CHAPTER 2

Long-Term Strategic Perspective

INTRODUCTION

This section of the GDS – a Long-Term Strategic Perspective – presents a *strategic* analysis of what the future may hold. This is an interpretation of how current and emerging circumstances may evolve to shape the progress of development in the city. This outlook on the City's prospects is based on a set of assumptions and projections about how certain key trends and dynamics may play out over the life-cycle of the City, and the future challenges and opportunities likely to emerge from these. Where appropriate and necessary, the analysis includes:

- A brief assessment of the City's efforts in engaging these conditions and trends, and the challenges implied by not scaling up efforts as well as the potential opportunities of doing so; and
- An indication of how national and provincial strategies analyse trends and future prospects, giving clues to how this GDS's development paradigm, vision, and long-term goals and strategic interventions may need to harmonise and align with the proposals in these strategies.

This is a *strategic* analysis in the sense that the Development Paradigm strongly informs the scope and focus of the analysis. We do not take a scattergun approach. Instead, the six principles outlined in the Development Paradigm section below help to isolate what are more important trends to look at. In turn, the analysis firmly grounds our core principle.

It is also a *strategic* analysis in the sense that it does not try to assemble a complete picture of what is currently happening, or likely to happen, in Johannesburg. A veritable telephone book of data tables, graphs, statistically-based projections, and odd facts often does not help to clarify why certain strategic conclusions have been reached.

This Long-Term Strategic Perspective therefore adopts the same style of analysis in the first iteration of the National Spatial Development Paradigm (NSDP). The NSDP was based on years of detailed and extensive study on emerging trends in the national space economy, and on comprehensively mapped evidence of the changing distribution of economic potential and need. However, the final analysis presented in the published document amounts to a tight narrative, capturing the key macro-trends emerging, and national government's interpretation of their strategic implications. This Perspective echoes this approach. It provides a synthesis of the City of Johannesburg's *perspective* on current and future trends, supported where necessary with appropriate references, tables and figures.

There is considerable data and analysis relevant to each of the twelve sector areas, produced by various City of Johannesburg departments, already in the public domain. Key documents include the Integrated Transportation Plan (ITP); the Spatial Development Framework (SDF) and Regional SDFs; the Human Development Strategy; the City's State of the Environment Report; the Water Services Development Plan; and so on. Also important is the City's five-year review of the last term of office – Reflection on a Solid Foundation: Building Developmental Local Government. This contains an overall picture of Johannesburg's demography, economy and socio-economic conditions, as well as a brief analysis of key trends and challenges at the start of each review chapter. This Long-Term Strategic

Perspective cannot repeat all this information, and so where appropriate the text simply refers to the relevant plan, strategy or document. In some cases this means that a sector area is not covered as extensively as other areas.

A number of studies were specifically commissioned at the start of the Growth and Development Strategy process to lay a foundation of understanding on key trends and issues. These studies will be available on the City of Johannesburg's website as supportive documentation to this analysis.[7]

DEMOGRAPHY

Fast, but also tenuous urbanisation

- The pace of urbanisation – the process by which rural populations move to make their homes in the city – is very fast in many parts of the developing world. In some places it is accelerating. In Africa the pace is especially fast. A recent World Bank report noted:

  > *"What is historically unprecedented is the absolute rate of urban growth in Africa – averaging almost 5 percent per year, implying close to a doubling of the urban population in 15 years. The urban growth rate reflects the continuing high natural growth of population. And the "take off" in Africa's urban population growth is yet to come. On average the population of the Africa Region is now one-third urbanized, higher than South Asia's 28%. Africa is approaching a demographic inflection point as the numbers of new urban residents are projected to rise sharply by over 300 million between 2000-2030 – more than twice the rural population increment."*[8]

- Over the very long run there is no conceivable reason why most developing world regions will not see a level of urbanisation – that is, the proportion of a population that permanently resides in cities – approximate to that which is currently seen in developed world countries.

- However, it is important to note that migratory flows are not only from rural to urban areas[9], and that a move to the city is not automatically a permanent move. Recent research indicates that the growth of many African cities, including large cities such as Lagos and Nairobi, has turned out to be far lower than that confidently predicted a decade or two ago.[10] This reflects the weak economic performance of many countries, which creates conditions in which opportunity seekers moving to cities are forced to hedge their bets by keeping one foot in the countryside. This implies that *en route* to eventual higher rates of urbanisation, national space economies may go through transitional phases in which the presence in urban areas of many residents remains fairly tenuous.

"… (i)n many nations, this trend towards increasingly urbanized populations is slower than most experts had anticipated. Africa is certainly less urbanized today than the UN predicted it would be 15-20 years ago, largely because nations do not urbanize rapidly if their economies are not growing. Censuses held in the last few years show that most of the large cities had smaller populations than had been anticipated. There is also great diversity within Africa of levels of urbanization and rates of increase in these levels"

Bolnick, J. (et al) (2006), A pro-poor urban agenda for Africa: Clarifying ecological and development issues for poor and vulnerable populations, Human Settlements Discussion Paper Series, International Institute for Environment and Development, p9]

- There is evidence that South African urban areas may still be in this phase. The census data from 2001 suggests that whereas 364 792 new residents moved into Johannesburg between 1996 and 2001, 194 604 moved out, leaving a net of 170 188. The census suggests that Johannesburg shed at least half as many people as it gained from more rural parts of the country like Mpumulanga, North West and the Free State.[11] StatsSA recently drew the following conclusions from a set of studies, based in part on census information, into South African migration and urbanisation patterns:

  "Clearly, there is migration towards the larger urban conglomerations, but there are dynamic ties that keep the rural areas linked to the cities. At first glance the metropolitan areas are receiving a large population of in-migrants from other settlement types in the country. However, the permanence of this migration is challenged by data from the sub-district level, and the ties between urban dwellers and the rural population may ensure the sustained existence of rural settlements, despite poverty and out-migration."[12]

- While many of the people moving in were certainly from rural areas, especially from parts of Limpopo, many also came in from other South African urban areas, notably other Gauteng metropolitan municipality areas, and other parts of Gauteng. Intriguingly, Johannesburg also lost large numbers of people to other urban areas. In fact, more people moved out to other Gauteng metros than moved in from these areas. This dynamic picture of inter-urban movement makes it even clearer that a standard perception of one way rural to urban urbanisation flows needs to be nuanced.
- Various scenario exercises suggests that there is a significant possibility of a severe and prolonged drought in Southern Africa which could also boost foreign migration to Johannesburg. Acute water shortages in some parts of the region may add pressure even in non-drought periods. Conflict and state failure in other parts of the continent will very likely continue to be a factor, increasing the number of economic migrants and refugees.[13]

Higher fertility, but also higher mortality

- South Africa as a whole is going through a process of demographic transition from higher to lower fertility. This process is driven in part by the shift in the shares of population from rural to urban. It is a seemingly inexorable trend that the nature of modern urban life changes the calculus of choice around how many children to have. Whereas in poorer rural settings the long-term benefits of having more children may exceed the longer term cost, in reverse is usually true in cities. This drives down the fertility rate over the long term.

- One exception to this rule is in cities managing strong rural to urban migratory flows. The demographic study commissioned as base information for this GDS concluded:

  "Fertility of recent migrants from rural areas, both local and foreign, will affect total population fertility in the City. These people have moved to the City from areas with a tradition of higher fertility compared to the established residents. Fertility, as a part of culture, does not change overnight, and pockets of high fertility among more recent in-migrants will tend to push up general fertility rates for Johannesburg."[14]

- Along with the first order effect of migration this will add to faster population growth in the short to medium term. Johannesburg is clearly seeing this trend in its statistics. The number of children born and registered in Johannesburg increased from 51 000 in 2002 to 54 000 in 2003. It increased to 61 000 in 2004. Other cities in South Africa have seen a decline over the same period.
- HIV and AIDS remains the big demographic unknown. While South Africa is going through a typical demographic transition from higher to lower fertility, the typical flipside of this transition, from higher to lower mortality, is distorted by the epidemic. A city-specific HIV zero-prevalence survey is not available for Johannesburg, but Gauteng data from the national HIV and Syphilis Antenatal Zero-Prevalence Survey gives a proxy picture. This survey estimated that the prevalence rate among pregnant women was 29,6% in 2003, after rising to 31,6% in 2002. Provisional data collected at City of Johannesburg clinics seems to confirm this picture, with 30,4% of pregnant women on average being HIV positive.
- Scenario studies synthesised for this GDS suggest that it is not impossible that a cure for AIDS may be found in the next decade. And at the very least, Anti-Retroviral Therapy will slow the death rate resulting from the epidemic. However, for the foreseeable future the rate of deaths resulting from AIDS will almost certainly rise.
- HIV and AIDS may also have the affect of accelerating flows of people out of the City. Cities are expensive places to live. It is quite conceivable that people living with HIV and AIDS who find their limited funds strained, will be forced to return to less expensive parts of the country where they have family members to take care of them.

Putting the picture together: future population growth

- The available data, when put together, does not provide a clear and unequivocal picture of long-term future population growth in Johannesburg.
- Some modelling, based largely on forward projections from census data, suggests a continued growth rate of between 3% and 4% per annum. If the annual rate of growth measured between 1996 and 2001 continues at 4,1%, Johannesburg's 3,1 million population in 2001 will have grown to 4,6 million in 2010. The National Health Review of 2005 estimates Johannesburg's population at 3 578 392, growing at 3,17%. At this pace, the City will have

4 293 813 in 2010. If rates of some 4% are maintained into the future, the population will double by 2022.

- However, more sophisticated demographic modelling, which takes a nuanced view of the evolution of the HIV and AIDS epidemic, reaches very different conclusions. This modelling says that whereas the rate of population increase was likely to have been very high over the last decade, it will now start to stabilise, and by the year 2015 the population of the City may actually decline. This Actuarial Society of South Africa modelling, which takes into account the roll-out of Anti-Retroviral Therapy suggests the trajectory in table 1. This indicates that the population of Johannesburg may rise only slightly above its current level, and will actually start to decline after 2015.

Year	Population	Non-AIDS death	AIDS death
2000	3 100 495	22 356	11 321
2005	3 436 045	25 184	30 563
2010	3 549 233	27 177	33 153
2015	3 569 507	29 184	35 292
2020	3 548 955	31 633	32 901

Table 2.1 **Actuarial Society of South Africa modelling for Johannesburg population growth based on the ASSA model 2002.**

Fast household growth

- Population growth is often seen as the major factor to consider in city planning processes. But in fact, household formation rates may be far more important. In many countries household growth rates have consistently exceeded population growth rates by a wide margin over the last century. South Africa will be no exception. Between 1996 and 2001 Johannesburg's household formation rate was 6,7% per annum. This corresponded with a reduction in average household size from 3,6 in 1996 to 3,2 in 2001. If this rate of formation/decomposition continues, the City's 1 million households in 2001 may double to 2 million by 2012.
- The rapid pace of household growth is unusually fast, even by the standards of a city in a country in demographic transition. The trend deserves further explanation.[15] Provisionally, it may be due to in-migration of people inclined to set themselves up as single-person households. It may be due to households splitting as an under-designed Johannesburg, that forced extended families to stay together in matchbox homes or on stands with backyard shacks, gradually gives way to a city with wider accommodation options. It may even be due to households decomposing in response to various incentives (including social grants, housing subsidies and perhaps even a capped free-basic services package).

Key strategic implications

- There is often a perception that city planning cannot be done effectively until and unless future population growth rates can be known with certainty. While there is merit in this perception, the reality is that South Africa's and Johannesburg's demographic context is so fluid at present that it will be impossible to accurately know and predict future population growth for some time to come.
- The conclusion from this cannot be that no proper planning can therefore be done. The only option is to plan on the basis of growth at the maximum likely rate, based on historical trends. To do anything less would not be prudent.
- A high rate of population growth is an uneasy prospect for developing world cities with significant resource constraints. However, there is little option but to bite the bullet and respond to this growth. The long-term scenario synthesis commissioned for this GDS pointedly concludes:

  "Johannesburg can only embrace its growth – there is a not a great deal that can be done to alter the course of many of the external factors that will impact on this growth in the next 20 years. Politically, the city cannot, nor need to, adopt a "full up – apply elsewhere" attitude. History is replete with failed attempts to stem the economic pull that draws people to locate in certain areas. Yet the City can, and many cities do, raise the cost of benefiting from living in Johannesburg. But as many of these costs, e.g., transport, are already high, and half of all households in Johannesburg are poor by any definition, the option of using prices for "demand control" is not viable in the short term and may never be morally sustainable."[16]

- A bigger issue than fast migration is the phenomenon of tenuous urbanisation resulting from ongoing patters of temporary and circular migration. Full commitment to urban lives of a greater share of the population has a net positive effect for major cities and countries as a whole. The long-run evidence in now developed countries, and recent evidence from Asia, suggests that the economic benefits of higher rates of urbanisation, if managed well, can be considerable. However, tenuous urbanisation presents a major challenge. The above quotation from StatsSA continues:

  "The temporary nature of rural-to-urban migration in South Africa may add insight into the persistence of overcrowding and poor living conditions in urban townships. Migrants may employ a calculated strategy to maximise the benefits to their household of origin, rather than for their own benefit or the benefit of residential units in the urban setting. This may result in the need for low-budget rental accommodation, such as backyard shacks or rooms in the dwelling of a family member. In Nairobi, attempts to move squatter residents to better and more expensive housing had very limited success because many preferred to live in the relatively cheap housing found in informal settlements. This allowed for greater savings, which were allocated to housing in their home communities, school fees and other expenses for their families."[17]

- In other words, a city's development prospects may be seriously eroded by the unwillingness of a large proportion of a population to stay and invest their aspirations and resources once and for all. The dangers include:
  - A population with a reduced willingness to help build livable urban environments by meeting responsibilities of urban life, most notably by paying for services received;
  - The leakage of financial resources from cities, as people hedge their bets by also investing in rural homesteads and livelihoods. This translates into less urban capital formation and weaker investment in saleable urban assets, notably residential property;
  - Weak development of "social capital" and weak aggregation of "knowledge-effects", as people see limited benefit in devoting time and energy to building urban social formations and networks; and
  - An environment of ever greater uncertainty, and therefore in turn more short-term opportunistic behaviour, as people perceive lower returns from long-term commitments to sustainable economic ventures.

"it is not possible to avoid the consequences of better delivery: that providing cheaper and better housing, services, and settlements will also attract increased levels of migration. That is, implementing (development) successfully will bring more and more of South Africa's poor and hopeful households into Johannesburg, on a rising curve. It is not impossible that reducing living costs in poor areas will also lower the perceived threshold for entry, and could result in greater numbers of less-educated migrants and more of the unemployed deciding to attempt moving to Johannesburg.

For the City of Johannesburg, the strategy adopted to cope with this paradox relies on promoting the urban transition, the demographic and economic shift which puts in-migrating rural households into full urban citizenship, with complete economic participation and full integration into the City's civic and cultural life. Crossing the urban transition means successfully accumulating the core of assets that urban households need to deal with the earning economy, as well as mastering the legal and cultural forms. Households which do not succeed in making the urban transition remain on the outside, economically, socially and physically, trapped in forlorn semi-rural colonies which never fully join the urban life."

[Cross, C. (et al) (2005), Understanding the city's demographic future, Report commissioned by the City of Johannesburg, pp 40-41]

- For cities facing fast but also tenuous urbanisation, the strategic implication is clear. It is not prudent to simply hope that things will evolve in such a way that opportunity-seekers appearing on the streets of cities do not need to be dealt with, because they may go somewhere else. The challenge must be to find ways to accommodate and assimilate this new population. No city can manage this process without tensions, and without significant strain on available resources. But it is an unavoidable challenge that must be confronted.
- High levels of household growth add significantly to the service burden of the city, unless the new households are relatively wealthy, in which case it will add directly to the City's tax base and boost domestic consumption. It is likely that many new Johannesburg households are not yet in this position, and so for the foreseeable future this presents a major challenge. However, over the longer run a greater number of households presents an economic opportunity, since it adds to the base of consumers and taxpayers. This in turn adds demand for goods and services to the dynamic of city economic growth.

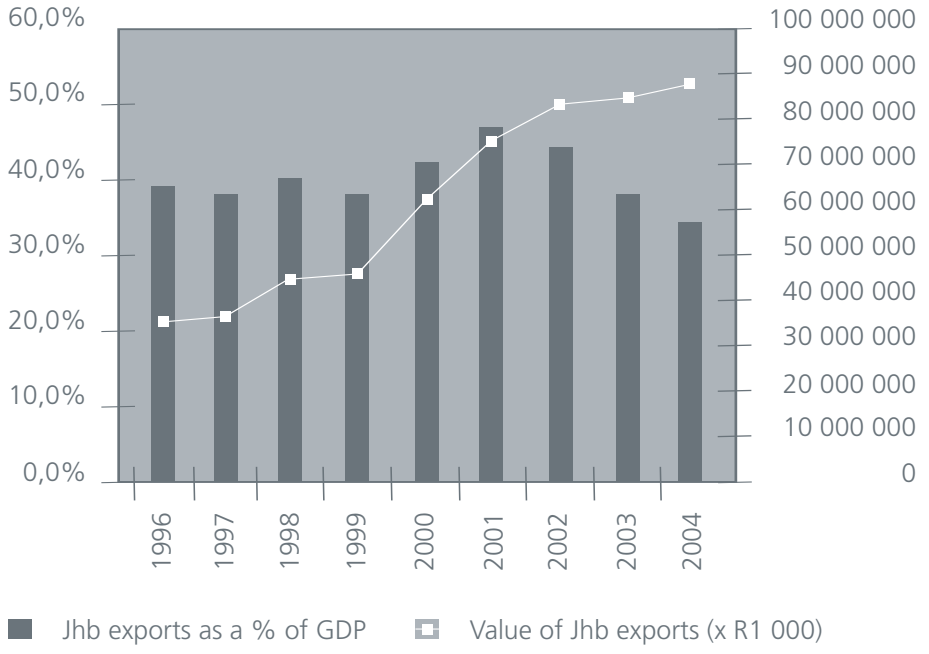
ECONOMIC DEVELOPMENT

- The City of Johannesburg's Joburg 2030 S0trategy provides a comprehensive analysis of the City's economy. Much of this analysis, including its assessment of micro-economic constraints, remains broadly valid. In addition, the City now brings out an annual economic review of Johannesburg which paints a detailed picture of the changing economic landscape. The information that can be found in these documents is not repeated here.

Long-run restructuring of city economies

- Whatever the original economic reason for the birth of a city, there is ample evidence that the economies of all major cities diversify over the long run. An economic analysis for a major Australian city put it this way:

  "… The economies of modern cities are increasingly service economies and, as a result, cities are increasingly not dependent on interaction with either their immediate hinterland or the rest of the world. One of the paradoxes of modern economies is that the relative importance of the traded goods sectors (that is export and import competing sectors) is declining, despite the remarkable growth in world trade that comprises a major part of what is now generally called globalisation. … most of the economic activity in modern cities comes from what people in those cities do for one another rather than what they do for the outside world. That is, the major sources of economic activity are the non-traded goods sectors which are predominantly services."[18]



- This same trend is seen in South African cities. The graph shows that even as Johannesburg exports have increased in value to almost R90 billion, their share of total GGP has dropped from 48% to 39% in the last few years.[19] This trend is accelerated by the strengthening of the Rand, but it must be

emphasised that the share of exports is not declining because the value of exports has declined. The graph can only be explained by other sectors of the economy – involving the local production or generation of goods and services to meet growing local demand – becoming more important.

This trend is positive overall. However, it is not without nuances. As a long-term trend it is also not without significant difficulties of adjustment for a city like Johannesburg.

- A schematic overview of the sectoral composition and growth patterns of the Johannesburg economy is contained in Table 2.2.[20] Trends worth noting include:
  - The growth rate of the Johannesburg economy has been higher than that of the South African economy over the period 1996 to 2004. Between 2000 and 2004 the Johannesburg economy grew 5,29% on average. The South African economy grew 3,29% per annum on average. While it shows structurally higher growth on average, it did not exceed the country's growth rate every year. Between 2003 and 2004, the South African economy grew 3,77%. This higher rate may reflect that other parts of the South African economy benefited more than Johannesburg from the relatively strong growth in commodity trade;
  - This possibility seems more likely when the current composition of the Johannesburg economy is considered. Wholesale and retail trade (at some 14,9%), and finance and insurance (at 19% even when excluding real estate activities) dominate the local economy;
  - Predictably perhaps, the massive expansion of the telecommunications industry has driven a 12,3% average annual growth in the post and telecommunications sector. Finance, and other business activities are also growing strongly. Fairly steady growth is shown by sectors such as transport equipment, land, air and water transport activities, wholesale trade and retail trade, hotels and restaurants;
  - There is some evidence of recent declines, off a trend of reasonably solid growth, of: some mining; chemical and rubber products; metal products, machinery and household appliances; electrical machinery and apparatus; and air transport. This is likely to reflect the more difficult business environment experienced by export industries exposed to the recent strengthening of the Rand, and increase in labour costs;
  - By contrast, sectors for which there is local production meeting growing local demand, such as food, beverages and tobacco products, and textiles, clothing and leather goods, show a recent up-tick in growth; and
  - It is noteworthy that the Johannesburg economy dominates the national economy, in finance, air transport, wholesale trade, production of electronic and medical products and services, other business services and other services. This suggests that the emerging Johannesburg of the future is the finance, trade and business services hub of the country.

Detailed sectors		Annual growth 2003-2004 (at constant 2000 prices)	Average annual growth 1996-2004 (at constant 2000 prices)	Share of national GVA in 2004	GVA per sector (R at constant 2000 prices)	Sector's share of total city GVA
11	Agriculture and hunting	1,6%	0,5%	0,7%	149 253	0,1%
12	Forestry and logging	(1,4%)	0,4%	1,2%	51 172	0,0%
13	Fishing, operation of fish farms	5,9%	1,0%	0,8%	6 289	0,0%
21	Mining of coal and lignite	(0,7%)	6,4%	1,4%	191 998	0,1%
23	Mining of gold and uranium ore	(8,3%)	1,3%	5,0%	680 178	0,4%
24	Mining of metal ores	(9,9%)	(0,1%)	1,3%	460 214	0,3%
25-29	Other mining and quarrying (including 22)	4,5%	2,3%	8,2%	596 828	0,4%
30	Food, beverages and tobacco products	5,2%	2,1%	11,3%	2 889 385	1,8%
31	Textiles, clothing and leather goods	2,3%	2,1%	8,9%	742 501	0,5%
32	Wood and wood products	2,0%	2,7%	20,2%	3 501 187	2,2%
33	Fuel, petroleum, chemical and rubber products	0,8%	6,4%	11,7%	4 780 171	3,0%
34	Other non-metallic mineral products	6,7%	0,8%	14,7%	834 979	0,5%
35	Metal products, machinery and household appliances	(1,7%)	2,9%	10,8%	3 807 785	2,4%
36	Electrical machinery and apparatus	(5,1%)	4,4%	19,1%	932 133	0,6%
37	Electronic, sound/vision, medical and other appliances	4,5%	2,0%	34,5%	759 791	0,5%
38	Transport equipment	4,1%	5,3%	11,1%	1,790 366	1,1%
39	Furniture and other items NEC and recycling	(0,4%)	2,8%	21,0%	3 214 420	2,0%
41	Electricity, gas, steam and hot water supply	(0,3%)	0,9%	11,0%	2 118 601	1,3%
42	Collection, purification and distribution of water	(0,4%)	(1,1%)	10,3%	331 725	0,2%
50	Construction	5,8%	3,5%	16,3%	4 283 839	2,7%
61	Wholesale and commission trade	5,2%	4,5%	28,0%	12 319 108	7,7%
62	Retail trade and repairs of goods	5,3%	4,9%	16,2%	11 635 301	7,2%
63	Sale and repairs of motor vehicles, sale of fuel	6,6%	7,4%	19,2%	3 773 573	2,3%
64	Hotels and restaurants	1,6%	3,3%	19,9%	1 934 111	1,2%
71-72	Land and water transport	3,1%	5,1%	16,8%	7 253 493	4,5%
73-74	Air transport and transport supporting activities	(0,3%)	4,3%	20,1%	3 185 402	2,0%
75	Post and telecommunications	8,2%	12,3%	17,4%	7 783 509	4,8%
81-83	Finance and insurance	3,5%	8,2%	30,9%	30 614 560	19,0%
84	Real estate activities	1,5%	1,0%	20,0%	11 671 705	7,3%
85-88	Other business activities	3,3%	9,9%	30,4%	11 161 977	6,9%
91	Public administration and defence activities	2,0%	1,0%	8,7%	4 440 751	2,8%
92	Education	2,0%	1,0%	8,5%	3 610 681	2,2%
93	Health and social work	2,0%	1,0%	14,3%	8 671 828	5,4%
94-99	Other service activities	2,0%	1,0%	26,6%	10 673 176	6,6%
Total industries		**3,1%**	**4,5%**	**16,6%**	**160 851 990**	**100,0%**

Table 2.2 **Schematic overview of the sectoral composition and growth patterns of the Johannesburg economy.**

Global and local risks

- City economies that were previously based on primary and secondary industries may prove to be strongly "path dependent". Stubbornly low levels of investment by South African business over the last five years, despite strong evidence of lower risks, lower interest rates and emerging opportunities in a more inclusive economy, suggest that the local economy is still dominated by business whose investment profiles remain largely geared to opportunities in the export of commodities. While the world is seeing a commodity boom at present, and South African firms are benefiting, investment risk aversion is understandable:

  – First, commodity prices are strongly cyclical and we may be nearing the top of the cycle;

- Second, the opening up of the world economy means it is virtually impossible to compete with China in the manufacture of low end products; and
- Third, there are major structural imbalances currently being seen in the global economy.

- This third issue warrants further explanation. Aside from the nagging question of what role future high oil prices may have on global economic growth, there is growing concern over the issue of very unequal trade balances between the United States, consequently showing an ever-growing deficit on the current account of its balance of payments, and Asian countries, showing a strong surplus. The May 2006 Monetary Policy Review from the Reserve Bank, sums up the position neatly:

  "Global imbalances have continued widening in recent years, raising fears regarding their sustainability over the long run … The differences between desired savings and desired investment rates in different regions of the world will have to be reduced if sustainable global economic growth is to be achieved and the probability of a sudden unfavourable correction in the world economy is to be reduced significantly. The strong growth in the foreign exchange reserves of Asian central banks has been one of the most visible features of growing global imbalances, along with the US current-account deficit. Large Asian trade surpluses and foreign direct investment inflows into East Asia have resulted in central bankers in the region buying US dollars to prevent their currencies appreciating. The accumulation of foreign exchange reserves is deemed by many to be artificially depressing Asian exchange rates, boosting trade surpluses, hindering natural adjustment mechanisms to rectify imbalances and creating the risk of financial crisis."[21]

  While this situation may seem a distant reality to economic policy-making in Johannesburg, it is critical to understand it if sound choices are to be made over how to commit public resources to economic development initiatives. Bluntly put, if the world does not find a way to address these structural imbalances through a smooth adjustment, the dollar may collapse in the short to medium term. This will result in a large portion of the world's savings in US denominated assets being wiped out, affecting investment rates across the globe. US interest rates will rise much more steeply than they have over the last few years, choking off domestic consumption there. Since final consumption expenditure in the United States is one of the key drivers of the global economy, the result will be a strong decline in the demand for goods and services from other parts of the world, including this country. South Africa will also see a secondary effect from a dollar collapse as the Rand strengthens and as export economies in other countries falter. Since the growth of these export economies has driven demand for commodities from South Africa over the last few years, this will be felt in a strong downward adjustment in growth prospects for a South African economy still very dependent on industries exporting commodities.[22]

- Over the long term, by implication, the key question facing Johannesburg is whether it can help facilitate a growth path not primarily driven, either

directly, or indirectly through financing and transport activities related to this, by the fickle prices of commodities or the global competitiveness (read low wages and weak Rand) of local manufacturing.

- A key trend that must be considered is the current domestic demand-driven boom. Over the last few years, simultaneously with an international boom in commodity prices, South Africa has seen a significant increase in the local demand for goods and services. This demand is partially driven by debt, as households take advantage of lower interest rates, and in part by a real increase in disposable incomes as the apartheid divisions between poor-black and rich-white begin to dissolve. There is little chance that this trend will not continue. Over the longer term it is not unreasonable to expect that increasing demand from the previously marginalised and economically excluded portions of our population will be at least as important an economic driver as demand for exportable goods and services from other parts of the world.
- A challenge is that this domestic demand is not yet being matched by domestic production. The result is an inexorable trend towards more imports and a widening balance of payments deficit.[23] There are real risks in this scenario, leading many to argue that domestic demand may need to be dampened by higher interest rates. Indeed, if domestic production does not grow to take advantage of higher levels of domestic demand, the result will be capacity constraints leading to inflation, increased imports, widening balance of payment deficits and, in turn, higher interest rates.
- However, an alternative perspective is that this is a short- to medium-term transition period. Imports are not only for luxury goods and risk-priced oil. They also reflect the foreign procurement of machinery to gear up local production capacity to feed this final household demand. If this general trend can be supported, existing business and new business entrants may accelerate the expansion of their investments. The resultant increase in employment, as well as new economic opportunities for local suppliers, may then provide the local economy with a second-round injection of demand that reciprocally justifies the additional investment. *Endogenous growth may therefore work together with international demand as the driver of the local economy*. It is vital for a municipality to take account of these possibilities if it is to correctly select which industries to support, and how best to support industry.

Sharing of economic benefits

- A key issue is who gets to access the local economy, currently undergoing fundamental structural change. In earlier periods of Johannesburg's history, the city managed to absorb many hundreds of thousands of poorly skilled workseekers in rapidly growing mines and factories. In the future this will no longer be feasible.
- On the one hand, production processes have changed so that less and less lower skilled labour is required. This inexorable trend will continue, leading some analysts to conclude that the dr eam of full employment is now an impossible one, that only the well-educated will now have prospects for accessing the economy, and that the poorly skilled will have no option but to

survive on welfare payments. This is a stark vision of the future that must be confronted. Analysis suggests, however, that it cannot be confronted by returning to the past to try "compete with China" on the strength of a "competitive Rand" and reduced cost of labour.

- A key reason for this is that the City of Johannesburg, as with other municipalities and other spheres of government, is currently engaged in a process of fundamental social transformation that will once and for all eliminate the conditions under which the cost of labour was kept low in the past.

  Salaries and wages are always a reflection of what a workforce needs to pay for social reproduction – to find accommodation; source basic needs such as food, power and water; access health care; travel to work; and so on. If the expense of social reproduction is high, there will be upward pressure on wages, either immediately through industrial action or indirectly through the level that salaries will drift towards when workers who cannot afford to stay in a firm that underpays start leaving the company. Historically, urban apartheid helped to keep local business competitive by forcing a large proportion of the population into overcrowded, poorly serviced and environmentally degraded dormitory townships in which the costs of social reproduction were artificially suppressed. Stretching the argument, contemporary China is the most competitive export economy in the world in large partly because of is extraordinarily low cost of labour, which in turn is due to the fact that China is in many respects like South Africa in the 1960s and early 1970s, with a large floating population unable to secure legal access to urban areas, and obliged to live in squalor.

  Johannesburg is currently working to unravel the distorted settlement patterns of apartheid. This necessarily means transforming its dormitory townships, inner City residential areas and informal settlements into normalised neighbourhoods with decent housing and services and a decent quality of life. However, while the cost-effects of this transition on the people who live in these areas can be managed to a certain extent, ultimately the poorer portion of the City's population will confront higher costs of living as a result of development. This increased cost in social reproduction will fall to business in the City, increasing the cost of labour and, beyond that, the price of goods and services. Johannesburg already has the highest cost of living in the country, and in turn the highest average monthly income of workers.

Understanding the second economy

- Various attempts have been made to come to grips with what the President meant by distinguishing between a first and second economy, the second not benefiting from growth in the first. Understanding the category of the second economy properly is important for effective economic policy-making in a South African context.
- The second economy is often poorly understood as comprising the economy of informal traders on our streets, who must be regulated and helped to formalise. This is a too narrow interpretation.

- For this Growth and Development Strategy, the second economy is the myriad of "generative interactions" between would-be business people that have not yet come to fruition, or which are struggling to stabilise. The second economy is the women's co-operative whose members may or may not be able to get it together to react to a US tourist's enthusiastic response to their beaded dolls, who has half-promised that she'll take a standard monthly order of a 1 000 to the States if they just prove they can get her 200 by next week. It is the largely self-trained part-time IT guy forging innovative open-source software applications in his garage, who wishes for a new kind of cheap open-plan office infrastructure, with desks rentable on a monthly basis, where he could share ideas with a community of peers. It is the woman who has just left her company to set up an outsourced specialised-flavouring service to the food industry that continuously experiments with new tastes. It is the "import-export business" operating from the sixth floor of a run-down inner city office block, wares packed to the ceiling, struggling to find a second cheap rental van to carry next month's unexpectedly large run to Zimbabwe. It is the office-worker talking to friends about the advisability of investing on the side in a start-up chain of coffee-shops or a firm with a half-chance of getting a deal to make machinery for mines on the West Rand.
- It is this economy – a quintessentially urban economy which will be the future point of access for many people denied meaningful opportunity in the past, and indeed which may drive jobs growth in future – that is as yet failing to fire. There are a number of reasons why this economy is not yet seeing a high rate of stabilisation and growth. Structural reasons such as the sectoral composition of the economy, and the low level of business experience of many entrants historically denied the chance to build acumen, are compounded by the remnants of racial and spatial exclusion.

Strategic implications

- This unique confluence of circumstances presents Johannesburg with economic challenges more complex and pressing than that faced in many cities around the world.
- A reading of the current economic context suggests that there are a number of sectors, with emerging long-term growth and employment prospects, that government may help either to gain access to greater opportunities or to help restructure to cope with the demands of a changing world. However, in the light of global risks, the imperatives of development, and the two-economy thesis, it is clear that the greatest effort should be placed where the generative interactions that occur naturally in urban areas are not yet being converted into sustainable business ventures. This means aggressively promoting economic opportunities for new market entrants in the small enterprise, informal and community sectors. Fostering entrepreneurship and supporting the sustainability in these emerging industries – in effect trying to grow the economy from below – will not equal economic restructuring by itself. Big business needs to come to the party. But it will likely bring a relatively high return on government's investment in trying to stimulate productive capacity for the future in response to emerging demand. Amongst

other things, it will help to deepen and sustain domestic demand as well, since new small businesses are likely to source a greater share of their inputs from the local market.

HUMAN AND COMMUNITY DEVELOPMENT

- The Human Development Strategy, published in early 2006, provides a detailed analysis of social trends pertaining to poverty, inequality and exclusion in Johannesburg. This remains the most accurate and comprehensive assessment of key social trends in Johannesburg. More importantly, it directly supports key strategic conclusions, and especially the three broad areas of focus making up the tri-sectors of the HDS triangle. These are carried forward directly into this GDS as the three goals making up the Human and Community Development Sector Plan. The perspective provided by the HDS is therefore not repeated or altered here. What follows are a few additions from recent information that has come to light.

Household trends and household poverty

- Any overall statistical analysis of household poverty must be nuanced by a more textured understanding of how household structures in the city are changing, in particular in response to different incentives. A study commissioned to provide base information for this GDS suggested that different household types show very different dynamics that shape their experience of, and their ability to respond to, poverty. Amongst other categories investigated, the study alerts the City to the need to watch future trends in:
  - *Inflated households and trapped consanguine households*. These are typically households in older township areas where a number of generations still live together. The household head is typically poorly educated. Many have missed the job market or have historically been employed in low wage domestic or similar work. Household expenditure is often carried largely by grants, either old-age pensions, or child-support grants claimed by younger members still living in the household. These households are extremely vulnerable in the face of potential decomposition. If a younger member moves out into an informal settlement or an inner city flat, or an elder member moves back home to a rural area, household income will be significantly depleted, leaving remaining members at risk.
  - *Lifestyle single households*. Decomposing out of inflated township households are new single households, in more and more cases made up of young women who no longer feel bound by cultural traditions to stay in the family home until marriage. They frequently transit into rented rooms in either townships, or inner city apartments, shared with peers. In the medium term many of these singles set up "temporary" homes with partners in informal settlements, from where they seek employment, save for bride-wealth, and/or wait for an RDP home. These households often

have strong future aspirations, but their ability to negotiate risks outside of the support structures of older more established families is often very limited.

- These more nuanced pictures, evolving over time, remind the City of the need to be more sensitive to the conditions under which poor households are either absorbed into or excluded from city life and opportunity. They also highlight the complex circumstances under which new households are able to access and stay on the ladders to prosperity that cities ideally provide for.

Impact on poor households of City practices

- In responding to these more complex social trends and dynamics, the City has examined its own practice in how it interfaces with households. The Human Development Strategy noted the complexity of using city resources to "subsidise" the livelihoods of poor households – ideally through revenue foregone in a well-targeted social package of services – when so many households are not accountholders. Imaginative solutions to this problem will be required in future. In addition, the City has begun to probe the impact of its own tariff structures on poor households. A recent study, whose results are still to be finalised and formally considered, provisionally suggests that:
  - In general terms, when the household bill received by a range of different income categories of Johannesburg households (from very poor to very high income) is compared with the equivalent bills in four other metropolitan municipalities, it emerges that Johannesburg's bills are amongst the highest for poor households, and amongst the lowest for high income households; and
  - Assuming an affordability threshold of 15% of monthly income, the social package makes the monthly bill of poor households earning between R969 and R1 938 a month easily affordable. Bills are very affordable for high income households. However, the typical monthly bill of medium to low income households, earning between R1 938 and R4 240 a month, appears completely unaffordable. There is also evidence that this category has borne the brunt of tariff increases over the last few years.

Strategic implications

- These trends are very important. They will have profound implications for the future stabilisation of households in the City, and the ability of households to invest in future activities and assets that promote wealth and secure against risk.

HOUSING

- Processes of household formation, and household strategies in the face of poverty, are both a reflection of changing cost-of-living calculations by individuals trying to achieve the best possible living-circumstances within their income thresholds. As residents go through these calculations they implicitly make choices about their best possible accommodation options (often in relation to other asset investment options). This means that housing is a critical long-term concern for the City of Johannesburg.

- South African cities were formed in a way that facilitated the life-cycle progression of residents from a small minority of the population through a graduation of residential options, while limiting this movement for other population groups. Typically in the past a new white entrant into the workforce might have moved up from single bedroom rental accommodation, through rented or purchased apartment accommodation, to detached homes in suburbs and, then on up the property ladder to "investment-grade" property in the northern suburbs. This was both good for the resident in terms of asset accumulation, and good for a City reliant on property taxes. By contrast, the options of African residents were extremely constrained, leading to a burgeoning of backyard accommodation in township stands.
- Over the last fifteen to twenty years the predictability of these patterns has diminished rapidly. Apartheid barriers have been removed, bringing into focus for the first time how the large majority of the population can and may choose to navigate residential choice. In addition, a wide range of new dynamics has come into play. These include greater competition for well-located residential options, consequent overcrowding of certain parts of the city and a de-densification of others, the relocation of large numbers of people to poorly located settlements on the edges of the City, rapidly rising property prices in the formal housing market, and the gradual emergence of new developments giving expanded choice.
- The City, in partnership with provincial government and other players, has taken a very specific view of what government needs to do in the housing environment. With the assumption, correct in most cases, that in fact the residential choice open to most poor residents is negligible, the City and provincial government have focused on providing access to low-cost housing opportunities on the bottom rungs of the housing ladder. The attention has been on stabilising and upgrading informal settlements and overcrowded inner city flats, and on providing RDP houses either developed in situ in informal settlements or on green-field space.

Informal settlements

- The City of Johannesburg continues to grapple with informal settlements. Informal settlements in most parts of the City have been contained. However, in some parts they continue to expand and densify. Total numbers of households and people living in informal settlements (aside from informal backyard accommodation) are very difficult to estimate. Consensus seems to gravitate around approximately 150 000 households, but figures as high as 220 000 are sometimes estimated.
- All efforts are being made to counter the growth and densification of informal settlements, but some key issues are impacting on the result. One key issue picked up in a 2005 provincial housing survey, that enumerated most of the households living in informal settlements across Gauteng, was the large number of locked dwellings, apparently unoccupied by any household. What is driving

GROWTH AND DEVELOPMENT STRATEGY 33

this trend is not clear. The locked structures may belong to circular migrants who for the most part dwell in one or other rural area, or to families that have other accommodation in backyard dwellings or inner city flats. Both groupings may be trying to hedge their bets by keeping a structure in an informal settlement in case other options fail. The phenomenon is not insignificant. Up to 30% of the structures in Johannesburg informal settlements appear to have no households resident within them on a full-time basis.

Families captured	110 051
… in number of structures (i.e. some families share dwellings)	99 396
Locked structures	*47 852*
Total (families + locked)	157 903
% who were single housholds	20,1
% on 1996/97 waiting list	7,0
% non-South African	6,9
% who rent structure	11,4

Table 2.3 **Dynamics in informal settlements in Johannesburg.**

Inner city slums

- A second dynamic is continued pressure on older residential accommodation in high-rise apartment blocks in key nodes, especially the inner city. The City of Johannesburg is obliged to ensure that the health and safety of these residents is not endangered in overcrowded, deteriorating buildings where services have been cut off. But it is also obliged to cater for the housing needs of residents who want to locate in the inner city.

Overall demand and supply

- At present the rate of supply of new housing opportunities nowhere near matches demand. This is true in general terms, and it is especially true in key segments of the housing market, not only in the lower income segments. The gap between supply and demand remains considerable, and must be addressed boldly and innovatively.
- The current focus on housing opportunities for low income households is warranted. The issue will remain the first priority for the foreseeable future. But over the medium to long term it is very likely that the City and its partners will need to expand their view of where and how to intervene in the provision of housing.
- There are two interwoven issues that will become more important in future. One has to do with gaps in the housing ladder, not simply in the lack of provision to meet demand at the lower end of the spectrum. The other has to do with the fact that a housing property market does not yet work in all areas, leading to a dead capital problem.

Gaps in the housing ladder and the dead capital problem

- In her 2005 Budget Speech before parliament, Minister of Housing Ms Lindiwe Sisulu stated that "we have graduated ourselves out of being Minister of low-cost housing to taking on the responsibility of the entire residential property market". With this statement, the Minister in effect noted that there is a fundamental linkage between the provision of sustainable housing opportunities for low income households and upper income housing, in an integrated "housing ladder".
- In principle, government wishes to subsidise low income households out of informal housing by giving them a basic housing unit with decent services for ownership. On the basis of this ownership, government expects subsidy beneficiaries to invest in their housing and at some stage in their lives, sell the housing for a profit so that they can buy another home higher up the housing ladder. The sold home becomes the entry-level accommodation for the next low income person – and in this way, a subsidy beneficiary becomes part of the housing supply chain. The new home that is bought becomes the next asset for the person who was once a subsidy beneficiary and is now climbing the property ladder, improving his housing conditions independently, without state support, on the back of an appreciating property market.

- However, there are three basic difficulties with this approach:
  - First, because of financial pressures in the household, many subsidy beneficiaries have little capacity to invest in the housing they have received, especially when there are so many other competing pressures on household income. This leads to a gradual deterioration of the subsidised home;
  - Second, there is little incentive to invest in their housing, and thereby improve it, if that housing is not likely to attract new buyers. In a self-reinforcing cycle subsidised homes are unlikely to find buyers if they are not invested in; and
  - Third, unless there is some prospect for existing subsidy owners to trade up to a next level in the housing ladder, there is little incentive to save for this step through investment in the existing asset.
- The reality is that the housing market remains dysfunctional, with key supply gaps in the housing ladder. This is making it difficult for a significant proportion of residents to access the housing options that best suit their needs.
- Some of the key gaps are:
  - Bonded housing between RDP housing and a typical entry-level bonded house of R210 000;
  - Serviced stands (the current price of which is estimated at R65 000);
  - Below the bar unsubsidised rental and ownership options; and
  - Any rental below R2 500 per month.

- The City of Johannesburg commissioned a detailed study on these issues for the GDS. Writing in the Business Day, one of the authors of this report succinctly captures the challenges:

  "Families living in RDP houses are unlikely ever to climb the housing ladder into better housing because they won't be able to afford to make the jump. For instance, in Johannesburg's Cosmo City, where RDP houses sit alongside bonded houses, the cheapest house you can buy with a bond is R210 000. Even if a family in an RDP house could sell their house for R35 000, they would still need a monthly income of at least R7 000 to pay the R1 747,16 instalment on their R175 000 bond (over twenty years at current interest rates of 10,5%). But to be eligible for a housing subsidy they will have had to earn less than R3 500 a month. For the 75% of South African households that earn less than R3 500 a month, the next rung of the housing ladder is too far away. Meanwhile, households who don't qualify for a subsidy, and who are first-time homebuyers, must earn at least R8 000 a month to afford the average "affordable" house price of R193 000. This means households earning R3 500-R8 000 a month (about 11% of SA's population) are possibly worse off than those who are poorer – they can't get a subsidised house for free, and they can't afford the houses that are on the market. The gap between those who can afford the "affordable" house and those who can afford the "average" house is also significant – about 11% of households earn R8 000-R26 000 (a R662 447 bond implies a R6 614 instalment, which implies an income of at least R26 456). … Attention needs to be given to the whole housing market. This means broadening the focus beyond subsidised housing, and beyond new construction. The problem of the missing middle is about more than just housing. It is about the equitable distribution of SA's economic success."

- There is some recent evidence that some dormitory townships where there has historically been little or no property market activity have recently also joined the property market boom. On the whole this is a very positive trend, since it adds to the asset base of households that have historically had no real store of economic value in fixed property. However, it also has negative consequences. Even relatively modest township houses are being priced out of reach of the poor. And there may be a downside for those currently able to celebrate new fixed wealth if the impending changes in the property tax regime result in a significant rise in rates for households with limited income streams.

INFRASTRUCTURE

- The future technical challenges of infrastructure expansion and maintenance in the City cannot be covered adequately here. At best some high level synthesis points on key issues in select service areas is possible. In the new City of Johannesburg institutional configuration, water, waste and power are three key services now clustered together into an Infrastructure Department. Other infrastructures, for example roads, fall into other sectors, and are dealt with separately.

- In very general terms the City still faces a steep uphill challenge to meet national government commitments to eradicating key service backlogs for the poor.
- In addition, the City is seeing the same sort of service disruptions in key networks as Cape Town has recently seen in electricity, albeit for different reasons. The medium- to long-term future will see an ongoing balancing game between investing in service extensions and rehabilitating existing assets.

ENVIRONMENTAL SUSTAINABILITY

City-level challenges

- The City of Johannesburg has identified a number of pressing long-term environmental challenges that arise from its own processes of production and consumption, and the layout of its built environment. A current pressing challenge is that currently available landfill space is fast running out. Much of what has been designated will have reached its capacity sometime in the next decade. While various measures may be introduced to extend the life, the City is currently facing the prospect of having to transport waste away from some landfill sites to others, at exorbitant expense. This challenge is calling forth innovative waste reduction and recycling solutions from the City's waste management company – Pikitup. If followed through to conclusion these innovations will enable the City to meet its Polokwane declaration commitments of zero-waste to landfill by 2020.
- Another key challenge is storm water management, as the City's built form has grown and densified over the last few decades, without adequate attention having been paid to the need to design in and maintain drainage and attenuation systems. A complete overhaul of the City's storm water management system – with a view to integrating it with the catchment management and open-space management systems – is currently being planned.
- In addition to these local challenges are some long-term global risks and threats.

Climate change

- Climate change is not a distant reality that will only affect northern countries and cities. There is gathering evidence that the effects of global warming will be felt very severely by cities of the South, in particular as the failure of agricultural regions may lead to more "environmental refugees" drifting to cities.

Peak oil

- The growth of the world economy over the past century and a half was made possible by the availability of cheap energy in the form of fossil fuels – oil, coal and natural gas. Oil fuelled the industrial age and fossil fuels have become indispensable in transport, production of medicines and plastics, electricity generation, and so on. Fossil fuels are non-renewable resources and they will, eventually, run out. This reality forces us to confront the question of when the world will reach its peak in global oil production. Referred to as "peak oil", this is not the point at which oil runs out, but the point at which no new reserves can be exploited, leading to a decline in production, while demand continues

to increase. At this point, analysis suggests, the price of oil will rise to well over $100 per barrel. This will have devastating economic and social consequences for an isolated city such as Johannesburg, far from the coast and far from international markets. It will also have a severe impact given that this City was largely built in the age of the automobile, and is today overly reliant on private vehicle-based modes of transport.

Water scarcity

- South Africa is already classified as a chronically water-scarce country. Gauteng is particularly vulnerable. The National Spatial Development Perspective estimates that Gauteng will experience a very serious water deficit by 2020. Limited water availability will require expensive measures to increase supply (from bulk water supply projects from ever-distant areas, through to purification of groundwater) or radical demand management measures. In general, Johannesburg is likely to see the price of water increase as demand outstrips supply. This will have a considerable impact on the poor.

SPATIAL DEVELOPMENT

Sprawling and de-densification of urban form

- There is ample evidence that structural change in the morphology of cities moves at a glacial pace at the best of times. And where change is accelerating, it is often in the wrong direction, or leads to contradictory effects.
- A recent report by the World Bank relayed the results of a long-term study, which has used satellite images from the 1980s through to the present day to track the changing built form of 120 selected cities across the world. The results are startling. They show that in virtually every city the structure of the built environment sprawled outwards and became less dense. This trend occurred regardless of population growth (some cities even declined in population) or spatial policies.[24]
- Despite years of national and local policy commitment towards a compact city, Johannesburg is clearly showing the same trends towards sprawl and de-densification. A recent study commissioned by the Gauteng Provincial Government to determine likely long-term developments in the transport sector concluded:

  "… By 2025, it is expected that Gauteng will have to accommodate an incremental population of 3,5 million people residing in an additional 1,2 million dwelling units. The spatial distribution is expected to be as follows: (a) Low income residential development around the existing disadvantaged areas, and mostly on the urban periphery; and (b) High income residential development concentrated in the central part of the provincial urban complex."

Provisional conclusions from the soon to be released Provincial Spatial Development Perspective confirm this trend. Its mapping picks up trends that indicate:

> *"... that the significant spatial expansions all occur on more peripheral areas, strongly reinforcing the existing pattern of spatial marginalisation."*

- This has the effect of cementing apartheid patterns of locating the poor on the margins of the City, in poorly integrated, unsustainable residential neighbourhoods far from urban amenity and social and economic opportunity. It also raises the aggregate cost of servicing the City as a whole, a cost that falls on both the economy, as well as people struggling to assimilate into the City and begin to move up the ladder of prosperity.
- The World Bank report noted above raises the question of what exactly cities need to do to fight "against the wind" of seemingly inexorable trends towards sprawl. However, over there are also very real complexities in urban compaction policies which raise extremely challenging policy questions.
- To the extent that the City is indeed able to contain sprawl, and promote higher residential densities in improved neighbourhoods close to social and economic opportunities, this often has the countervailing effect of driving up the cost of well-located land and housing. The pricing effects lead either to the poor being squeezed out to more "affordable locations", often into informal settlements, or to slummification, as households are forced to share dwelling units in overcrowded apartment blocks and/or find irregular accommodation in derelict commercial and industrial spaces.

TRANSPORTATION

- The City of Johannesburg produces an annually updated Integrated Transportation Plan (ITP). This provides a veritable warehouse of data and trends analysis, on everything from travel demand patterns, cost of transport, time taken to reach school and work using different modes, changes in the modal split between public and private, dynamics in the structure of the transport industry, and so on. This information is not repeated here.
- The key long-term opportunity in the transportation sector is of course the Gautrain. This infrastructure will have a profound impact on the patterns of mobility in the City, and very likely also the spatial configuration of the Guateng city region as a whole. A key challenge, however, is to ensure that the City's existing transport infrastructures and operations interface adequately with the Gautrain, in particular to ensure that this massive investment does not end up being inaccessible to the poor.
- Over the long term, a number of other large transport infrastructure developments are planned for the City, including a number of new rail connections, highways, and highway-based development corridors. Only some of these are planned by the City of Johannesburg, and not all of them correspond with the current spatial vision expressed in the City's Spatial Development Framework, or indeed this GDS. A major challenge in the

future, as in other South African cities, is to ensure joint planning for the full range of infrastructures to be rolled out by the many players in the fragmented transport industry.

HEALTH

- There are many dimensions of the future health challenges in Johannesburg that cannot be reflected here.
- The most important long-term structural trend that will determine many future health challenges is of course HIV and AIDS. The first section of this Long-Term Strategic Perspective noted the possible impact of HIV and AIDS on overall population growth. In addition, however, it is important to have regard for the fact that the epidemic will have very serious repercussions for the everyday health of many residents. The available evidence suggests that by 2015 over 150 000 Johannesburg residents will be in the later stages of the disease.
- These infected residents will almost all be on Anti-Retroviral Therapy (ART), but it must be understood that ART is not a cure. Under poor urban environmental conditions it can at best extend the life of an infected person by between five and ten years.
- The burden of this disease will have serious effects on the welfare of the City residents. It will limit the prospects of every person and household affected, sapping their energy and resources, eliminating their aspirations and turning their planning horizon to the short term, and constraining their chances of getting and keeping a job, limiting their options for accessing and repaying capital, and so on.

Year	Stage 1 Acute HIV infection	Stage 2 Early disease	Stage 3 Late disease	Stage 4 AIDS	Stage 5 Receiving ART	Stage 6 Discontinued ART	New infections	% HIV
2000	155 668	78 106	77 348	14 685	–	–	51 302	10,5
2005	155 902	109 268	176 265	47 705	13 453	1 224	40 987	14,7
2010	128 295	88 380	178 164	32 476	95 638	10 353	31 682	15,0
2015	108 949	67 336	139 846	24 653	144 493	17 660	28 562	14,1
2020	103 786	58 935	112 658	19 230	149 938	19 368	29 691	13,1

Table 2.4 **ASSA modelling on HIV and AIDS progression in Johannesburg**

Strategic implications

- At present, the City of Johannesburg's response to the epidemic falls broadly in line with national and provincial interventions. Voluntary counselling and testing, condom distribution, awareness raising and community mobilisation will all remain important interventions. Over time, however, more City effort and resources will need to be devoted to minimising the impact of the disease on affected homes and communities. Creative mechanisms to assist infected people to adhere to the regimen of ART will also be necessary.

SAFETY

Crime rates

- Crime and safety are critical issues in Johannesburg. The City has gained a reputation as severely affected by crime. Sometimes this is deserved, but a close examination of available evidence suggests that sometimes this is not. While it is not possible to project future rates of crime, the current data reflects some positive trends.
- Table 2.4 below shows aggregated police station data, publicly available, for the Johannesburg and Soweto reporting areas.[25] Crime data is notoriously unreliable. Certain crimes, such as rape and assault, are typically under-reported. This means that if residents have a negative impression of the police services, increasing rates of these crimes may not show up in the statistics. Increases may even show up as a decline. Other crime levels are susceptible to the efficacy of police action. For example, the more proactive the police are at dealing with "neglect and ill-treatment of children", "drug-related crime", and "driving under the influence", the higher these levels of crime will appear. The same principle applies as to those crimes that often do not get reported when the trust in police ability is diminished – the better the police perform, the higher the levels of reported crime. However, some crimes are less "elastic" and almost always get reported, such as murder, burglaries at business premises, and theft of motor vehicles or out of motor vehicles.[26] On these crimes, SAPS statistics for Johannesburg show steady improvement over the last ten years. Incidents of "murder", "burglaries at business premises", and "theft of" and "theft out of motor vehicles", have all reduced significantly over the last decade.
- Similar improvements are less evident in other major South African cities. For example, in the Cape Town metropolitan area, theft of motor vehicles increased from 8 309 in 2003/04 to 12 339 in 2003/04, whereas in Johannesburg incidents dropped from a massive 25 817 to 13 440 over the same period. Murder rates remained static in Cape Town at around 1 800 to 2 000 over the 1994 to 2004 period, whereas in Johannesburg the number of murders per year has declined from over 2 000 to 1 261. Both Cape Town and Durban have seen incidents of burglaries at residential properties climb over the last decade. In 2003/04 Durban residents reported 20 177 burglaries at homes, a level now equal to Johannesburg's. Cape Town has seen the number of reported burglaries at homes jump from 22 943 in 1993/94, just below Johannesburg, to 34 133. The evidence suggests that in Johannesburg the number of reported incidents has fallen from 24 114 in 1993/04, although it clearly remains high at 20 486 in 2003/04.
- Having said this, it must be noted that some categories of crime have shown a large increase in all cities, including Johannesburg, over the last ten years. Incidents of "common robbery" and "all theft not reported elsewhere" have almost doubled. This reflects in a huge rise in the theft of cellular phones.

Community conflict

- The days when the communities of Johannesburg lived in a constant state of instability, either because of the state of emergency and almost daily clashes between the apartheid security forces and anti-apartheid organisations in the 1980s, or because of endemic conflict between political organisations in the early 1990s, are long gone. But every now and then the city does experience unexpected outbreaks of community conflict. The term community conflict is used here in a generic sense. It refers to tension within settlements or buildings between community groups or residents' associations that occasionally leads to violence, conflict between taxi associations over routes, gang warfare that may or may not be linked to control over territory in which to conduct illegal activities, xenophobic attacks on groups of illegal immigrants, acts of vigilantism by crowds, and open protest against public authority.
- The crime statistics show that these forms of community conflict rarely manifest as open public violence, where public order policing forces need to be called out. But no city in the world is free of this challenge. The City of Johannesburg is acutely aware that it has an important role to play in averting the kind of conflict that broke out in Diepsloot in July 2004. Here, an unfounded rumour that the community was going to be forcibly removed to Brits, a town in the North West Province 60 kms from Johannesburg, resulted in elements of the community setting fire to two Council buildings, attacking community homes, and engaging running battles with police. Addressing the underlying structural conditions that give rise to such conflict is vital.[27] There is no evidence that these structural conditions are being exacerbated across the City. But there is also evidence that some neighbourhoods that have historically functioned as "urban ghettoes", where social crimes such as domestic abuse are rife, will need focused attention in the years ahead if they are to be socially and spatially integrated into the City.

Table 2.5 Aggregated police station data for the Johannesburg and Soweto reporting area.

	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Murder	2 225	2 243	2 126	2 202	2 259	1 853	1 699	1 635	1 585	1 261
Rape	4 140	4 153	4 346	4 188	3 755	3 800	3 581	3 563	3 391	3 286
Attempted murder	2 846	2 627	2 782	2 527	2 562	2 282	2 208	2 303	2 609	2 256
Assault with the intent GBH	12 745	12 881	15 118	15 626	15 586	17 475	18 075	16 994	17 303	16 824
Common assault	14 983	14 103	12 642	11 991	11 365	12 259	13 714	16 289	20 061	21 897
Robbery aggravating circumstances	18 486	15 926	12 787	14 891	19 425	20 650	22 153	22 254	25 031	24 828
Common robbery	4 236	7 459	7 803	7 887	9 014	9 811	11 060	10 501	10 911	10 170
Indecent assault	240	315	322	256	206	257	324	391	473	577
Kidnapping	590	482	647	585	566	766	728	575	404	448
Abduction	211	175	168	210	228	222	188	218	460	446
Neglect and ill-treatment of children	225	221	187	174	96	159	135	210	453	813
Culpable homicide	765	811	749	883	835	668	603	654	614	580
Public violence	66	73	61	94	72	77	60	25	61	67
Arson	510	481	486	479	439	404	437	428	455	431
Malicious damage to property	13 862	14 056	13 648	13 129	12 966	13 720	14 027	13 881	14 505	14 778
Crimen Injuria	2 222	1 968	1 779	1 783	1 571	1 681	2 306	2 798	3 082	2 681
Burglary at residential premises	24 114	25 316	21 942	21 293	21 631	21 866	20 722	20 201	20 173	20 486
Burglary at business premises	7 554	6 180	5 831	6 237	5 542	6 027	6 041	5 911	5 433	4 787
Theft of motor vehicles and motorcycles	25 817	22 874	22 087	23 183	20 886	18 842	16 779	14 992	14 049	13 440
Theft out of or from motor vehicles	30 800	30 500	24 437	22 306	20 905	21 383	20 680	19 889	19 326	16 928
Stock theft	470	39	55	57	43	38	39	29	23	24
Illegal possession of firearms	940	1 162	1 154	1 205	1 381	1 448	1 394	1 513	1 572	1 690
Drug-related crime	2 414	1 833	2 050	1 880	1 704	2 209	2 106	3 678	3 565	3 397
Driving under the influence	2 086	1 490	1 948	1 755	1 250	1 166	1 215	1 597	1 387	1 540
All theft not mentioned elsewhere	34 558	34 392	34 427	38 444	40 396	46 319	50 950	52 983	56 089	58 177
Commercial crime	8 097	8 150	8 707	9 331	10 043	11 731	11 121	9 335	9 301	9 826
Shoplifting	5 249	5 191	5 092	5 241	5 131	5 592	5 985	6 130	5 928	6 322
TOTAL CRIME INCIDENTS REPORTED	220 451	215 101	203 381	207 837	209 857	222 705	228 330	228 977	238 244	237 960

Notes Reported Crime Statistics for the South African Police Services Johannesburg and Soweto reporting areas combined. Note that a few parts of the City of Johannesburg are excluded from these areas. For example, Roodepoort falls into the SAPS's West Rand area. Source SAPS website www.saps.gov.za

FINANCIAL SUSTAINABILITY

- In the mid-1990s, the then Greater Johannesburg Metropolitan Municipality sank into a serious financial crisis. Since then the City has seen a very impressive financial turnaround. The achievements can be seen in a very wide range of successful programmes and indicators of financial improvement. In the years going forward, the City projects that it will be able to maintain this financial position. However, three sets of challenges are acknowledged.
- First, the work to secure an unqualified audit, and perhaps more importantly the City's credibility with its consumer base, continues. This is contingent on sorting out some thorny issues. A key issue, on which there has been much progress, but on which more work needs to be done, is the completeness of

the recorded revenue base on the City's books relative to the actual base. Fast development in many parts of the City, especially where developers take license to press ahead with a development in the hope of securing retroactive Council approval, poses challenges.

- Second, the last five years have shown that, regardless of internal improvements, the City will need to plan for ever greater-demands on its expenditure (notably as ageing infrastructure networks deteriorate, raising complex questions of whether to maintain or refurbish) within an ever-more uncertain revenue envelope. The City now knows that three of its key revenue streams are likely to be destabilised in the medium term: RSC levies have been eliminated (to be replaced temporarily by a grant). The introduction of REDs raises the question of whether Johannesburg generated electricity surpluses will need to cover the capital costs of significantly deteriorated infrastructure in township areas, and the operating losses implied by a very low payment rate. And the introduction of a new basis for property valuation will adjust the burden of taxation across the City, raising the prospect of possible disruptions.
- Third, the City has placed a great deal of emphasis on financial stability over the last five years. It has gone far in achieving this, but also has had to face growing pressure that illustrates that financial stability is not a self-insulated good. In particular, the introduction of free-basic services and the planned evolution of this into a high-profile social package to support human development must be accommodated in the City's finances. Over the very long term, the City faces a major challenge in that continued growth in its revenue streams have environmental cost implications. Attempts to achieve greater environmental sustainability may, by extension impact on finances. Bluntly put, the City must face up to the prospect that the need to contain outward sprawl of new high-value developments will impact on its future revenue; and that water demand management to save on escalating bulk costs may limit its capacity to cross-subsidise the bills of lower income households from the pockets of high-volume domestic consumer in suburban homes.

Strategic implications

The City of Johannesburg has ensured its stability in the short to medium term through strong *financial* management. It must, and will, continue to lay the foundations for medium- to long-term stability by securing *fiscal* conditions.

GOVERNANCE AND ADMINISTRATION

Greater complexity in challenges facing government

- Across the world, the long-term trend is towards citizens and stakeholders expecting more and more development and delivery from their public authorities, while wanting to contribute less and less to the available pool of public resources. This is driving governments to explore extreme measures to improve efficiency, in turn having an effect on the stability and integrity of public service. Johannesburg is also facing this broad trend.

- On the positive side, more governments are exploring new ways to work with communities and business to ensure that:
  - Every cent in the public purse goes further;
  - Stakeholders are well-informed of the limits of what they can expect from the state; and
  - Communities are actively involved in their own development with the aim of compounding the developmental impact of available energies and resources.

Global city region

- The City of Johannesburg exercises authority over a municipal jurisdiction containing over 3 million residents. However, this area is simply the core of an extended urban region of 10 million people. The rest of this region is governed by other municipalities adjacent to the City of Johannesburg. Over a period of time this region will grow and densify, and it will become more and more difficult to administer the local government affairs of Johannesburg residents, without considering the functional overlaps and interconnections with other municipalities in respect of spatial planning and housing location, transport systems, service infrastructure, economic development, environmental management, and so on.

Strategic implications

- Johannesburg already has some good experience with public participation and partnership arrangements. It will need to deepen this in the years ahead.
- The concept of a Gauteng Global City Region has been introduced to help municipalities engage this growing challenge in a constructive and mutually supportive way. Over the next few decades this idea, and the principles, ideals and practices it implies, will become a cornerstone of the City's approach to governance.