



Harbour Arch, Cape Town. Future smart city?

TECHNOLOGY

Smart options for South African cities

The UN predicts that 70% of the world's population will be urban by 2050. Are local cities on the right trajectory?

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Smart cities such as New York, London and Seoul use digital technologies and sustainable development to improve the quality of life and efficiency of urban operations while meeting the needs of current and future generations.

Property developers are keen supporters of the push for smart cities in SA as enabling technologies have proved to be a powerful driver of property markets. But what are

the projections, and how far are we from achieving the smart city ideal?

The City of Cape Town called this year for public submissions of ideas to make it the first truly digital smart city in Africa.

"We are looking for inspiration for new uses for existing technology and data," the city says.

Primary areas of focus include energy efficiency, health and assisted living, platforms for economic, digital and social inclusion, public

infrastructure, maintenance and public safety.

TRANSPORT

In Johannesburg, Cape Town and Durban a focus of smart city endeavours is on forward-thinking transport routes that deliver investment opportunities in commercial and residential property.

A good example is the Gautrain station in Rosebank. After it opened it generated an additional 2.5% growth in property prices compared with suburbs further away.

a study by Lightstone Property shows.

Similarly, the multiple transport routes in Woodstock, Cape Town, including a MyCiti bus route, a railway station and cycle lanes, have contributed to the suburb's development, which incorporates mixed-use precincts.

SERVICES

However, the integration of transport and other local services with digital solutions is what



Waterfall Country Estate, Midrand



Val de Vie, Paarl



Steyn City, Midrand

network since 2010. "Waterfall Estate boasts a world-class fibre optic and wireless communication network. Every home in all seven residential developments is fibre-ready, as is every office, warehouse, school, hospital and shopping centre," says communications manager Tertia Du Toit. In due course, 5G technology (which will power much faster internet speeds and in the future, driverless cars) will be rolled out across the development.

CONNECTIVITY

A fibre network also runs all operations at nearby Steyn City estate, which is installing about 17 cellular base stations for 4G connectivity while it waits for 5G to roll out. Community-based apps are another hallmark of the smart city and in estates such as Val de Vie in Paarl, can play an integral role in daily life. "Val de Vie residents can use a dedicated app to reserve sports facilities such as squash/tennis courts or confirm attendance at yoga, pilates or water aerobics classes," says group

marketing director for the estate Ryk Neethling.

CAR OWNERSHIP

In the rest of the city sprawl outside these estates, Wi-Fi zones and transport apps are the extent of available smart city technology. Uber, Taxiify and lift-sharing apps have disrupted traditional transport modes, eroding the culture of car ownership. Uber head of public policy SA Yolisa Kani told a South African Cities Network conference in February that her company's data "show a strong shift by millennials away from getting drivers' licences and owning their own cars".

5G TECHNOLOGY

The anticipated commercial deployment of 5G technology could happen as early as next year. "The roll-out of 5G infrastructure is a key enabler for smart cities and it cannot come soon enough," says IP Global's director of Africa George Radford. "Investors should look out for the opportunities they present. You can't go wrong investing in these forward-thinking locations." Green solutions are

also key to a smart city. Again, top-end estates such as Steyn City, Val de Vie in Paarl and Sibaya in KwaZulu-Natal are the first adopters of sustainable technologies, using solar energy, grey water to irrigate golf courses, LED lighting and gas for cooking. Sustainability is a focus in Amdec's developments, which use green building initiatives including refuse recycling, water-saving devices, low-energy LED lighting and rainwater harvesting. "These will be core features of the Harbour Arch precinct in 2019. "There is huge benefit in executing water-saving measures at the construction stage, rather than retrofitting. Not only is it better to have systems in place at the start, but it saves money in the long run," says Stopforth. Green developments represent excellent investment potential, says Radford. "They will enjoy sustainable growth in the decades to come, while ensuring that their citizens' quality of life is maintained and their economic participation assured".

"The roll-out of 5G infrastructure is a key enabler for smart cities and it cannot come soon enough"

George Radford, director, IP Global Africa

citizens to seamlessly go about their lives.

He says South African cities are sprawled out – unlike dense urban areas such as Tokyo or Manhattan – making smart city technology in SA spotty and expensive. Nonetheless, some of SA's biggest urban mixed-use developments, such as the RIObn Harbour Arch near central Cape Town – due to open in August 2019 – will evolve into small smart cities by embracing the latest technology. "Technology is an integral accompaniment to new urbanism," says Amdec Property Development MD Nicholas Stopforth.

SMART ESTATES

Walker anticipates that driverless cars are still about 10 years away in SA, but that affluent "gated communities" will blaze a trail for converged, high-speed IT solutions for residents and workers. These "smart estates" seem to be a particular South African suburban variation of the global smart cities concept. Waterfall Estate in Midrand, where an additional Gautrain station is planned and expected to boost further growth in the area, is a good example. At this mixed-use development residents have enjoyed a multitude of internet and communication services connected to a fibre optic

makes cities smart by global standards, and this is where the challenge lies for Johannesburg and Cape Town, says Mark Walker, associate VP at the International Data Corporation for sub-Saharan Africa. "Smart cities are based on linked digitally driven transport, (electricity) metering, documentation, policing and health service systems," Walker says, enabling

THE HOUSE OF 2025

As early as 2025, homes could look vastly different. PropertyFox CEO Crispin Inglis says the speed of technological development is too rapid to ignore – the way we live, where we live and how we build our homes appears headed for a dramatic shift. By 2025 homes could have transformed in the following ways:

1 Water by design. SA is a water-scarce country with a growing population. Houses will need inbuilt rainwater tanks and double reticulation grey water systems. Gardens and swimming pools will dwindle and bathtubs will be less popular.

2 Artificial intelligence. Alexa – Amazon's customisable smart home assistant – will read the news to you, take phone calls, control lights, open curtains, update shopping lists and manage drone deliveries through a special hatch in the roof. You'll want to rig up your home to be smart enough to allow Alexa to reach its full potential.

3 Garden rooftops. More people will start growing their own produce

as food prices rise. As residential gardens shrink it is likely rooftops and vertical spaces will be used for vegetable and herb gardens.

4 Fewer garages. By 2020, UberAir plans to run air taxis in at least three big cities – Dallas, Los Angeles and Dubai. It is possible that there will be helipads on rooftops. Even if air transport does not take off, Uber and lift-sharing apps will almost

certainly cause a big decline in car ownership.

5 Trendies leave town. Fewer cars means fewer traffic jams. A city's trendy crowd may be more comfortable living further from town, meaning new suburban areas will spring up packed with good restaurants and bars.

6 Flexible homes for short-term rentals. Possible options include rotating cupboard storage at the click of a button, to swap guests' or hosts' possessions, and former garage space being converted for an Airbnb with a separate entrance.



Illustration: PropertyFox