



SOCR 2016 **DATA ALMANAC**

*Introducing SCODA –
The State of Cities Open Data Almanac*



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INTRODUCTION

A key part of the development of the State of South African Cities Report (SoCR) is the need for evidence-based reporting which provides the information, experience and best practices on urban development and city management. The SoCR uses a large amount of data, statistics and indicators in a variety of formats to support the arguments made. However, the chapters themselves cannot carry all this evidence that is important to understand the cities. This underlying data needs to be shared through an almanac that details how our cities are performing in becoming more productive, inclusive, sustainable, well governed.

BACKGROUND

The Data Almanac has a history as long as the State of South African Cities Reports, and a number of different approaches have been employed to use and share data over time. The 2006 SoCR contained a data almanac attached as an annexure to the report. There were significant data gaps in the 2004 SoCR, and the 2006 indicator set was based on data availability, resulting in an arbitrary collection of indicators that was overly reliant on a few limited sources. Criticism of the 2011 SoCR noted the absence of a published almanac, a decision that was made due to the incompleteness of available datasets. This 2016 almanac is in response to the call for the data to be published, as well as for a more systematic approach to realise an evidence-based report.

The Data Almanac project builds upon an initiative that began in 2008 through a cities' Urban Indicators Reference Group, which was trying to take a systematic approach to addressing data challenges in cities.

In compiling the list of indicators for the SoCR, the SACN used available outcome indicators and data that were already being collected through its own projects, as well as linking with existing data and indicator projects and programmes (such as the Stats SA, CSIR (StepSA), National Treasury and the World Council for City Data). This project has again highlighted that data collection to monitor important city development indicators remains a significant challenge. Leading up to the publication of SoCR, considerable time and effort were put in to defining, compiling and populating the agreed set of indicators to provide the evidence base for city benchmarking. An indicator project run during 2015 populated the Almanac with data and made inquiries to determine:

- The correct or relevant department (custodian) of the data
- The availability of, and ease of access, to the data
- The frequency with which the data is updated
- The reliability of the data (through a data quality rating system indicating whether the information was as good as it gets, inconclusive with some data, inconclusive with no data, incomprehensible or that no data was available)
- The location or access point to the data

IMPROVING ACCESS TO CITY DATA

Cities require a broad range of data and information to enable city planning and management. The cities also face a significant reporting burden. On an annual basis, they use their own data, national data sources (such as Stats SA) and data from private vendors and projects to report on outcome indicators, which are required for monitoring and evaluation needs of a number of national departments, agencies and regulators. Many of these requirements are legislated and required for compliance. Over and above the reporting burden, a lack of capacity and adequate data management systems makes it difficult for many cities to provide data readily. In addition, cities require sub-metro level data from across their departments and entities for their own planning and management purposes. This data is often not available to them at the level and form needed. The SACN is interested not only in addressing these shortcomings but also developing a set of indicators that provides the evidence base for city performance and reporting, which allows cities to benchmark and learn from one another.

The State of Cities Open Data Almanac (SCODA) has been initiated by SACN, with its partners, as a city-centric approach to addressing the planning, management, monitoring and reporting needs of cities – and to realise more efficient and effective data systems and processes. The benefit for future urban research (including SoCR reporting) is that the data and indicators will become more readily and consistently available.

METHOD

The following method was used to compile the data almanac:

An indicator selection process was used to narrow down an extensive list of city-level indicators to a short list that provides a perspective on the state of cities. The following list of indicators was used as a starting point:

- Indicators from the 2006 and 2011 SoCR almanacs
- Review of existing key sector specific reporting requirements (for example current state of environment indicators, National Development Plan Outcomes indicators, etc.)
- Analysis of data and indicators required for local government reporting (SACN, 2013)
- Data included in State of the Cities Report 2016, which includes data accessed from the Centre for Scientific and Industrial Research's (CSIR) StepSA initiative (<http://stepsa.org/>)
- Global City Indicator Facility (GCIF) indicators (<http://www.cityindicators.org/>)
- The World Council for City Data (WCCD), ISO 37120 Standard on City Indicators (<http://www.dataforcities.org/>)

These indicators were evaluated on the basis of :

- Relevance to the cities themselves
- Informing planning and management of cities
- Ability to inform decision making for cities
- Usefulness as local and international benchmarks
- Enablement of learning within and across cities
- Data availability and transparency
- Comparability of data across the cities

The data collection process focused on populating as many of the core indicators as possible, and then the longer list of secondary or supporting indicators. Where the data for core indicators does not exist, a suitable alternative data source was sought. Where possible, time series data was collected and the frequency of data collection recorded, so that the indicator database becomes a living and expanding resource base.

Data population in the Almanac was completed during 2016 in the lead up to publishing the SoCR. Any additional data that was collected during the development of the chapters has been included in the Almanac.

THE ALMANAC CONTENTS

This section lists the consolidated list of indicators in the data almanac. A short-list of core indicators covers the main SACN thematic areas (Inclusive, Productive, Governance, and Sustainable Cities, and basic Demography) and totals 103 indicators. The expanded list of secondary indicators covers a more comprehensive set of city indicators, bringing the cumulative total to 217 indicators. Additional city-level data that was collected in support of the chapters of the SoCR is also integrated into the almanac (for example additional economic and urban safety indicators).

The longer list of indicators includes the consolidated list of indicators across municipalities, SACN indicators, GCIF and WCCD indicators. This list is a more comprehensive municipal “dashboard” and urban governance indicator set, as well as meeting SoCR benchmarking needs.

The indicators are organised according to the thematic areas. In addition, a selected set of these indicators has been included in the SoCR City Profiles, depicted graphically. The data can also be accessed per city profile. The full data set can also be sorted and filtered per user preference.

The indicator table for download includes a detailed **Indicators Specification** (metadata) which informs the indicators and includes the following fields which are populated with available information:

1. Indicator name
2. Indicator definition

3. SACN theme (inclusive, productive, sustainable, well-governed)
4. SACN sub-theme (e.g. access and mobility, planning and design, sustainable transport)
5. SACN programme (e.g. human settlements, public transport, economy, water)
6. Core / secondary indicator
7. Data source and website link (where available)
8. Contact details
9. Date of collection
10. Date data available
11. Links
12. Resolution of data (province, city, ward, suburb, enumerator area, etc)
13. Frequency of collection (3–5 yearly, annual, quarterly, monthly, when available)
14. Spatial (e.g. location, distribution, GIS data availability)
15. Form (e.g. total, ratio to total & national average, short term & long term trends, sector)
16. Unit of analysis
17. Relevant legislation
18. Notes

WHERE TO FIND THE ALMANAC

The full almanac database is available for download from the SACN Website (www.sacities.net), via the SoCR 2016 page. The almanac can be downloaded in the following formats:

- Full Almanac (as an Excel spreadsheet)
- Download per theme:
 - Demographic data
 - Inclusive cities
 - Productive cities
 - Well-governed cities
 - Sustainable cities
- City profile data per city (9 cities)
- Indicators specification (metadata)

WAY FORWARD: SCODA BEYOND 2016

Beyond the SoCR 2016, the vision is to create SCODA as an online living resource and database for cities. The project will move beyond a simple data catalogue to a full interactive data portal that can also serve as an ISO-certified city system for data and indicators, which ultimately feeds directly into cities' reporting requirements.



SCODA is a partnership between cities, SACN, SALGA, Stats SA and other interested partners. It is also supported through a strategic partnership with the WCCD, certifiers of the ISO 37120 Standard on City Indicators which is considered to be an important means of ensuring that SCODA is locally and internationally relevant for city development assessment and reporting.

Over the next phase of development, SCODA will focus on three key objectives:

1. Digitising the necessary data and metadata into an open online Almanac;
2. Improving ease of access to current and comparable indicators about cities; and
3. Easing the burden on cities of intergovernmental reporting and compliance by pre-populating known national and provincial or sector reporting requirements.

REFERENCES

SACN. 2015. Open Data Almanac for Cities, Project completed by KPMG, Project Reference: 130:003 for www.sacities.net.

SACN. 2013. Urban Indicators Project 2013 Scoping and Planning Exercise: Study Findings, project completed by AfriScope for www.sacities.net.

INDICATOR SUMMARY TABLE

This section lists the core and secondary indicators in the Almanac, and their short definitions. Full metadata can be found in the downloadable **Indicators Specification**. The highlighted indicators are the core indicators, which are the initial focus for populating the SCODA database.

Indicator		Definition
DEMOGRAPHIC		
1	Population size	Total population in metro
2	Population density	Total population per square kilometer by area type
3	Households	Total households by type
4	Population growth rate	Percentage increase or decrease in the population
5	Population projections	Population projections are estimates of total size or composition of populations in the future.
6	Female population	Total female population in metro
7	Male population	Total male population in metro
8	Sex ratio	Total number of males per 100 females
9	Dependency ratio (age & economic)	Total number of people aged 0–14 years and aged 65 years and older as a portion of the population aged 15–64 years per 100 population
10	Child population	Total population under 14 years of age
11	Youth population	Total population 15–24 years of age
12	Adult population	Total population 25–64 years of age
13	Elderly population	Total population aged 66 years and older
14	Net migration rate	Difference between in-migrations and out-migrations over a period of time
15	International immigrants rate	Total number of international immigrants over a period of time per 1 000 population
16	Indigent	Number of registered indigent households
17	Poverty rate	Number of people living below the national poverty line
18	Gini coefficient	A measure of inequality in income or wealth
19	Life expectancy	The average number of years that a newborn could expect to live, if he or she were subject to the age-specific mortality rates of a given period.

PRODUCTIVE CITIES		
20	Gross value add (GVA)	Total value (Rands) of goods and services produced
21	Exports	Value of all goods and services exported
22	Imports	Value of all goods and services imported
23	Labour productivity	Ratio of volume measure of output (GDP/GVA) to a measure of input use (the total number of hours worked or total employment)
24	Household Income	Total income from different sources for all household and by dwelling type
25	Cost of living	The amount of money needed to sustain a certain level of living, including basic expenses such as housing, food, taxes, and healthcare
26	Economically active population (EAP)	Total population employed and seeking employment within the 15–66 year age group
27	Employment absorption rate (EAR)	Proportion of the total working-age population / EAP that is employed.
28	Employment	Total (formal & informal), disaggregated by sector
29	Unemployment rate	Number of unemployed workers as a proportion of the total labour force
30	Vulnerable population unemployment	Women, youth, disabled proportion of unemployed
31	Skills supply	Number of higher education degrees and diplomas
32	Skills demand	Ratio of unemployed population with higher education degrees and diplomas to employed population with higher education degrees and diplomas
33	Human development index (HDI)	The HDI combines three dimensions: A long and healthy life: life expectancy at birth; education index: mean years of schooling and expected years of schooling; a decent standard of living: GNI per capita (PPP US\$)
34	Fixed capital productivity	
35	Registered businesses	Number of registered corporations (private, formal sector companies with limited liability)
36	Company survival rates	Percentage of registered companies still registered
37	Private sector employment	Percentage people employed in the private sector
38	Patents	Number of new patents issued
39	Debtor servicing	Average number of days to pay service providers (30 day payment target)
40	Building plan value	Value of all building plan applications and approvals
41	Residential building plans	Number and value of residential building applications and approvals
42	Industrial building plans	Number and value of industrial building applications and approvals

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Indicator		Definition
PRODUCTIVE CITIES		
43	Commercial building plans	Number and value of commercial building applications and approvals
44	House prices	Average price of residential housing
45	Business start-up	Number of days to register business
46	Construction permits	Number of days for construction permit to be issued
47	Electricity connection	Number of days for electricity to be connected
48	Property registration	Number of days for property to be registered
49	Airline destinations	Number of registered domestic and international airlines arriving and departing from airports in metro
50	Passenger arrivals	Number of domestic and international passengers arriving and departing from airports in metro
51	Cargo (air & ports)	Tonnage of incoming and outgoing cargo being handled by airports and ports
52	Number of fixed-landline telephone connections	Total population with access to the fixed-landline telephone / 100 000
53	Number of mobile telephone connections	Total population with access to the mobile-cellular telephone / 100 000
54	Number of internet connections	Total population with access to the Internet / 100 000
INCLUSIVE CITIES		
55	Police stations – SAPS	Number of police stations
56	Crime – violent crimes	Number of violent crimes
57	Crime – property crimes	Number of property related crimes
58	Crime – Social fabric crimes	Number of social fabric crimes
59	Crime – commercial crimes	Number of commercial crimes
60	Learner enrolment- primary	Total number of learners by gender enrolled in primary school
61	Learner enrolment- secondary	Total number of learners by gender enrolled in secondary school
62	Learner-educator ratio	Total number of learners to educators
63	Learner-classroom ratio	Total number of learners to classrooms
64	Completion rate – primary school	Proportion of pupils starting grade 1 who reach last grade of primary school
65	Completion rate – secondary school	Proportion of pupils starting grade 7 who reach last grade of secondary school
66	Literacy rates	Total population aged 15–24 years who are literate (can read and write) by age group, the result is then multiplied by 100
67	Matric pass rate	Matric pass rate
68	Ratio of tertiary qualifications	Number of higher degrees (tertiary) qualifications per 100 000 people
69	ARV clinics – metro	Number of clinics dispensing ARVs
70	Hospitals – provincial	Number of provincial hospitals
71	Hospital beds – provincial	Number of hospital beds per 100 000 population
72	Mortality – infant	Number of infant deaths under 1 years of age per 1 000 live births
73	Mortality – under 5 years	Number of children deaths under 5 years of age per 1 000 live births
74	Mortality – maternal	Number of maternal deaths under 1 years of age per 1 000 live births
75	Multiple deprivation index	Number of people deprived of income, housing, health care, education, employment, housing, services, crime free and suitable living environment
76	Dwelling type	Number of dwellings by type and location
77	Informal shelter growth	Percentage increase/decrease in number of informal shelter by location
78	New housing delivery	Number of new shelter opportunities by type and location per year
79	Household growth	Estimated growth of households per year
80	Dwelling tenure	Number of households by tenure type and dwelling type with location
81	Evictions and forced relocations	Total number of evictions and forced relocations
82	Repossessed houses	Number of repossessed houses in different residential areas
83	Affordability index	Ratio average house price to the average employee remuneration
84	Household cost	Percentage of household income spent on housing
85	Service account arrears	Number of households that have arrears on their service accounts
86	Mortgage bonds – banks	Number and value of mortgage bonds approved by financial institutions
87	Housing market	Value of the housing stock and sales by sector

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Indicator		Definition
INCLUSIVE CITIES		
88	Private sector investments	Financial investments by the private sector in new housing developments by location and type
89	Accredited municipalities	Assignment status per metro
90	Accreditation capacity	Total staff and funding allocated for accreditation responsibilities
91	Social facilities	Number of social facilities by type (i.e. community halls, homes for children & aged, creches & child care, performing arts, museums, libraries, cemetery, sports facilities, swimming pools, parks)
92	Sustainable human settlement (SHS) land	Land purchased for SHS
93	Passenger travel costs	Percentage of household income spent on transport
94	Parking	Number of parking spaces by type of provision (e.g. street, buildings, office, transport)
95	Commuter information systems	Value of investments in commuter information systems and support
96	Public transport rezoning	Number of rezoning applications for public transport
97	Public transport building plans	Number of building plan applications for public transport
98	Transportation spend	Value of spent on transport by mode
99	Transport passenger trips	Number of trips taken by type of public transportation (e.g. bus, BRT, rail)
100	Transport passengers	Number of transport passengers by mode (i.e. private car, taxi, metrobus, rail, BRT, cyclists and pedestrians)
101	Private transport	Number of kilometres travelled by private car
102	Public transport vehicles	Number of public transport vehicles by type (i.e. buses, taxis, train seats)
103	Growth in motor vehicle ownership	Number of cars registered to private owners over time
104	Transport operating costs	Average cost for transport trips by mode (i.e. private car, taxi, metrobus, rail, BRT)
105	Travel time to work	Average travel time to work by mode of transport (i.e. private car, taxi, metrobus, rail, BRT) & area type
106	Passenger waiting times	Average time waiting for public transport by mode of transport
107	Travel distance	Average travel distance to work by mode
108	Public transport land value	Change in land use and value around public transport nodes
109	Safety of transport systems (road fatalities)	Number of road fatalities per accident type (pedestrian, public/private transport)

SUSTAINABLE CITIES		
110	Water availability	Amount of water available in the catchment per capita
111	Water consumption	Total amount of water used per capita
112	Water losses	The amount of water lost to use or no income derived from
113	Blue drop score	Blue drop rating – state of potable water – water quality
114	Green drop score	Green drop rating – state of waste water treatment – water quality
115	River and wetland health	State of freshwater resources (quantity, quality and value)
116	Reservoir water availability	Volume of water available in reservoirs (m ³) per person
117	Energy supply	Total energy supplied/purchased by service provider by fuel type
118	Energy generation	Total energy generated by metro by fuel type
119	Energy consumption	Total electricity sales (GWh/year)
120	Energy intensity	Energy consumption per unit of output by sector (e.g. manufacture, transport, service, residential, agriculture)
121	Green energy	Total investment in green energy projects
122	Renewable energy	Total renewable energy generated by municipality (GWh/year)
123	Alternative energy use	Total households that use alternative energy sources
124	Energy losses	The amount of energy lost to use or no income derived from
125	Greenhouse gas (GHG) emissions (carbon footprint)	Total volume of greenhouse gases (CO ₂ , CH ₄ , N ₂ O, SF ₆ , HFCs and PFCs) released into the atmosphere over a specified area and period of time
126	Temperature	Average annual temperature change
127	Rainfall	Average annual rainfall change
128	Waste generation	Volumes of waste generated by type (household, industrial, commercial, hazardous, medical, radioactive)
129	Waste disposal	Volume of waste disposal by method (e.g. compacting, landfill, incineration)
130	Landfill availability	Total available airspace in years
131	Waste disposal facilities	Number of existing and proposed licensed sites

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Indicator		Definition
SUSTAINABLE CITIES		
132	Waste collection	Number of waste receptacles
133	Waste recycling	Waste diverted for recycling
134	Waste recycling schemes	Number of recycling schemes
135	Waste to energy	Number of waste to energy projects by type of output
136	Ambient air quality	Ambient concentrations of air pollutants by type and source
137	Residential fuel combustion	Percentage of households using coal and wood fuel for heating and cooking
138	Transport air pollutants	Ambient concentrations of air pollutants by vehicle type
139	Respiratory disease	Number of deaths from lower respiratory disease
140	Tuberculosis	Number of deaths from tuberculosis
141	HIV/Aids	Number of deaths from HIV/AIDS
142	Land transformation	Percentage change in land cover types
143	Coastal land transformation	Percentage change in coastal land cover types
144	Open space	Proportion of metro set aside for open space / natural areas
145	Food security	Hunger – measured from GHS
WELL-GOVERNED CITIES		
146	Municipal management vacancies	Number of vacancies at senior management level
147	Municipal posts	Number of staff posts by type
148	Performance management	Value of performance management practices implemented in the municipality
149	Municipal staff vacancies	Number of vacant posts
150	Municipal skills shortage	Rate at which vacant posts are filled by level
151	Woman employment	% woman employed within Local municipality
152	Electricity interruptions	Total number of reported electricity interruptions
153	Duration electricity interruptions	Average length of electricity interruptions
154	Water interruptions	Total number of reported water interruptions
155	Duration water interruptions	Average length of water interruptions
156	Voter registration – national & local	Number of voters registered to vote in the local and national elections
157	Voter turnout – national & local	Number of registered voters voted in the local and national elections. Voter participation is the best existing means of measuring civic and political engagement for several reasons (high quality data, broad cross-country comparability) (OECD)
158	Consultation on rule-making	Transparency in communication and open access to regulations promotes government accountability, a business-friendly environment and public trust in government institutions. indicator describes the extent to which formal consultation processes are built-in to the regulatory law-making process. The indicator is based on a composite index comprised of various information on the openness and transparency of the consultation process. It refers to the existence of institutional practices but does not, however, gauge whether these procedures are in fact effective
159	<i>Batho Pele</i> principles	Extent to which <i>Batho Pele</i> principles are being implemented
160	Citizen satisfaction	Percentage of people satisfied or very satisfied with municipal performance
161	Access to free basic services to all qualifying people in the municipality	Free basic services include electricity, water, sanitation and refuse removal (see indicators below)
162	Access to water	Number of households who have access to water by type (i.e. none, RDP, piped, backlog)
163	Access to sanitation	Percentage households who have access to sanitation by type (i.e. none, mainline, backlog)
164	Access to electricity	Percentage households who have access to electricity
165	Access to refuse removal – weekly	Percentage households who have access to refuse removal by type (i.e. none, weekly, less often)
166	Community halls	Number of community halls
167	Libraries	Number of libraries
168	Fire stations	Number of fire stations
169	Fire protection personnel – metro	Number of people employed in fire protection services
170	Police personnel – SAPS	Number of police personnel employed by the SAPS
171	Police personnel – metro	Number of police personnel employed by the metro
172	Fire protection services expenditure	Amount of expenditure on fire protection services

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Indicator	Definition	
WELL-GOVERNED CITIES		
173	Schools	Total number of primary and secondary schools
174	Primary health Care clinics – provincial	Number of primary health care clinics operated by provincial government
175	Clinics – provincial	Number of clinics operated by provincial government
176	Health and ambulance expenditure – provincial	Amount of expenditure on health and ambulance services by the province
177	Health and ambulance expenditure – metro	Amount of expenditure on health and ambulance services by the metro
178	Health workers – metro	Number of health workers employed by the metro
179	Health workers – provincial	Number of health workers employed by the metro
180	Private practitioners	Number of health workers employed by the metro
181	ARV clinics – provincial	Number of clinics dispensing ARVs
182	Clinics – metro	Number of clinics operated by metro
183	Primary health care clinics – metro	Number of primary health care clinics operated by metro
184	Waste management staff	Total number of employees in solid waste management (fulltime, part time, vacant)
185	Waste management assets	Expenditure on construction of sewerage and sanitation facilities
186	Waste facility maintenance & repair	Expenditure on repairs and maintenance of refuse removal, sewerage and sanitation facilities
187	IWMP reporting	Status of IWMP report
188	Wastewater	Household access to wastewater treatment by type
189	% allocated and spent of capital and maintenance budgets	% spent of the allocated budgets for capital development and maintenance of infrastructure. As a measure of commitment to IDP and SDBIP goals
190	Capital and maintenance budgets	% of budget allocated to maintenance and operations, versus new capital development
191	External audit	Status of audit findings
192	Internal audit	Status of internal audit
193	Informal settlements	Ratio of informal settlement area to total area
194	Urbanisation policy	Status of urbanisation
195	Land development	Size of land been given approval for development
196	Revenue profile	Amount of revenue by source
197	Residential rates	Rand value of rates paid by residences and businesses
198	Business rates	Rand value of rates paid by residences and businesses
199	Services levy	Rand value of rates paid by residences and businesses for services
200	Grants	Total value of grants to metro
201	Property rates	Rand value paid as property rates
202	Capital grants & transfers	Value of grants and transfers for capital expenditure
203	Spending profile	Metro expenditure by type (e.g. public transport, residential housing, roads)
204	Capital expenditure	Funding for capital projects by source
205	Operating surplus	
206	Debt collection	Amount of bad debt recovered
207	Debtors	Money owed to metro
208	Bad debt	Amount of owed to metros by the creditors that cannot be collected (i.e. loss) and all reasonable efforts to collect it have been exhausted.
209	Remuneration costs	Total cost of staff salaries
210	Liabilities	Funds borrowed to fund capital expenditure
211	Cash position	Cash available
212	Acid test ratio	Current assets minus inventory divided by the current liabilities
213	Debt to income ratio	Total liabilities of municipalities compared with their total revenue
214	Current ratio	Current assets provide cover to meet current liabilities
215	Debt ratio	Proportion of debt municipalities have relative to their assets and provides an indication as to how much municipalities rely on debt to finance their assets
216	Budget funding	Value of shortfall between budget and income
217	Wasteful expenditure	Value of wasteful expenditure



2016 STATE OF CITIES REPORT SPATIAL DATA SUPPLEMENT

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Spatial and Temporal Evidence for Planning in South Africa (stepSA) is a collaborative initiative aimed at building the capability and evidence base to support investment decisions in SA's cities, towns and settlements. Understanding of the spatial implication of growth trends and population movement, and profiling of the growth dynamics in settlements and towns clearly enables much more targeted and co-ordinated infrastructure investment. To assess the progress made by South African cities in the last 20 years in relation to development outcomes as well as to identify strategic problems and opportunities facing cities, the South African Cities Network has produced the latest State of the Cities Report. To provide evidence-based input for this report, a number of spatial indicators and or indices have being compiled by CSIR towards the SoCR 2016, each illustrating a specific component of change or transformation.

Three sets of indicators are profiled each dealing with its own component of change, it includes the following:

Three-dimensional spatial change – reflecting demographic and economic information (including change over time)

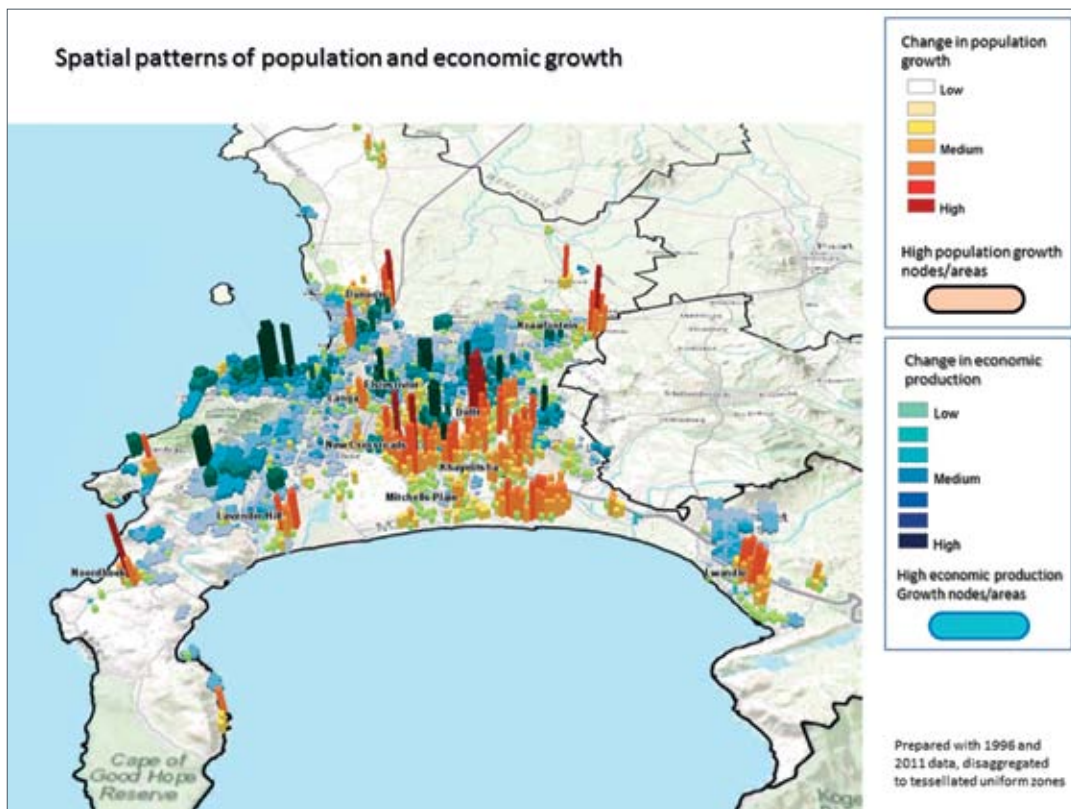
Place-based comparison within cities of performance and population dynamics which includes the following:

PLACE BASED (ward)	Change in percentage households living in poverty
	Change in percentage unemployment
	Change in settlement density
	Reflecting the youth as a percentage of the population
POPULATION DYNAMICS (ward)	Change in population per hectare 1996 – 2011
	Number of households in 1996, 2001, 2011
	Number of poor people in 1996, 2001, 2011
	Population change between 1996 and 2011
	Population in 1996, 2001, 2011
	Population per hectare 1006, 2011

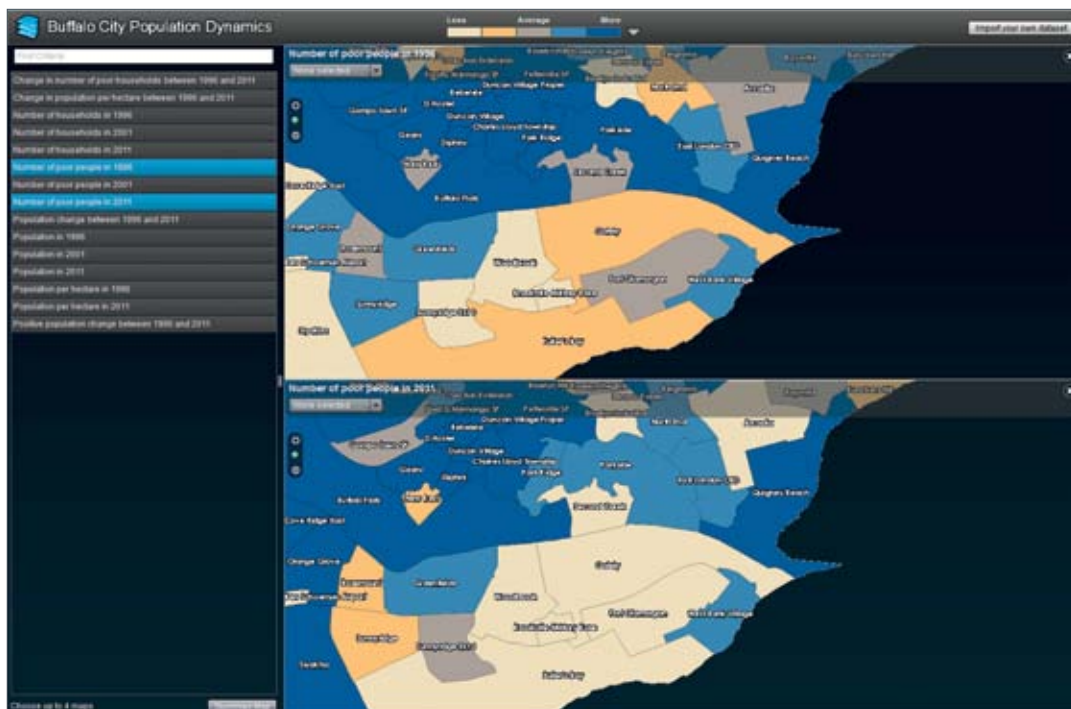
Other indicators including the following:

SUB-CITY	Employment change for 1996 – 2011
	The percentage of the population with more than a matric qualification
	Energy poverty
	Racial diversity

Example: Three dimensional spatial change



Example: Place-based comparisons



These items are available on the StepSA portal:

http://stepsa.org/sacn_SoCR.html