

You'd be forgiven if you thought Africa was a low-tech continent. Like other non-Western continents, we endured the [digital divide](#). But times have changed. African countries like [Rwanda](#) and [Nigeria](#) are becoming tech powerhouses. For example, more Africans are using the internet and smartphones every day.

The smartphone is just the beginning. There are all kinds of "smart" technologies these days. We now have smart TVs, smart boards (an interactive blackboard used in classrooms), and even smart refrigerators. Now, everyone is shifting their attention to smart cities.

I know what you're thinking. What's a smart city? In this first part of a two-part series, I'm going to explain the rise of smart cities. I'll tell you what they are, why they are important, and the positive impacts they will have on African economies.

Trends driving smart city development

Smart cities did not appear out of thin air. So before we go any further, let's look at three drivers of change that explain how smart cities became a topic of everyday conversation.

Smartphone penetration. There were 294 million smartphone users across Africa. An [article suggests](#) that number will soar to 930 million by the year 2021.

Africa's growing role on the global stage. As I mentioned, Africa is growing into a technology hub in areas like cybersecurity and the Internet of Things (IoT).

Smart cities proliferating around the world. Places like China, Amsterdam, India, UAE, and Barcelona are all embarking on smart city initiatives. There are also signs of a [US-EU smart city alliance](#). There's even the annual [Smart City Expo](#) where [Singapore](#) took top honours this year. But let's not forget that we have our [own smart city conference](#) in Africa.

What are smart cities?

In a nutshell, a smart city injects technology into almost every aspect of a city's operations to manage resources and assets efficiently. This includes transportation, healthcare, waste management, power supply, and education, among others. Cities use such tech like AI, big data, cybersecurity, and the IoT. Many governments are racing to become smart cities.

Why are smart cities important?

Our current model for city-building is outdated. A growing population that is quickly urbanizing is just one issue among others like aging infrastructure, resource depletion, and environmental degradation that is taking its toll on our cities' ability to thrive. These problems are not unique to Africa, but we have the opportunity to be a leader in building cities that meet the growing economic, social, and environmental needs of its people.

Building smart cities can maximize an area's economy and welfare and promote a shift to more sustainable behaviour. Smart cities can provide important data in real-time like crowd density, cleanliness of public spaces, and the exact movements of registered vehicles. Such data could provide support in decision-making when identifying the needs of the city. This could help governments increase the efficiency and quality of services and reduce public spending.

China has an [app](#) that combines many features like social media, e-commerce, healthcare, cuisine, and dating, among others. The Dubai government released a similar app where users can pay a speeding ticket or electric bill, call a taxi, register your vehicle, report a violation, or track a package. The app even [won an award](#). Users never need to leave the app, which ultimately generates data governments can use to optimize their cities.

How will smart cities positively impact the economy?

I mentioned that smart cities can maximize the economy and reduce public spending. Let me expand on that. Our cities can save [billions of dollars](#). That's no exaggeration. Imagine streetlights that adapt and dim when no one is around, only to light up when it detects movement. Or say that you're spending time looking for a parking spot. There are services out there that will tell you where you can park and its rules and regulations. And if you were ever confused about where you should put your garbage, automated waste management systems can send your garbage to the correct destination via underground vacuum pipes. This reduces noise pollution from garbage trucks and bad odour.

The smart city market is estimated to reach over [2 trillion dollars by 2025](#). That number jumps to [20 trillion dollars](#) for the IoT market. That's why [entrepreneurs are excited](#) about smart cities.

Conclusion

It's easy to see why smart cities are becoming innovation hubs that incubate new businesses and promote social development. They promise to change everything from homes and buildings to mobility. This article shows how Africa and the world are undergoing immense change, which presents us Africans with a great opportunity for growth.

In part 2 of this series, I'll dive deeper into Africa's role in smart city development and how these new changes will benefit Africans.