and 2008 saw a number of significant changes that may have reduced energy usage, and may thus have a positive impact on future measurements of CO_2 equivalent emissions. In addition, the City has embarked on a comprehensive education campaign aimed at raising awareness of CO_2, and encouraging more sustainable energy use, including the promotion of alternative technologies and green energy. The City also had to implement a programme of pre-emptive load shedding, which was initiated by Eskom in order to manage electricity distribution during supply shortfalls.[162]

At the same time, the petrol price and the general cost of living both rapidly increased. Therefore, in an effort to try to reduce travel costs while also reducing CO_2 and other harmful private-vehicle emissions the City is implementing an integrated rapid transit (IRT) system that is intended to integrate all modal options[163] and is designed to promote the use of public transport in the city. The first phase of this project was launched in 2011 with a commuter bus service along the west coast corridor.

Conservation of unique natural landscapes or ecosystem goods

Biodiversity

Cape Town's natural and endemic vegetation, and the plant and animal biodiversity it represents are under severe threat. Nearly 60% of the original extent of Cape Town's natural vegetation has been lost, mostly in low-lying areas. Of those vegetation types that were historically most extensive, significant amounts have been lost – over 90% in some cases.

160. Carbon dioxide (CO_2), a colourless, odourless gas, is a by-product of numerous human activities, primarily the burning of fossil fuels for electricity generation and transport purposes. In South Africa, almost 90% of the main electricity supply is generated through coal burning. Coal is one of the dirtiest fuels available, and produces massive amounts of pollutants as well as high levels of CO_2 when burned – burning one tonne of coal produces approximately 2,4 tonnes of CO_2.
161. City of Cape Town, *State of Environment Report, 2009*. Available at http://www.capetown.gov.za/en/EnvironmentalResourceManagement/publications/Documents/State_of_Environment_Report_2009_2010-08.pdf.
162. Pre-emptive load shedding had the dubious advantage that one was able to schedule one's work around the blackouts, and not be completely caught by surprise.
163. Among the modes to be integrated are: Metrorail services, road-based services on main routes, conventional bus services, minibus taxis , feeder bus services, improved pedestrian and bicycle access, metered taxis and park-and-ride facilities.

It is important to note that Cape Town encompasses no fewer than six endemic national vegetation types, which means that these six types can only be conserved within the boundaries of Cape Town as they occur nowhere else in the world. Furthermore, three of these vegetation types are considered to be critically endangered, and remnants will need to be conserved both within urbanised areas, as well as outside of the urban edge. Cape Town is perhaps the only city in the world where unique biodiversity must be conserved within the urban fabric.

The major causes of biodiversity loss are human development (both agriculture and urban) and the impact of invasive alien species. Through the recognition of the Biodiversity Network, the City has taken a decisive step towards ensuring that its biodiversity is conserved for the future.

In 2009, this plan was incorporated into the municipal SDF thus mapping out a future for the City in which biodiversity concerns feature prominently in decision-making. The City's Environmental Agenda 2014 target is to see 60% of the Biodiversity Network formally conserved. Currently, approximately 40% of the Biodiversity Network is under formal conservation management.

The Cape lowlands – mainly the Cape Flats area – now has the highest concentration of threatened endemic plants per area of remaining vegetation in the world;[164] and Cape Town is one of the most threatened global biodiversity hot spots. Critical biodiversity areas are under constant threat from development, and if developed, could result in a failure to meet South African national biodiversity targets. Cases in which the City and/or Province are required to mediate between conflicting property development and environmental interests are increasing.

Water quality

This section is best divided into three subsections to cover the challenges and achievements of maintaining the quality of coastal water, inland water bodies and drinking water.

Coastal water quality

Between September 2009 and October 2010 only five out of 40 points measured on the False Bay coast failed to comply with coastal water quality guidelines. On the Atlantic coast, two out of 28 points measured failed to comply. This is a significant improvement on the previous year of monitoring, and an especially important improvement on the very poor results obtained in 2005.

Poor coastal water quality tends to occur in clusters of monitoring points, indicating that pollution is relatively localised and may therefore have a point-source origin. The tendency for poor water quality to occur around storm water and wastewater outlets and river mouths indicates that these are the significant sources of coastal pollution, as a result of polluted storm water and insufficiently treated waste water release into Cape Town's fresh-water systems. A significant decline in False Bay water quality was noted in 2008, but has improved since.[165]

The City aims to address the underlying reasons for storm water contamination, as well as improve the quality of wastewater effluent, including measures to address faecal contamination of storm water, such as the ongoing roll-out of formal sanitation in informal areas, and the ongoing upgrade and extension of wastewater treatment works.

Inland water quality

Most of the city's rivers and water bodies are recreationally unsafe due to rising *E.coli* levels, largely as a consequence of polluted stormwater runoff (from urban, peri-urban and agricultural areas) and breakdowns and spillages in the wastewater system.

Natural biota collapse has occurred in certain heavily affected systems, such as Zeekoevlei and the Noordhoek wetlands. Between October 2009 and September 2010, 9 out of 14 rivers and 11 out of 13 vleis[166] monitored suffered from bad or poor ecosystem health, while five rivers and three vleis had fair or good ecosystem health. No systems were categorised as "excellent" in the 2009/10 hydrological year.

With respect to the public health guideline, two of

> **"** The Cape lowlands – mainly the Cape Flats area – now has the highest concentration of threatened endemic plants per area of remaining vegetation in the world, and Cape Town is one of the most threatened global biodiversity hot spots. **"**

164. City of Cape Town, *State of the Environment Report 2009.*
165. City of Cape Town, *State of the Environment Report 2009*, p 52.
166. A *vlei* is a shallow lake of a seasonal or intermittent nature. Some vleis, such as Rondevlei and Zeekoevlei in the Cape Peninsula, are permanent bodies of water.

“In five cases the water quality actually declined (either slightly or significantly) whereas the quality improved in most of the water bodies – with significant improvements in water quality in six of the rivers and seven of the vleis.”

the 14 rivers and six of the 13 vleis experienced more than 80% compliance level between October 2008 and September 2009. Only in five cases did the water quality actually decline (either slightly or significantly) whereas the quality improved in most of these water bodies – with significant improvements in water quality in six of the rivers and seven of the vleis.[167] Thus while the quality of these water bodies is still in poor or bad condition some improvements are taking place.

It is also important to note that many urban areas worldwide experience significant inland water quality problems, and that this problem is not unique to Cape Town. Globally, very few rivers are in a good condition.

Drinking water

In 2005 the Department of Water Affairs and Forestry started a drinking-water quality regulation programme aimed at ensuring improved water quality through compliance monitoring, followed in September 2008 by an incentive-based Blue Drop monitoring programme.

In 2010, the national Blue Drop rating was a good 71%. At municipal level, 13% of municipalities had an excellent performance rating (i.e. above 90%).[168] The ten water services authorities or municipalities that scored the highest Blue Drop ratings in 2010 (and their scores) were as follows:

1. City of Johannesburg, Gauteng .... 98,0% (Johannesburg Water and Rand Water)
2. City of Cape Town 98,0%
3. Bitou, Western Cape 98,0%
4. Kgatelopele, Northern Cape 97,4%
5. George, Western Cape 97,0%
6. Ekurhuleni, Gauteng .... 97,0% (Ekurhuleni Water and Rand Water)
7. Mogale City, Gauteng .... 97,0% (Mogale City Water and Rand Water)
8. City of Tshwane, Gauteng .... 96,0% (Magalies Water and Rand Water)
9. eThekwini, KwaZulu-Natal .... 96,0% (eThekwini Water and Umgeni Water)
10. Dr. JS Moroka, Mpumalanga 96,0%

The introduction of Blue Drop certification may have led to an improvement in drinking-water quality. However, it is evident that water quality still needs some improvement as only 13% of municipalities nationally received an excellent rating.

Table 19: *Cape Town waste statistics, July 2006–June 2011 (calendar years, in tons)*

	2006 Total tons (Jul-Dec)	2007 Total tons	2008 Total tons	2009 Total tons	2010 Total tons	2011 Total tons (Jan-Jun)
General waste	668 612	1 313 581	1 249 944	1 109 273	1 252 480	615 196
Hazardous waste	24 324	112 323	65 118	61 083	58 318	23 578
Free disposal	809 249	1 095 089	524 830	391 668	200 076[169]	177 127
Total waste disposed	1 502 185	2 473 493	1 839 892	1 562 229	1 708 817	815 901
Waste minimised	102 726	175 962	157 264	145 707	140 260	82 601
Total waste generated	1 604 911	2 649 455	1 997 156	1 707 936	1 850 076	898 501

Source: City of Cape Town Solid Waste Management Department (August 2011 update)

167. Data courtesy of City of Cape Town, Environmental Resource Management Department, March 2011.
168. Municipal Outreach Project, 2010. *Newsletter 90: Water quality quantified*. Posted 24 September. Available online http://www.eumunicipaloutreach.org.za/newsletters/newsletter-90-water-quality-quanitified-24-september-2010/. Quality is assessed by means of a performance index that measures whether municipalities and/or water provision authorities have good systems in place to treat, manage, and monitor the quality of drinking water in their respective supply systems.
169. In July 2010, the City started charging a tariff for the disposal of builder's rubble. Before that, the builder's rubble figures were reported as part of free disposal. For consistency, the builder's rubble is retained as part of the free disposal figures for 2010 and 2011. For July–December 2010, builder's rubble amounted to 130 114 tons, and 156 252 tons for January–June 2011.

Mitigating resource depletion

Solid waste disposal

Increased uptake of recycling by the city population and improvements in solid waste disposal has the potential to decrease the demand for landfill, which, in Cape Town, has practically reached full capacity.

Table 19 (on preceding page) shows a steady decline in the amount of waste disposed at landfills. However, the period 2008-2009 showed a dramatic drop in the levels of waste disposed, with 1,56 million tons, or approximately 425 kg per person, having been disposed of during that year. In terms of per capita waste disposal, this is the lowest amount recorded since co-ordinated monitoring of sites across the city began in 2004, and is on par with the waste disposed in only the second half of 2006 (July to December).

The reasons for this dramatic drop in waste disposal are varied. Firstly, the global economic downturn that began in 2008 and has continued throughout 2009 and 2010 may have had a role in the reduction of waste sent to landfill. Construction and demolition are likely to have slowed over this term, meaning less construction waste was sent to landfill. Additionally, consumers have become more frugal in their habits, thus reducing the amount of consumer waste generated.

Secondly, many large retailers have become aware of the impact and costs of over-packaging of food and other products, and are thus making an effort to reduce packaging material both in the supply chain and at the end-user level. Also, the public is becoming more aware of the need to recycle, partly due to the City's public awareness and educational programmes on minimising the impact on the environment.

Table 20: *Percentage of Cape Town residents separating waste for recycling, 2009*

	Black African	Coloured	Asian	White
Yes	0,75%	7,96%	18,96%	40,91%
No	99,25%	92,04%	81,04%	59,09%

Source: Statistics SA, General Household Survey, 2009

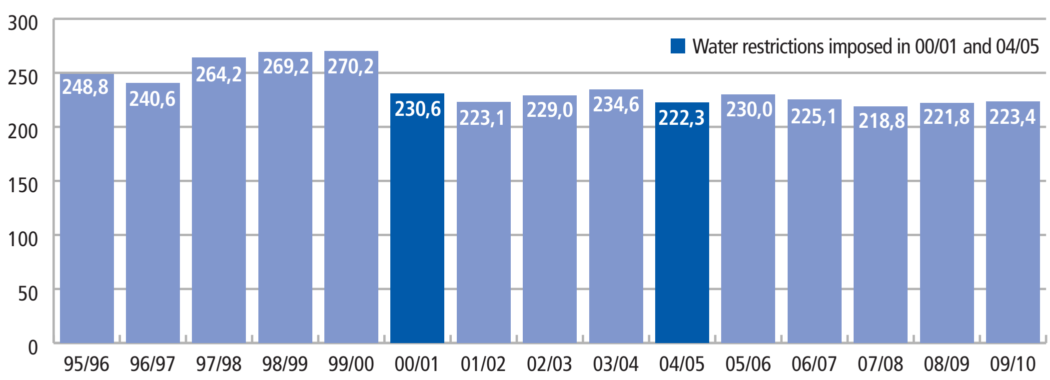
Voluntary recycling may therefore account for a portion of the reduction. However, the 2009 General Household Survey results show that a very small percentage of Cape Town residents recycle their waste – a trend confirmed by the City of Cape Town Customer Satisfaction Survey 2010/11.[170] This suggests that there is enormous scope for improving recycling practice among Cape Town households and for further reducing the demand for landfill space (refer to table 20).

> There is enormous scope for improving recycling practice among Cape Town households and for further reducing the demand for landfill space.

Water use

South Africa is a semi-arid country and as such is subject to periodic water stress. Cape Town has already had two periods of severe water restrictions, in 2000/1

Figure 9: *Cape Town average daily water use per capita in litres, 1995–2010.*



Source: City of Cape Town Environmental Resource Management Department

170. The City of Cape Town's Department of Solid Waste Management reports that it delivers a dedicated service to 30% of formal households. (Muller, Othelie. 2011. Personal communication. 2 September. Cape Town.)

and again in 2004/5, and which have remained in place since. Reports from the City of Cape Town indicate that the city is heading for a water crisis by 2016 if below-normal rainfall patterns persist.[171]

In this context, efforts to reduce water loss and changing consumer behaviour become crucial as a first line of response. Furthermore, the City is exploring the use of alternative water sources, including the Table Mountain aquifer and desalination projects.

Since 1995, water use has remained at fairly stable levels of between 250 and 310 billion litres per year, rising to the high of 310 billion litres in 1999. The 2001 and 2004 water restrictions saw a dramatic decrease in the amount of water used in Cape Town. Water use per capita has decreased significantly since 1996, and in 2009/10 is currently at its second lowest level at 223,4 ℓ per day, or roughly 6,750 kℓ per month. The City of Cape Town has set an organisational target to reduce overall water usage to 290 billion litres per year and to reduce per capita usage to 180 ℓ per day[172] (refer to figure 9).

> “A pro-poor step tariff ensures that the indigent pay less for the little water they use, while the tariffs are also an effective way of discouraging high water use, and for consumers to adjust their consumption levels to what they can afford.”

The per capita usage figures for 1995/6 to 2009/10 show that per capita usage has remained more or less at the same level following the 2004 water restrictions, and indicates that the people of Cape Town have taken to heart the message to conserve water.

At the same time the amount of water unaccounted for including unmetered water delivered to informal settlements, leaks outside private property and/or water used by the fire services – has increased (both in terms of the percentage of total water and absolute numbers of litres, see table 21 below).

In the absence of any evidence that the number of fire incidents or water leaks has increased dramatically, the increase in unaccounted for water – basically water used, but not sold – corroborates figures that service delivery, especially better water supply, to Cape Town's informal settlements is improving. Table 21 shows that total water use is increasing from year to year, mainly due to the increase in number of Cape Town residents (as the per capita use remains stable).

This growth is unsustainable in the long term – given that Cape Town may run out of water by 2016 and will need to find alternative sources. This will require more awareness-raising on the water situation in Cape Town and further encouragement for careful use of a scarce resource. As of 1 July 2011, domestic customers' consumptive water and sanitation tariffs have increased by approximately 8,28%,[173] with water getting progressively more expensive the more consumers use.

A pro-poor step tariff ensures that the indigent pay less for the little water they use, while the tariffs are also an effective way of discouraging high water use, and for consumers to adjust their consumption levels to what they can afford. The City may also have to monitor the use of non-potable water (through the use of boreholes) and its impact on underground water levels more carefully.

***Table 21:** Cape Town water use, 2004–2010*

	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10
Water sold to customers (megalitres)	202 582 663	213 563 346	223 686 878	226 047 150	219 533 825	218 462 109
Water unaccounted for (thousands of litres)	58 419 550	58 458 793	59 724 614	59 004 214	75 901 218	83 274 562
% Water unaccounted for	20,6%	19,8%	19,4%	18,7%	23,3%	25,2%
Water use (thousands of litres)	261 002 213	272 022 139	283 411 492	285 051 364	295 435 043	301 736 671
Per capita, daily (litres)	222,3	230,0	225,1	218,8	221,8	223,4

Source: City of Cape Town, Department of Environmental Resource Management.

171. Daniel, Dugan. 2011. Western Cape's surface water supply runs low. Western Cape's current surface water supplies could run out by 2016. *Business Day*. 8 March. [Online] Available: http://www.businessday.co.za/articles/Content.aspx?id=136508.
172. City of Cape Town *State of the Environment Report 2009*, p 55.
173. See City of Cape Town. 2011. Water and Sanitation Tariffs to increase by 8.28% to ensure a sustainable supply. 28 June. [Online] http://www.capetown.gov.za/en/MediaReleases/Pages/WaterandSanitationTariffstoincreaseby828toensureasustainablesupply.aspx.

The City also processes wastewater for reintroduction into the environment. Wastewater is any water that enters the sewerage system and is subsequently processed at a wastewater treatment plant.[174] The treated effluent is released into rivers or the ocean, where it is assimilated into the environment.

An increasing quantity is being used in industrial processes, where a lower water quality than that of drinking water is acceptable, while other beneficial uses of the waste sludge[175] include composting and application to agricultural land. In addition, the City implements the Department of Water Affairs' Green Drop rating system for wastewater treatment works, which seeks to elevate the quality of treatment of wastewater, or recognise best practices in the management or design of wastewater treatment.

In 2009, the City received Green Drop certificates for seven of its treatment works, namely Cape Flats, Llandudno, Macassar, Melkbosstrand, Mitchells Plain, Oudekraal and Parow.[176]

Into the future

Three strategic initiatives led by the City of Cape Town are currently under way. Their impacts on the sustainability of the city will continue to unfold in the next five to ten years and beyond.

First is the **Energy and Climate Change Action Plan**, a set of over 100 smaller projects that aim to create a lower carbon, more modern, liveable and equitable city, as well as projects to improve energy efficiency in the City of Cape Town's own operations. With respect to Cape Town residents, the City has embarked on a range of environmental awareness and education programmes, with the view to changing behaviours that advance the city's resilience.

The second key development is the City's **Strategic Development Framework** (SDF)[177] which, when approved, will promote a more compact city form in order to improve Cape Town's efficiency and sustainability. A compact city will be achieved through introducing planning tools to contain the city's footprint and encourage responsible densification through strategic infilling and the intensification of land uses within the existing urban footprint, aligned with concentrations of economic activity, public transport, infrastructure and amenities.

New urban development will be directed towards locations where its impact on the city's natural and built heritage will be least felt, or can be best managed, and where it is possible for sustainable human settlement to be served by the full range of urban opportunities and services. Similarly, new urban development will be expected to achieve a compact form, with appropriate planning for density as well as a greater mix and intensity of land use.[178]

The third development is the progressive roll-out of the **integrated rapid transit** (IRT) network. As the public transport network expands – and assuming the City can provide a safe and secure service to inhabitants – it would be worth exploring how best to incentivise the wide-scale use of the public transport system across the different socio-economic groups. This would support the City's goals of reducing road congestion and cutting private-car carbon emissions.

Where the objective is to encourage ways of living and working that are less expensive to maintain, some partnerships with the local residents and businesses may need to be 'incentivised' through the use of

"The City has embarked on a range of environmental awareness and education programmes, with the view to changing behaviours that advance the city's resilience."

174. This includes wastewater produced by bathing and showering, washing clothes and dishes, and flushing toilets. Also included are effluents from industries and commercial activities.
175. Pollutants are removed from the wastewater, and are converted into a semi-solid sludge.
176. City of Cape Town. 2009. *State of the Environment Report 2009*. p 39.
177. At the time of writing (June 2011), the SDF has been approved by the City of Cape Town and has been forwarded to the PGWC for its consideration.
178. Two types of development edges contain urban development: the urban edge and the coastal edge. The urban edge is a medium-term to long-term edge line that has been demarcated to limit urban sprawl, and to protect natural resources. As Cape Town grows, the City will need to provide more undeveloped land for urban development, and the edge line will have to be adjusted to (i) accommodate at least ten years' urban growth without endangering endemic natural, heritage and scenic resources, and (ii) facilitate the logical extension of the City infrastructure network. The coastal edge exists to protect the coastal ecological processes as well as the coastline as a public amenity available to all citizens (City of Cape Town 2011, *Spatial Development Framework*, Cape Town, 2011).

> A number of waste recycling pilot projects are already under way in a few select neighbourhoods, while the City has installed drop-off recycling depots in others. Recycling has helped reduce the pressure on the City's landfills – which are now near capacity.

municipal bylaws, and penalties where residents and businesses do not comply. Other possible ways would be to investigate measures to encourage a reduction in the number of private cars that enter the city during the work week by rewarding car-pooling and providing safe park and ride facilities in the suburbs for commuters.

Another alternative for reducing the number of cars on the road would involve the adoption of new business models involving (electric) car sharing[179] or bike sharing-models for short distance travel, for example.
Investments into locally generated alternate fuels for hybrid and electric cars suited to local conditions would potentially yield ecological dividends as well as job creation and economic development spin-offs.

Other global trends that will need a local response include:
Globally, **renewable and nuclear energy** will constitute up to 36% of total power generation by 2020.[180] This prospect of greater use of renewable energy such as wind and solar – both of which are possibilities for Cape Town – will require improvements in the storage of such energy. Cape Town has the institutional resources (in its higher-education institutions), the research capacity and requisite technical skills to design and build the facilities in response to the city's energy needs as well as the potential of exports into Africa and around the world.

It may be worthwhile considering how the City can facilitate local responses to calls to **innovate to zero** – zero emissions, zero accidents/fatalities, zero defects, zero breaches of security, zero-emission technology (like wind and solar energy, etc.) – which are gaining traction in different parts of the world and industries. This could be done by supporting the emergence of a green economy and green industry in Cape Town. Solid waste management technologies have also evolved and now offer the possibility to generate biogas from a renewable-energy product, by treating and recycling biodegradable waste into energy.

The City of eThekwini has already begun implementing a biogas-generating project, from which Cape Town will be able to learn. While these initiatives will not generate sufficient energy to meet the bulk needs of the city, they can help shift the composition of Cape Town's energy sources, and move the City closer to its renewable and clean-energy use targets.

A number of **waste recycling** pilot projects are already under way in a few select neighbourhoods, while the City has installed drop-off recycling depots in others. Recycling has helped reduce the pressure on the City's landfills – which are now near capacity.

While the City will have to decide on a new landfill site, it will also need to consider making the necessary infrastructural investments to process large quantities of recyclable materials and, concomitantly, incentivising recycling at the household level. However, for more people actively to recycle their household waste, the City will have to collect these recyclables as part of its regular municipal services.

South Africa is a semi-arid country and is already beginning to display the signs of water stress predicted by climate change researchers. To address the growing prospect of **water insecurity**, the City is already upgrading its reticulation system to reduce leakages and 'water losses' and is investigating desalination as well as ways to harvest groundwater.

However, the seriousness of the situation also calls for more sustainable use of existing water, including better wastewater treatment solutions, and their potential use to generate bio-gas energy from wastewater, as well as continued water demand management initiatives. Already the City has a treated effluent re-use programme in place. The City of Cape Town needs to embark on ongoing campaigns to teach all communities about responsible water use, to clarify and refine water restriction regulations and to communicate these to all residents.

The aforementioned resource concerns also suggest that the City would need to look carefully at the kind of economic activities it would like to encourage. Future economic activity should ideally be low-carbon, compact, smart-technology-driven, low in waste

179. Clendaniel, Morgan, 2011. "Montreal to get Car-Sharing Service with no reservations or drop-off spots." *FastCompany* 3 May: http://www.fastcompany.com/1751285/bike-share-programs-inspiring-car-share-programmes. Similar schemes – some membership based – operating in inner-cities in Germany in 2008, Austin, Texas as well as Vancouver and Quebec City.
180. Frost & Sullivan, 2010. *World's Top Global Mega Trends To 2020 and Implications to Business, Society and Cultures*. For more information on this report see http://www.frost.com/prod/servlet/report-toc.pag?repid=M65B-01-00-00-00.

generation, and low in water consumption.[181]

Food security and local food supplies will become an increasingly critical issue as climate change affects rain patterns and as the rising cost of fuel drives up food prices. Low income and impoverished households will be most affected by food price hikes, and would be first to benefit from more locally produced and sourced food that can be sold more cheaply, without having to incorporate high transport costs. It is in the interest of all the residents of Cape Town – and the resilience of the city – to make more, and ultimately maximises productive use of land (or roof space in a more compact city) by planting and cultivating more food plants.

There are a small number of food gardens operating in the city, mainly intended to meet the needs of specific communities. Currently only 1% of Cape Town residents grow their own food, compared to 3% in Johannesburg and 11% in Msunduzi.[182]

This is extremely low compared to, for example, the most sophisticated organic food gardening systems in Havana Cuba, whereas of March 1998, it was estimated that 50% of national vegetable production in Cuba was grown in urban areas by more than 30 000 people on more than 8 000 small farms and gardens in the city.[183]

The challenge would be to multiply current efforts in Cape Town. If undertaken at a large enough scale, food gardens produced on publicly owned land could support larger numbers of indigent households, for example. In addition, such an intervention has the potential to create employment and support the supply of scores of fruit and vegetable vendors in the informal sector.

The City of Cape Town is setting an example in responding to the emerging challenges brought on by climate change through, among others, its efforts to retrofit public buildings as well as using a multitude of approaches to change household and business awareness of, and behaviours around, resource use. In this way, the City aims to achieve positive spin-offs for Cape Town's natural wealth and provide healthy living environments for all its residents.

> “The City of Cape Town is setting an example in responding to the emerging challenges brought on by climate change.”

182. South African Cities Network, *State of the Cities Report 2011*, p 104.
183. Murphy, Catherine nd. *Urban gardens increase food security in times of crisis: Habana Cuba*. Available: http://www.flacso.uh.cu/sitio_revista/num3/articulos/art_CMurphy13.pdf.

Cape Town's move towards a low-carbon economy[184]

The impact of climate change and global warming on our society, environment and economy is among the most critical issues facing the world today. The majority of peer reviewed scientific papers agree that unless significant effort is made in the next 20 years to curb and reduce our carbon emissions, there will be a strong likelihood of runaway global warming, where no effort to mitigate carbon emissions will have any effect.

The South African context holds many challenges in this regard. The country is among the top 15 per capita carbon producers in the world. This is largely due to our heavy dependence on coal and liquid fuels for energy, our energy intensive industries and inefficient use of energy in all sectors of society. As a developing country, economic growth is a key requirement in order to create employment.

Yet, this traditionally implies the increased use of finite resources, and an associated increase in energy use and carbon production. In addition the rate of urbanisation is accelerating in South Africa's major cities, and some city populations are expected to nearly double in size over the next 20 years, with most growth occurring in the low income and informal areas. This brings with it new challenges around resource use and service delivery within our cities.

Recent research has shown that South Africa's largest cities combine to form a major source of carbon emissions in South Africa. It follows therefore that if South Africa wishes to move towards a low-carbon growth path, the majority of changes will have to occur at the city level.

The City of Cape Town has traditionally been at the forefront of this thinking, and now needs to accelerate the move towards becoming a sustainable city driven by a thriving yet low carbon economy in the future. Given the predicted growth that Cape Town will encounter over the next 20 years, there is a unique window of opportunity to grow the city space according to sustainable planning and development principles which will reduce carbon emissions and be of benefit to all people in the city.

This would include among implementing densification (with the associated resource- efficiency implications of a more dense city), integrated transport and spatial planning approaches, sustainable housing delivery, addressing living conditions in the ever-increasing informal settlements, moving towards cleaner and more efficient forms of energy production and use and improving urban quality. Implementing these effectively will result in increased employment and economic growth through a sustainable green economy, while concurrently improving equity and social benefits for the citizens of Cape Town.

The City has begun some initial work to understand exactly what is required for the city to achieve a responsible low-carbon objective over the next 20 years. What is clear is that, while the City has substantial influence over the energy use and carbon emissions in its area, support from other spheres of government will be essential to achieve its targets. Concerted effort from National Government, particularly around the shift to renewable-energy sources and public transport modes is required. Provincial and local government need to work together to create attractive investment spaces for green industries. Business, industry, transport and residential sectors need to implement large scale energy efficiency programmes. Future projections show that a transition to a low-carbon economy ultimately holds many benefits for the city and its people. These include lower long-term energy costs, higher levels of employment, poverty alleviation, economic growth and greater resilience in a carbon and resource-constrained future.

Much work needs to be done to realise this future, and the huge inertia to deviate from the status quo in both private and government spheres makes it difficult to shift towards a more sustainable course. However, it appears that the implications of not pursuing a low carbon growth path for the city should be reason enough to precipitate and justify bold leadership decisions in the municipality, other spheres of government and indeed in all sectors of society.

Problems arising from a 'business as usual' approach to the future include rapidly increasing energy costs through depleting fossil-fuel resources and future carbon taxes, an insecure energy supply, lower employment levels, rising inefficiencies from urban sprawl and lack of planning integration, an increased gap between the wealthy and the poor, and an inability to market the city as a green investment destination. All of these have an overall negative effect on the city's economy, society and environment, and are symptoms of an unsustainable approach to city development.

The transition to a low-carbon economy must become an imperative for the City of Cape Town, as well as Cape Town businesses and residents, as it must for all metros in the country, in order to ensure a sustainable future for all. This vision must endure beyond short-term municipal budget constraints, immediate consumer wants, and short sighted political agendas.

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184. This think piece was authored by Mark Borchers, Director of Sustainable Energy Africa.

Living in the City: Challenges of urban growth and form

'Success' will not be judged solely in terms of economic growth and efficiency, but will include more subjective factors, including social, economic and environmental resilience, and inclusiveness for all parts of the population and diversity – as well as remaining authentic during transition. Perhaps 'equal opportunity' or 'percentage of green spaces' will one day sit alongside GDP as a component in future rankings of successful cities.[186]

This chapter reviews some of Cape Town's urban growth and form challenges, and the way in which the City of Cape Town has responded to these. Specifically, this chapter examines the key challenges and implications around growing informality and the need for affordable housing, the increased demand for access to municipal services and bulk infrastructure, public transport and mobility, as well as fragmented spatial form.

In line with global trends, South Africa's population is rapidly urbanising. Stellenbosch University estimates that up to 80% of the country's population will reside in urban areas by the year 2026[185]. Urban growth in South Africa is not only due to people movements from rural to urban areas, but is amplified by an influx of people from other countries – in particular African countries – with an as yet unknown effect on South Africa's resources and infrastructure.

With an estimated population of 3,7 million people in 2010, Cape Town is significantly smaller than most of the world cities. However, it faces similar developmental challenges. As the earlier chapters suggest, Cape Town requires a major focus on physical and economic infrastructure as well as human capital development,

185. Tilley, Les. 2008. SA cities join hands for growth. Southafrica.info. Available at http://www.southafrica.info/business/economy/development/citiesnetwork.htm.
186. Piccolin, Olivier. 2011. *Making Livable Cities Tomorrow's Reality* [Online] Available: http://www.philips-thecenter.org/livable-cities/blogs/Olivier-Piccolin/2011/Olivier-Piccolin/

Table 22: Households and housing types in four major metros, 2007

		Johannesburg	Cape Town	Ekurhuleni	eThekwini
Number of households		1 165 014	902 278	849 349	833 859
Access to housing	Formal	77,3%	83,0%	71,1%	72,2%
	Informal	18,8%	15,6%	26,0%	17,1%
	Traditional	0,4%	0,4%	0,1%	6,4%
	Other	3,5%	1,0%	2,8%	4,3%

Source: Statistics SA Community Survey 2007

"One of the City's biggest challenges relates to the continued growth in informal settlements and the expanding number of households living in makeshift backyard structures."

especially in social, governance and technical capabilities, to achieve equitable and inclusive growth.

In addition, with cities being the present locus of production and employment opportunity, innovative strategies are required to manage growth to ensure that development is sustainable.

Urban growth and form challenges

In the remainder of this chapter we examine more closely some of the key urban growth and infrastructure challenges that the city is facing. These include:

- Growing informality, and the need for access to low-cost housing
- Public transport and mobility bottlenecks
- Access to municipal services, and infrastructure maintenance
- Rapid growth, sprawling development and social fragmentation

It is then followed by a short section outlining some of the City of Cape Town's responses to these challenges, and how these responses may be taken forward into the future.

Growing informality, and the need for access to low-cost housing

The need for new housing has significantly outstripped the City's capacities, as well as those of Province and National Government, to provide enough formal housing to meet the demands of low-income households which, in turn, has fuelled the growth of informal settlements. Thus, one of the City's biggest challenges relates to the continued growth in informal settlements and the expanding number of households living in makeshift backyard structures.

Table 22 above highlights this significant urban challenge experienced by four major metros in South Africa, though Cape Town had the lowest number of households in informal housing in 2007. In 2010, there were 1 060 964 households in Cape Town. Of these, 72,5% lived in formal housing, 17,1% in informal housing, 10,4% were backyarders, 0,4% lived in traditional structures, and 0,6% in other types of housing.[187] The 2010 population figures more accurately reflect the growth in informal structures in formal townships – i.e. the backyarder phenomenon – as an

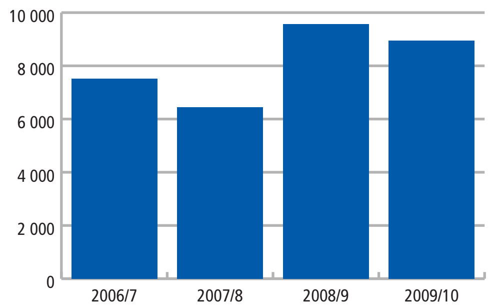
***Table 23:** Estimated informal dwelling count and percentage change per annum, from aerial photographs of Cape Town, 1993 to 2008*[188]

	1993	1996	1998	Feb 2002	Jul 2003	Jan 2004	Jan 2005	Jun 2006	Jan 2007	Sep 2007	Jun 2008
Informal dwellings	28 300	59 854	72,140	83 684	96 951	94 972	98 031	104 216	108 727	116 820	134 055
% Change per annum		37,17	10,26	4,00	11,19	-4,08	3,22	4,45	7,42	11,17	19,67

Source: Compiled by Strategic Information, using data captured from aerial photographs by Corporate GIS of informal settlements

187. Palmer Development Group (PDG) 2010, Municipal Service Finance Model for Cape Town.
188. The significant increase from Sept 2007 to June 2008 could be as result of improved counting methods using Feature Analyst software as well as including temporary relocation areas (TRA) in the June 2008 informal count.

Figure 10: City of Cape Town low-income housing delivery, 2006/7–2009/10.



Source: City of Cape Town Housing, March 2011

outcome of the growing demand for low-cost housing.

It is estimated that the number of households in informal dwellings will continue to increase, though the estimated growth rate might drop off slightly into the future. Table 23 on the preceding page shows that the biggest percentage growth in informal dwellings occurred between 1993 and 1996. Analysis of settlement growth using aerial photographs of informal settlements shows a strong, though uneven, growth trend between 2003 and 2008.

Given the current growth, Cape Town may in future need to accommodate approximately 15 000 to 18 000[189] new households every year, while also having to address the existing backlog.

Currently, the City is able to build fewer than 10 000 units per year (see figure 10 above) while, as at 8 March 2011, there were approximately 340 000 households on the waiting list for low-income public housing.[190] This situation calls for innovation in housing delivery as well as a fundamental shift in how city dwellers live in the future Cape Town.

In line with the global urbanisation dynamic, especially as it pertains to cities in the developing world, the rapid growth in informal dwellings suggests that a large number of Cape Town's current (and future) residents will be unemployed, poor, and likely to set up house in an informal settlement, where the barriers to entry are low.

Echoing the national policy shift from eradicating informal settlements to upgrading these settlements, the City of Cape Town recognises that a lack of affordable housing options forces people into informal settlements. It has therefore undertaken to upgrade informal settlements in different parts of the city, especially in the southeast of the city (including Khayelitsha and Mitchells Plain).

To this effect, the City's five-year housing plan for 2010 to 2014 sets out a range of strategies for upgrading the living conditions of people in informal settlements and makeshift backyard structures. According to the City of Cape Town's five-year housing plan for 2010/11–2014/15, it aims steadily to step up access to shelter by providing incremental housing, starting with the provision of adequate services.[191]

The provision of housing is a mandate held jointly by the City, the provincial government and the national government (through the Department of Human Settlements). The housing and infrastructure backlogs, insufficient funding, as well as lack of institutional capacity to address these backlogs remain key challenges for all three spheres of government. In March 2011 the Minister of Human Settlements announced that a select few municipalities – including Cape Town – have been accredited to drive human settlements projects and would receive direct funding

> **"The housing and infrastructure backlogs, insufficient funding, as well as lack of institutional capacity to address these backlogs remain key challenges for all three spheres of government."**

189. This is based on a projection by Gerry Adlard (2010), which is, in turn, based on calculations by Prof Simon Bekker of Stellenbosch University, who estimates a net inflow of 50 000 people per year to the city. Based on the average household size of informal settlements and backyard shacks of about 3,1 in Census 2001. This is the equivalent of 16 000 new households per annum. (See *Poverty, Urbanisation and Informal Settlements in Cape Town: A Handbook for Local Government Policymakers and Practitioners.* October 2010. p 7.
190. As at 8 March 2011, the number of applicants on the database waiting for a housing opportunity was 340 655 according to the Housing Directorate's Database Section. This number shifts continually as more people add their names to the waiting list and others are removed when they are allocated housing.
191. A strategy to provide basic services to informal settlements will be implemented. The development of an integrated human settlements plan not only includes houses, but all community facilities such as cemeteries, sports facilities and libraries. (See City of Cape Town. 2010. *Five-year Integrated Housing Plan 2010/2011–2014/2015.* [Online] Available: http://www.capetown.gov.za/en/Housing/Documents/5_Year_Integrated_Housing_Plan_2010.pdf.)

from the national government for delivery of subsidised housing.[192]

While this development is recent, the devolution of public housing functions to some of the major metros (and select cities with the requisite capacity to deliver) should help to alleviate the current disconnect between the scale of the housing need and Government's response to date. Furthermore, at the local government level, the devolution of the public housing and transport mandates may bolster attempts at more integrated planning and stronger alignment between transport, housing and land management policies.

The financial cost of addressing these and future housing and infrastructure demands is high and will need significant additional capital investment, together with a fundamental rethink of how to deliver more housing, more rapidly, to people in a more integrated, sustainable manner. From the perspective of creating more resilient cities, the *State of the Cities Report 2010/11* makes the case for housing design, production and delivery mechanisms that are more participative, flexible and responsive to household needs and capacities (including budgets):

"Resilience also implies something about the process of producing the built environment. A prescriptive, top-down model of 'delivering' housing and services to passive local communities risks providing inappropriate, inflexible or unaffordable facilities."[193]

Nationally, there has been slow progress in providing affordable housing options for those excluded from the fully subsidised 'RDP housing' as well as the mortgage-financed housing market, i.e. those located in the gap housing market.[194] For 2009, approximately 19,5% of Cape Town households had a monthly income of between R3 500 and R7 000, which qualifies them as potential beneficiaries of gap housing projects.

The City of Cape Town will need to respond innovatively to the need for affordable rental housing, facilitating access for those in the gap housing market. Already, the City partners with gap housing providers by making City-owned land available at affordable prices, and assisting with sourcing potential beneficiaries for gap housing developments.

"The City partners with gap housing providers by making City-owned land available at affordable prices, and assisting with sourcing potential beneficiaries for gap housing developments."

Public transport and mobility bottlenecks

The poorest households live on the outskirts of the city, furthest away from potential employment opportunities. Most often, poorer residents – predominantly black African and coloured – have to commute longer distances and times using public transport modes i.e.

Table 24: *Mode of transport to work, Cape Town 2009, in percentages*

	Black African	Coloured	Asian	White	Total
Office is at home	3,90	6,11	6,46	17,21	7,36
Walking	8,99	7,14	7,88	0,82	6,65
Motorcycle/bicycle	0,24	0,80	4,86	0,92	0,69
Minibus taxi/sedan taxi	25,91	17,25	4,34	0,24	16,96
Bus	18,03	10,39	0,00	0,88	11,14
Train	24,83	11,30	0,00	1,36	13,99
Lift club	1,58	5,29	1,08	1,19	3,20
Private/company vehicle	13,43	39,49	75,38	76,76	37,81
Unknown	3,09	2,22	0,00	0,63	2,20
Total	100,00	100,00	100,00	100,00	100,00

Source: Statistics SA, General Household Survey 2009

192. Address by the Minister of Human Settlements, Tokyo Sexwale MP, during the Human Settlements Budget Vote, National Assembly, 19 April 2011. Available at http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=17894&tid=32315.
193. SACN. 2011. p 48.
194. SACN. 2011. p 70.

trains or buses – which are currently not optimally integrated. Tables 24 and 25 show that more than 40% of black African commuters are travelling by public transport, and that about 54% of black African commuters have to travel between 30 and 90 minutes between home and work – compared to 41% of coloured commuters and 28% of white commuters. These poorer residents, concentrated on the fringe of the city, are the least able to afford the costs that come with urban sprawl.

In turn, the better-off middle classes are more likely to commute in their private cars – with only a small percentage participating in lift clubs. As more cars come onto the existing road network, these commuters are likely to face more traffic congestion, and longer commuting times could become an ever-growing part of the city experience.

There is still a lot of awareness-raising and incentivising to do before Cape Town commuters will come close to the targeted 53% use of public transport by 2015, as outlined in the City's Integrated Transport Plan.[195] Public transport surveys by the City indicate that private transport use predominates in the overall commuter modal split in 2011: of the respondents surveyed, 50% use their private cars, 26% use trains, 13% taxis, 9% bus, and 2% non-motorised transport.[196]

A significant reduction in the use of private cars in the city will also generate a positive spin-off for air quality. Private cars and freight are responsible for more than 50% of the city's energy use and 65% of the city's brown haze. Air pollution levels are exceeding health guidelines more frequently than in the past. An increased and accelerated modal shift from private vehicles to public transport will also reduce the high levels of CO_2 emissions in the city.

Key to meeting these challenges and integrating the city is providing affordable and efficient public transport systems. Drawing on findings by UN-HABITAT that one of the main drivers of city growth in 78% of the cities they have analysed is transport infrastructure,[197,198] the City of Cape Town has embarked on the provision of an IRT system that will contribute to addressing some of the more intractable problems of fragmentation and disconnection from the city.[199] An IRT system is the

"Cape Town has embarked on the provision of an IRT system that will contribute to addressing some of the more intractable problems of fragmentation and disconnection from the city."

Table 25: *Travel time for those who do travel to work, Cape Town 2009, in percentages*[200]

	Black African	Coloured	Asian	White	Total
Less than 15 minutes	8,21	13,15	21,13	35,70	15,15
15 to 30 minutes	30,52	39,91	69,68	34,83	36,22
31 to 60 minutes	49,50	34,79	3,27	21,60	37,41
61 to 90 minutes	5,16	6,68	0,00	6,79	6,04
More than 90 minutes	0,00	1,38	0,00	0,31	0,69
Unknown	6,61	4,09	5,93	0,76	4,49
Total	100,00	100,00	100,00	100,00	100,00

Source: Statistics SA, General Household Survey 2009

195. See City of Cape Town. 2006. *Integrated Transport Plan for the City of Cape Town 2006 to 2011*. Available at http://www.capetown.gov.za/en/IDP/Documents/Statutory%20compliance%20plans/M.Integrated%20Transport%20Plan.pdf.
196. Presented by Mike Marsden to Strategic Mayoral Committee/Executive Management Team meeting, 3 August 2011.
197. Schlaikjer, Erica, 2010, Megacities on the Move: Scenarios for the Future of Sustainable Urban Mobility, *The CityFix*, 6 December. Online: http://thecityfix.com/megacities-on-the-move-scenarios-for-the-future-of-sustainable-urban-mobility/.
198. See McKone, J. 2010. Online: http://thecityfix.com/the-future-of-sustainable-urban-mobility-integrate-integrate-integrate/.
199. Currently, public transport is neither efficient nor viable in a city characterised by urban fragmentation, monofunctional land uses, and low residential densities. People living in outlying (and often low-income) areas have very high transport costs. Overall, public transport is of a poor quality, and is unsafe and overcrowded. This situation has been made worse by underinvestment in the rail infrastructure, trains and buses, and by lacking regulation of the taxi industry.
200. This excludes those who have their office at home.

cheapest form of car-competitive public transport available to cities. It has the potential to drive the necessary city densification processes, with more compact development clustering around stations and along public transport corridors.

Phase 1 of the City's IRT system is being implemented in the inner city and along the West Coast corridor, and implementation is expected to continue until the end of 2013. The planning and design of phase 2, which will be focused on the southeast of the city, will start in the 2011/12 financial year.[201]

"For the last ten years at least, the City has closed some of the service delivery gaps in informal settlements by connecting them to municipal services as well as phasing in the provision of on-site services to backyarders."

Access to services, and infrastructure maintenance

For the last ten years at least, the City has closed some of the service delivery gaps in informal settlements by connecting them to municipal services as well as phasing in the provision of on-site services to backyarders. The demand for new housing and access to municipal services puts pressure on bulk infrastructure. In the context of resource constraints, it has unfortunately meant that maintenance of the existing (bulk) infrastructure was neglected and is now in need of repair and maintenance.

The impact of this underinvestment is particularly pronounced in the older parts of the city, and in the transport, stormwater and wastewater sectors. Much of the road network requires urgent maintenance, while many of the wastewater treatment works are operating beyond capacity, and are prone to breakdowns (with potentially serious environmental impacts). Following on the City's focus on, and significant investment in, new municipal infrastructure over the last two to three years, there is a need for greater balance between rolling out new infrastructure and raising investment levels for remedial work, upgrades and replacement of ageing municipal services infrastructure.

Some of the challenges include the following:

- Rapid and accelerated demand for water and energy far exceeds natural capacity and the City's ability to supply these resources. The consumption of these resources is growing faster than the population growth rate (currently estimated to be around 3%). The scarcity of these resources affects the economy and quality of life, especially that of the urban poor.
- The Berg River Dam is the only remaining surface water source to meet Cape Town's needs. At current levels of water consumption and water demand, this will only be enough until 2015, after which the City will need to investigate more costly water sources, such as recycled water, desalinated sea water, or extracting water from the aquifers.
- The City lacks conventional energy-generating capacity. Yet electricity demand is growing at 4% per year. Cape Town imports most of its power from Mpumalanga, and uses Koeberg Nuclear Power Station to supplement peak demand. Koeberg's exclusion zones and evacuation requirements have an impact on the spatial development of the city, and any expansion of its generating capacity may exacerbate this.
- The lifespan of the City's active solid waste sites is low,[202] though there has been a steady decline in the amount of waste disposed at landfills. In the future, waste will need to be transported to locations outside the municipal boundaries at substantial financial costs to the city's residents. While waste minimisation efforts are bearing positive results, more waste minimisation facilities (with their associated land requirements) will need to be developed within Cape Town's boundaries. In addition, larger numbers of Cape Town residents will have to be incentivised to recycle their waste and reduce the demand for landfill space.[203]

Table 26 (next page) shows the steady growth of population and households between 1996 and 2009. It also provides some idea of how the City of Cape Town has responded to the burgeoning need and where the remaining service gaps are. The gaps are mainly located in informal settlements.

These figures suggest that considerable effort has

201. Martheze, John. 2011. Personal communication. 14 July. Cape Town.
202. As at June 2011, the lifespan for the active sites is as follows: Bellville, two years; Coastal Park, seven to nine years; Vissershok South, two to three years; Vissershok North eight to ten years. Upon finalisation of the new regional landfill site, another 30 years will be provided. (Muller, Othelie. 2011. Personal Communication. 2 September. Cape Town.)
203. One possible mechanism is to introduce a penalty for households and businesses that do not separate and recycle their waste – an option that is already being discussed by the City of Johannesburg.

gone into providing formal and informal settlements with municipal services. Nevertheless, metros across the country have been hit by service delivery protests in 2011 as people in informal settlements expressed their displeasure at the rate of infrastructure service rollout as well as corruption in some areas. It is reasonable to expect that metros like Cape Town will continue to face service delivery protests as the City of Cape Town falls short of the pace of service delivery that is required and expected.

Rapid growth, sprawling development and social fragmentation

Creating integrated cities and economically vibrant and accessible settlements for all has proved to be an enormous challenge for most South African metros. Cape Town remains a city of sharp contrasts, with wealthy residents nestled in lush suburbs around the mountains and hugging the foothills of the Tygerberg and Helderberg, contrasted with the Cape Flats, where the majority of the city's poorer residents live in a visually unremarkable expanse with sparse greenery on the eastern outskirts of the city, far from Cape Town's commercial and industrial nodes.

In the post-apartheid era, Cape Town has experienced high growth, to the extent that it is increasingly difficult to find appropriate land for greenfields housing development. The city grew by 40% in developed land area over the period 1985-2005. Compared to the development rate of 701 ha per year over the period 1977-1988, the city is more recently developing at an average rate of 1 232 ha per year.[204]

At the same time, the land area suited for residential development is limited. Cape Town's geography – the long coast line and the mountains – limits expansion while the imperative to preserve agricultural land and biodiversity resources reinforces the need to limit the growth directions of the city. Furthermore, hazardous or noise-generating land uses – such as landfill sites and the airport – further reduce the developable land area.

> "Cape Town has experienced high growth, to the extent that it is increasingly difficult to find appropriate land for greenfields housing development."

Table 26: *Access to service levels in Cape Town, select years between 1996 and 2009*

	Cape Town				Johannesburg	eThekwini
	1996	2001	2005	2009	2009	2009
No of households	653 085	777 389	862 704	1 019 395	1 298 311	1 002 865
Population	2 563 095	2 893 249	3 314 271	3 655 000		
Refuse Removal						
Percentage of households without weekly refuse removal [205]	10,09%	5,79%	3,24%	5,01%	9,86%	14,55%
Number of households without weekly refuse removal	65 882	45 031	27 948	51 072	128 059	145 957
Water Supply						
Percentage of households without piped water on site	10,13%	15,60%	6,23%	8,64%	7,53%	16,87%
Number of households without piped water on site	66 133	121 258	53 718	88 076	97784	169 169
Toilet Facilities						
Percentage of households without flush toilet		12,66%	6,60%	6,70%	9,05%	30,50%
Number of households without flush toilet	n/a	98 435	56 904	68 299	117 484	305 891
Electricity Supply						
Percentage of households without electricity supply	12,70%	11,19%	3,72%	7,50%	8,46%	7,41%
Number of households without electricity	82 928	87 024	32 090	76 454	109 848	74 305

Source: Statistics SA: Census 1996, Census 2001, General Household Survey 2005 and 2009

204. Cape Town Spatial Development Framework, Technical Report, p 32.
205. The City of Cape Town reports 100% service delivery to all known formal and informal properties. The discrepancy may be attributed to residents not always realising that the contractor collecting their waste is employed by the City of Cape Town. (Muller, Othelie. 2011. Personal communication. 2 September. Cape Town.)

> “Uneven urban growth could be a source of both economic inefficiency and social injustice, because it impedes labour and housing market interactions, transport networks and economical public service delivery.”

Some landscapes will also need to be protected as they form part of the City's cultural heritage. They provide some of the most sought-after living environments in the country, and are major tourist attractions. The rapid growth of the city also places significant pressure on some unique cultural landscapes including the denser inner-city environments (like Bo-Kaap), the more semi-rural valleys (like Hout Bay), small coastal enclaves (like Simon's Town), as well as unique cultural landscapes (like the Durbanville winelands and Mamre). If not mitigated, development pressure will become an increasing threat to these places, and will contribute to the decline in quality of heritage and cultural features, buildings and landscapes.[206]

Given these limitations on developable land, it is essential that land suitable for urban development is used effectively and efficiently. Increasingly, this has led to calls to transform Cape Town's spatial and social legacy into a more integrated and compact city, with mixed use zoning areas that bring residents closer to work, and offer opportunities to break down the social barriers between different social and racial groups in the city.

Currently, Cape Town's average population density is low, at 39 persons per hectare, and varies between 100 and 150 in the shack areas of Khayelitsha and between four and 12 in the former white suburbs.[207] Middle-income and high-income households mostly live in low-density suburbs geared to car-based commuting, and are costly to service with public transport and other infrastructure. In townships, the majority of households live in confined spaces, vulnerable to the spread of shack fires and communicable diseases, are poorly situated in relation to flood hazards, and are remote from livelihood opportunities and amenities.

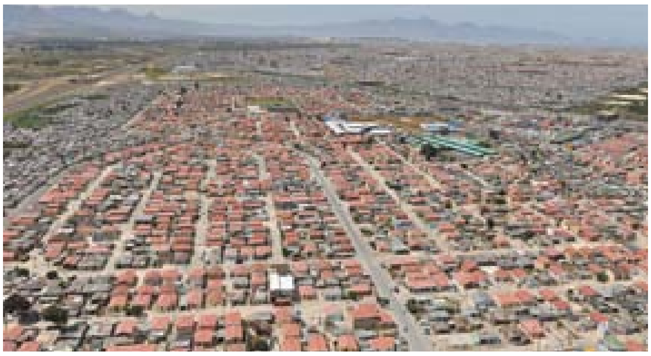
In these townships, the pressure on land for housing complicates the provision of bulk infrastructure, community facilities, public spaces and formal economic activity. If not tackled proactively, the historical legacy could create the conditions for replicating the past: "Uneven urban growth could be a source of both economic inefficiency and social injustice, because it impedes labour and housing market interactions, transport networks and economical public service delivery."[208]

In practice, this has been difficult to achieve as the cost of more centrally located land, combined with the need for large scale low-income housing developments have coalesced to push affordable housing developments to the periphery of the city. Increasingly, brownfields sites – rehabilitated former industrial sites along existing development corridors and closer to the city centre – may have to be considered for low-income and gap housing, and be rehabilitated accordingly.

Spatially fragmented cities need to be knitted together more effectively through strategic investments in transport, housing and economic development. Alternatively, failure to address the fragmentation and low density patterns may deepen existing inequalities and social marginalisation in Cape Town through:

- Perpetuating apartheid spatial planning patterns that entrench race and class divisions in and between urban settlements;
- Deepening income, asset and spatial inequalities between rich (mainly white) and poor (mainly African black) residents;
- Perpetuating urban dysfunction, with the poorest people living on the peripheries in informal settlements or backyards, furthest from employment opportunities, and with limited access to social and leisure services and recreational spaces;
- Lacking viable public transport systems that can move the general public and facilitate connections between different public and non-motorised transport modes and/or facilities;
- A water crisis, as groundwater and river ecosystems are damaged or depleted to meet increasing demands for water, and the costs of water services escalate;
- Increased costs of traversing the city – to search for or get to work – as oil prices increase while people movement and goods transport remain dependent on road-based vehicles and private transport;
- Food insecurity escalates as agricultural land is potentially swallowed by residential and commercial development and we lose capacity to grow more food locally; and

206. Cape Town Spatial Development Framework, Technical Report, p 40.
207. City of Cape Town, 2009. Cape Town Densification Strategy: Technical Report, www.capetown.gov.za/en/sdf.
208. SACN. 2011. p 59.



- Increased energy insecurity as more dispersed residential developments tax the existing energy grid without the sufficient investment in building alternative energy sources.

Other consequences that may develop from a sprawling city – with the potential to diminish the liveability of the city for all residents – include:

- Increased air pollution, mainly from vehicle emissions from longer journeys and more private cars on the roads; and
- A collapse of ecological functioning as biodiversity is lost through destruction of natural habitat and alien invasive species, leading to loss of ecosystem services such as natural purification of water supplies and creation of drainage systems, loss of moderation of floods, and so forth.

Key elements for successful urban restructuring include higher-density housing development in well-located areas, major improvements in public transport to link previously fragmented places to one another, and higher employment levels in townships and informal settlements. More compact urban form should however not mean losing access to public green and open spaces, and neighbourhoods will have to be designed with amenities that can foster the formation of communities and social interaction to advance social cohesion and increase the liveability of more compact environments.

Strategies and plans

In response, the City of Cape Town has initiated a number of strategic and integrated planning and framework development processes, with a view to starting to address the urban challenges outlined earlier. These following five key strategies – currently, all works in progress and at different stages of development – include:

- the development of an *urbanisation strategy*, with a framework that outlines a pro-poor and coordination function, to respond in more coherent fashion to the myriad challenges including poverty, inequality, unemployment, inadequate housing, overcrowding in existing informal settlements, [and] lack of access to essential services and resources;[209]
- an *economic development strategy* that outlines the options for economic development drivers and strategies over the next five to ten years;
- *a social development strategy* to guide the City from 2012 to 2022 as it seeks to meet the development needs of communities;
- *a spatial development framework* that sets out proposals for developing a more integrated compact city form, and which will guide the city's infrastructure development over the next 15 years or so; and
- a longer term – 30 year – *city development strategy* process that together with different stakeholders, will include a vision of Cape Town in 2040 and the strategic levers and interventions to achieve the long-term vision.

These strategies are supplemented by a range of plans that seek to take forward some of the key components outlined in the overarching strategies. These include, among others:

- The City's five-year *Integrated Development Plan* (IDP) for 2012 to 2017, which is being prepared, will support the City's focus on creating the conditions for economic and social development, and facilitating universal access to municipal services.
- The City is also – by necessity – implementing an *Energy and Climate Change Action Plan* to prepare the city and its inhabitants for the effects of climate change and to modify the collective behaviour of Cape Town residents to mitigate the potential effects and risks. The plan includes a range of activities, including support for alternative energy supplies – like the Darling wind energy farm – as well as measures to make existing City of Cape Town-owned infrastructure more energy efficient by retrofitting them with energy saving technologies. City of Cape Town owned buildings are already being retrofitted with automatic meter reading electricity consumption meters in order to monitor and improve the energy use in these buildings. Similarly, low-income houses are being retrofitted with solar geysers and ceilings to improve energy efficiency and use over the long term.
- The *Integrated Transport Plan* (ITP) is a statutory

> "Key elements for successful urban restructuring include higher-density housing development in well-located areas, major improvements in public transport to link previously fragmented places to one another, and higher employment levels in townships and informal settlements."

209. City of Cape Town, Draft Urbanisation Strategy Framework, 3 June 2011.

requirement and part of the IDP. It provides an overview of the transport context in Cape Town, identifies transport needs, and initiates select transport projects in line with those needs. The 2006-2011 ITP outlines plans to upgrade the public transport network in the city, and is also linked into the climate change and energy action plan targets to reduce carbon emissions in the city.

The implementation of the IRT system is a big part of the ITP. As of March 2011, the City of Cape Town has also been awarded accreditation by the National Department of Transport to operate and maintain the Metrorail system (with funding from National Government). This will contribute to better planning and alignment of the different modes of transport in the city.

> "The nature, depth and inter-linkages mean that the City of Cape Town cannot address these challenges on its own. It will require focused and sustained efforts by all to achieve improved quality of life for all Capetonians."

Into the future

The chapter started by identifying the importance of equity and sustainability if Cape Town is to achieve harmony between the social, spatial and environmental aspects of the city and the people who live in it. As briefly outlined above, the City of Cape Town has made a start down this road through a range of different processes that are contained in a number of strategies and action plans to stimulate the local and regional economy, to address spatial and social fragmentation, and the serious environmental and resource challenges and opportunities the city will face in the next few years.

However, the nature, depth and inter-linkages mean that the City of Cape Town cannot address these challenges on its own. It will require focused and sustained efforts by all to achieve improved quality of life for all Capetonians. The City of Cape Town will need to work with other spheres of government, the private sector, non-governmental and civic organisations, the residents of Cape Town and others to address these challenges.

In terms of the future, the most pressing urban development challenges and opportunities facing Cape Town in the next five to 15 years, and on which the City of Cape Town and others need to focus, include the following:

- *Growing demand for housing:* Cape Town has been one of the fastest-growing cities in South Africa. Currently, the City's ability to deliver on public-subsidised housing falls short of the need, and is reflected in the growing backlog in public housing delivery as well as the growth in informal settlements and the number of backyarders. Furthermore, the gap housing market remains largely uncatered for. This is both a challenge and an opportunity for social innovation to make housing more affordable (using sustainable and more participative delivery methods) and for technological innovation using new building technologies that integrate waste recycling and renewable materials to boost energy efficiency and recycling at the household level. Apart from reducing the actual building costs, these residential units will in the long term be more affordable to run and potentially reduce monthly service charges.
- *Water security:* The possibility of an impending water crisis in Cape Town by 2016 to 2020 – and the potential of a prolonged drought if rainfall drops as a result of climate change – necessitates innovations in harvesting ground water as well as desalination technologies – coupled with continued water demand management strategies. Rainfall is already reputed to be below normal for the rainy months, and Cape Town cannot build any more dams. The City is therefore already investigating technologies and opportunities for harvesting new water sources as well as upgrading water reticulation network and systems to minimise leaks and water loss. Water scarcity awareness initiatives targeting consumers and encouraging careful use of this precious resource continue to be important.
- *Energy insecurity*: Several factors point to the need to find alternative energy sources including: the vulnerability of continuing the current dependence on foreign sources of oil, concerns regarding oil and fossil-fuel depletion, as well as the geo-politics of oil, combined with competing demands for oil between developing countries versus those of the growing Indian and Chinese economies. The development of renewable energy sources – solar and wind – means more local control and enhanced energy security. The City will also need to invest in technologies for more effective storage and distribution of renewable energy.
- *Public transport*: Linked into innovations for enhanced energy security is the need for investing in

a high-quality integrated public transport system used by a cross-section of Cape Town residents, which can also be used to integrate parts of the city that are on the social and spatial margins. An integrated system will encourage the use of non-motorised transport, urge private car users to switch to public transport as well as incentivise them to consider hybrid cars that are powered by plugging them into the electricity grid. These initiatives will have positive energy and quality-of-life spin-offs by reducing pollution and improving air quality in Cape Town.

- *Social and spatial integration in the city:* Cape Town's spatial structure remains fragmented, despite dramatic political changes and growth and development over the past 20 years. Despite post-apartheid policies, new state-subsidised housing and market-driven development continue to reinforce existing spatial patterns and perpetuate the peripheral location of low-cost housing. Cape Town is making some progress with respect to developing a more compact city form, with mixed use and more integrated and accompanying social development as a priority. The City of Cape Town has approved an SDF in which urban growth management and spatial and social integration constitute some of the key building blocks. At the time of writing, these plans were with Province for their input and approval.
- *Food insecurity and increasing urban agriculture practice:* As it becomes more expensive to import and transport food (with rising oil prices), food will also become more expensive. All cities, Cape Town included, will increasingly have to source food locally. The City's urban agriculture policies will need to take far greater prominence and will necessitate preservation of green spaces on the outskirts of the cities. Increasingly too, the city and its residents will need to shift to more productive use of available green space and increase the use of food plants.
- *Innovations in solid waste management technologies and practice:* These can reduce the need for ever-increasing landfills and could have the positive outcome of generating energy from waste. At the same time, more Cape Town residents will have to be incentivised to recycle waste at household level.

In the final analysis, however, it will not be enough only to address the spatial structure of the city. The complexity of the challenges requires an integrated approach that addresses the range of social, educational and economic improvements alongside the spatial interventions. Besides facilitating opportunities for business investment and employment creation, the City will also need to facilitate ways for residents to increase their livelihood options through income creating opportunities in the informal economy, and creating a platform for linkages between informal traders and the formal economy. This has the potential to include large numbers of residents who are currently on the social, spatial and economic margins, in more functional and equitable relationships with the City of Cape Town.

The *liveable city* will be defined by the people in the city. Diversity and inclusivity – and the participation of all stakeholders in defining what the 'fit for the future' Cape Town will look and feel like – are crucial components of creating a liveable Cape Town, one that addresses its challenges to meet equity and sustainability.

Cape Town has engaged in processes to benchmark itself as a 'world-class city' with the ability to compete economically with comparator cities with which it has something in common – such as Rio de Janeiro, Istanbul, Mumbai, Shanghai, Boston, Vancouver or Barcelona[210] – to attract future investment opportunities and employment-generating opportunities that can benefit its residents. The City may well want to link into initiatives such as the Liveable Cities initiative of the Phillips Center for Health and Well-being[211] – to redefine what a 'fit for the future' Cape Town may look like.

> "Besides facilitating opportunities for business investment and employment creation, the City will also need to facilitate ways for residents to increase their livelihood options through income creating opportunities in the informal economy, and creating a platform for linkages between informal traders and the formal economy."

210. Turok, Ivan, et al. 2011, *Cape Town's Global Competitiveness: Synthesis Report for the City of Cape Town (Draft 6)*, Cape Town.
211. Urban Planning Advisory Team (UPAT) of the International Society of City and Regional Planners (ISOCARP), 2010. Livable cities in a rapidly urbanising world. For the Philips Center of Health and Well-being, Singapore July 25-31. Available on http://www.philips-thecenter.org/livable-cities/recent-activity/2011/Urban-Planning-Action-Team-Report/

Towards a sustainable city form for Cape Town[212]

How is one to conceive of both the organisation of a city and the construction of a collective infrastructure?

A view of Cape Town from the air always impresses. The beautiful landscape that is host to one of the most bio-diverse regions in the world frames a charming city known for its urbanity and vibrant history. An aerial view also reveals a sprawled city, the established settlement that hugs the mountain stretches to low-density low-income neighbourhoods revealing large-scale informal settlements that are home to a large portion of the city's population.

This is not the glamorous city that attracts millions of tourists every year. Life in settlements such as (the ironically named) Barcelona and Europe on the Cape Flats is hard; many, though, choose to make it their home and have done for a long time.

Cape Town's geography is difficult. Major transport routes run into the city, making it particularly difficult to traverse across from where the poorest live to where the promise of employment awaits. Spatial planning efforts since the early 1990s have attempted to address this inefficient spatial structure, using ordering elements such as nodes and corridors to knit the city back together.

Despite these intentions, so much that is familiar remains: urban poverty, social inequalities and increasing marginalisation. Transformation remains selective: then and now. It appears that the "… new era will still contain many echoes of the old. In other words, business will go on, but never as usual – because it never has."[213]

How does one move from a spatial fetishism which places faith in the ability of markets and people to move in accordance with lines and points on a map? Is meaningful intervention possible in a context where unemployment grows and structural inequalities make it difficult for the poor to get around?

The answer perhaps lies partially in how we read the city.

Planners tend to plan around what should be, rather than *what is*, and what *could be*. One of the most poignant trends is city development towards the north where investment in infrastructure hardly keeps pace with the demand for new residential and commercial development.

For spatial planning to be relevant it needs to engage more deeply with markets and have a more direct link to infrastructure development.[214] There is an opportunity here. By understanding the location decisions of firms and engaging with infrastructural change and prerogatives, long-term planning can become more relevant. It requires an active engagement with city economic development processes and an operational understanding of the potential of large infrastructural investment.

A closer relationship between spatial planning and infrastructure delivery needs to be framed differently. We can no longer assume an oil-driven economy and the utility systems that rely on this. Future urban transitions are required to be innovative, move towards zero-waste systems and take climate change seriously.

A new paradigm needs to inform the city. Resilience is key, as is adaptation. The built form that best supports this is one where thresholds support public transportation, where densities allow for fewer emissions and support local economies and where naturally vulnerable areas are protected for everybody.

It is a city where opportunities for those on the margins are broadened; where the informal economy is supported and those living in shacks are not seen as temporary sojourners on the urban edge but citizens that rely on their own invention for shelter in the absence of flexible public policy.

Enhancing livelihoods will enable a broader population to become part of the sustainable city. This entails promoting strategies that build a closer relationship between livelihoods and city strategies; design that enables mobility and considers space more carefully. It entails higher densities, accommodating mixed use, the informal economy and taking public transport seriously. It also requires insight into what and who drives the current spatial trajectory of the city. A clearer understanding of the forces that drive development and continued fragmentation is necessary.

Intervention to the greater good in this context will take courage and vision that imagines a sustainable city that is mindful of the challenges of climate change, growing income inequality and dissatisfaction with service delivery levels. It requires that we think of sustainability more broadly; that we consider infrastructure differently. The social dimension is integral to this.

It is also a city where innovation is recognised in unexpected places, given room to breathe and the chance to make a contribution to the ongoing engagements and negotiations that make a city vibrant – the reasons so many flock to it. The poor and excluded need appropriate technologies and spaces in accordance with necessity. Social networks enable collective mobilisation of scarce resources.

How to support these processes while remaining true to normative goals of upliftment requires an engagement with the everyday strategies employed in the ongoing survival of those at the margins. This is the collective infrastructure that needs to be nurtured, recognised and celebrated.

212. This piece was written by Dr Nancy Odendaal from the School of Architecture, Planning and Geomatics, at the University of Cape Town.
213. Thrift, N. 1996. "New Urban Areas and Old Technological Fears: reconfiguring the goodwill of electronic things." *Urban Studies 33(8)*: 1463 – 1493.
214. Todes, A. 2008 'Rethinking spatial planning', SSB/TRP/MDM 2008(53).

Conclusion

The input and engagement of residents, business, and other stakeholders in addressing these challenges and advancing a more 'fit for the future' Cape Town are crucial. A resilient Cape Town cannot be attained without the collaboration of Cape Town's residents in particular, and engagement has been shown to flourish in a relationship of trust.

The local government elections in May 2011 put in office new councillors to provide leadership: Almost half of the Council of the City of Cape Town is new to this sphere of government.

A new term-of-office plan is being developed to outline the short to medium-term objectives for the City for the next five years, from 2012 to 2017, which will also guide the IDP for this period. For the medium to long term, City officials are developing a medium-term growth plan, guided by the SDF, and beginning to outline a process to develop a 2040 vision for Cape Town, which will be contained in the CDS. One of the aims of this *State of Cape Town Report 2010* is to collate up-to-date information and analyses that will support and assist in creating a deeper understanding of the challenges facing Cape Town and its people.

This report focused on Cape Town's key development challenges in 2010. In the main, the challenges can be summarised as follows:

1. The population of Cape Town will continue to grow. This calls for the City of Cape Town with other spheres of government and stakeholders to plan ahead to timeously meet the needs as they emerge, especially the need for access to low-cost housing and basic municipal services.
2. While the health profile of Cape Town is improving, there still is wide-scale poverty, with poor communities living on the periphery of the city, with their spatial location serving as one expression of their social marginalisation.
3. The city's social fabric is undermined by social mar-


ginalisation and high levels of social criminality - especially drug and murder-related crime. This requires concerted interventions to build social equity, foster a sense of community and engage residents (especially youth) in (re)building the city.

4. High proportions of the Cape Town population are unskilled and unemployed, while the traditional highly labour-absorbing industries in Cape Town (like the textile industry) are in decline. The City of Cape Town will therefore need to support an environment where the informal economy and SMMEs can grow, with a view to providing some entry-level jobs and contributing to economic growth.
5. Combating social marginalisation and building trust and a sense of community between population groups in Cape Town will require a more compact city form with ample green and open public space that will facilitate social interaction, and play.
6. Young people emerge from the current education system with low to medium level skills that do not meet the needs of the job market. This calls for an improvement in the quality of education and an increased uptake and completion of tertiary and advanced tertiary education.
7. In order to capitalise on the potential of the knowledge economy, Cape Town needs to invest in the soft (human capacity) and hard (fibre optic networks) infrastructure that will yield the optimal conditions (and value-added services) for such an economy to flourish.
8. The rate of urban development is placing undue pressure on the natural and cultural resources of the city. The City of Cape Town will have to support ways to conserve and enrich the existing natural and cultural landscape, from the neighbourhood to the city level.
9. As one consequence of climate change, Cape Town is facing the possibility of water scarcity with the potential knock-on effect of food insecurity. The City administration will have to continue with water demand management, while also exploring and securing alternative water sources.
10. The City of Cape Town's bulk infrastructure needs urgent maintenance to reduce resource loss (for example water leakage) and enhance environmental conservation efforts (such as stormwater runoff, sewage system, etc.).
11. The emerging possibility of a global oil scarcity requires the City of Cape Town to map all the alternative-energy solutions potentially available and/or developable in/by the municipality – including good quality public, hybrid (electric), and non-motorised transport alternatives – as well as alternative local energy generation and energy-storage solutions.
12. Cape Town residents will have to be part of the solution to Cape Town's challenges and the City of Cape Town will need to facilitate interventions that encourage residents to reduce their carbon foot print at the household level, including recycling household waste, using public or non-motorised transport more often, and being engaged – more broadly – in efforts to build the city's resilience at the environmental, economic and social levels.

Combined, these 12 challenges outline the need for a development path for Cape Town that promotes economic growth, reduces poverty and social marginalisation, and builds residents' engagement in making the city more resilient at the level of the economy, the natural and cultural landscapes, households and communities and the ecosystem; in other words, the city as an integrated whole.

The two previous state-of-the-city reports as well as *The State of the Cities Report 2011* respectively, include discussion on governance as development issues and challenges for Cape Town and South African cities in general. The City of Cape Town's governance institutions and culture, encapsulated in Council, will clearly affect the health and resilience of the city (as an integrated whole) in the way they seek to integrate these different systems – or not.

Thus, the question will be whether and how Council (and City of Cape Town officials) consider these challenges in their decision-making at the municipal level, or their implementation of decisions made within local, provincial and national institutions and frameworks.

In light of the above, it is clear that the input and engagement of residents, business, and other stakeholders in addressing these challenges and advancing a more 'fit for the future' Cape Town are crucial. A resilient Cape Town cannot be attained without the collaboration of Cape Town's residents in particular, and engagement has been shown to flourish

"A resilient Cape Town cannot be attained without the collaboration of Cape Town's residents in particular, and engagement has been shown to flourish in a relationship of trust."

in a relationship of trust. The resilience of the city as an integrated whole comes down to, among others, the City of Cape Town's ability to build that trust through inclusive social processes that recognise, validate, and draw on the experiences and viewpoints of the cross-section of Cape Town's diverse communities.

The City of Cape Town has adopted the SDF, which was with Province for ratification at the time of writing. This framework was developed with community participation. It envisages the spatial dimension of a more resilient Cape Town, and provides a plan for how to knit together the socially and spatially fragmented Cape Town into one that is more functionally efficient and environmentally sustainable. What will be required in making this vision a reality, is a set of processes that convince residents why and how they can fruitfully participate in making Cape Town a socially cohesive and more resilient city.

The challenge will be to lead in the development of process innovations, going beyond the technical and institutional innovations – and to create excitement and buy-in among Cape Town's residents, businesses as well as other spheres of government to bring about a resilient and economically and socially thriving Cape Town.

THINK PIECE

The detail in the data

Towards more robust and expanded data provision at the city level, especially in view of Census 2011[215]

The role of Statistics South Africa (Stats SA) is to provide all stakeholders with information about the socio-economic data of, and a brief overview of the environmental situation in the country. This is in line with the Statistics Act, (Act 6 of 1999) and the fundamental principles of official statistics of the United Nations.

Stats SA strives to bring relevant, accurate and timeous information to the public, wants to nurture a culture of evidence-based decision-making, and adequately equip users to make informed decisions based on relevant information to address the challenges and opportunities in South Africa and an increasingly global community.

Statistical information makes measuring the country's performance transparent, leading to empowerment and service excellence and also promoting accountability by focusing on data related to economic growth, price stability, employment and job creation, life circumstances, service delivery and poverty alleviation and demographic profile and population dynamics.

Data collection takes place by means of various surveys throughout the year and every ten years Stats SA embarks on a national project called the Census. Census 2011, as all the previous ones, will afford Stats SA the opportunity to satisfy user needs more effectively, as the data that are collected during the Census is at place-name level. The data, therefore, represents the lowest geographic level, also called small-area statistics. The various users of statistical data,such as government departments and municipalities, will have the opportunity to engage the data relevant to their needs at various levels of planning, policy formulation and decision-making.

The relevance of the data acquired by the various users will allow them to address the needs of their customers more effectively. For example, IDP managers at municipalities will be able to ensure that their plans are more effective in terms of issues to be addressed at municipal level, such as the provision of water and sanitation facilities, housing, roads, clinics and other much-needed resources.

The operations for Census 2011 in the metro were conducted by means of four satellite offices, which were located in Bellville, Athlone, Tokai and the central city. Each of these offices was managed by experienced permanent staff, who were deployed to these offices to meet the needs of the Census specifically.

The metro comprised 6 417 enumeration areas, which constitutes approximately 60% of the entire Western Cape. The total staff complement for the metro was in excess of 8 000 people, of whom the majority were on contract.

Data collection was done over a period of 21 days, from 9 to 30 October and the final results will be released in March 2013.

Census 2011 has been dubbed the 'single biggest operation in peacetime'.

215. This short piece was written by Ulrich Jacobs of Statistics South Africa, Cape Town office.

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