

IBM Report: Technology Holds the Key to Economic and Social Reform in Accra, Ghana

Cloud computing, Big Data and mobile technologies can help transform Accra into a smarter city - improving lives and bolstering the West African hub's continued rise to prosperity

PR Newswire

ACCRA, Ghana, April 11, 2013 /[PRNewswire](http://prnewswire.com)/ -- IBM (NYSE:[IBM](http://nyse.com)) today announced the launch of a report entitled "*A Vision for Smarter Growth: an IBM Smarter Cities Report on Accra, Ghana*" that highlights how the rapidly emerging West African city should turn to technology to transform its key urban systems. Based on the opinions of local experts from across public and private sectors and civil society, the report identifies *city services, transportation, and energy* as essential for Accra's urban reform.

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According to the International Monetary Fund, Ghana is one of the fastest growing economies in the world, driven by an emerging oil and gas industry, a growing base of consumers and significant foreign investment. Its capital, Accra, is one of Africa's fastest emerging cities. According to Mastercard's African Cities Growth Index, Accra is ranked Africa's top city in terms of economic potential over the next five years. Accra has also experienced significant demographic growth, the city's population expanding by over 1 million people - a 35 percent increase in the past decade, placing increasing strain on the city's resources.

"As Ghana's capital, Accra is emerging as one of Africa's economic success stories," said Alfred Vanderpujje, Mayor of Accra. "But such growth is not sustainable in the long term if we do not act now to put in place the systems and processes of the future. Technology is clearly one of the fundamental building blocks for creating a smarter and better functioning Accra."

The publication of the IBM report follows the launch of the Ghana government's National Urban Policy Framework and Action Plan, which is aimed at improving infrastructure and raising revenue in Ghana's cities to reduce poverty and tackle urban growth challenges.

"Cities across Africa are facing the dual challenge of rapid urban and economic growth," said Joe Mensah, Country General Manager of IBM Ghana. "IBM's approach is to enter a dialogue with key stakeholders and

experts on the ground to understand the challenges and explore where technology can be successfully applied to transform the systems on which our cities depend. The scale of Accra and its challenges creates a manageable environment for implementing smarter systems that could really improve lives and business."

Transforming City Services

Rising numbers of residents place increased strain on existing resources and require more effective delivery of city services such as water, sanitation, refuse, public safety, education and healthcare. The Government of Ghana sees improved revenue collection as key to Accra's transformation and its ability to fund investment across all of the city's systems - a key part of the country's Urban Policy Framework and Action Plan:

"We estimate that Accra loses up to 50 percent of its current revenues to fraud or underpayment by residents," said Lydia Sackey, Metro Director of Budget, Accra Metropolitan Assembly. "Revenue generation is key to improving city services in Accra. Quite simply, if we don't raise enough revenue, we are not able to perform our functions and produce enough services for people in the city."

The IBM report highlights how mobile payment systems could help make the process of paying taxes easier for Accra's residents in the future. Hosting city services in the cloud would translate to more transparent and cost-effective municipal service delivery and an online platform for cataloguing property values could lead to a substantial increase in property tax revenues. Big Data analytics could help city authorities more easily identify cases of tax under payment or fraud.

The Transportation Headache

Like all African cities which are currently experiencing rapid rates of urbanization, transportation is one of Accra's key challenges with growing numbers of citizens and vehicles placing increasing pressure on the city's road networks. With 90 percent of all transport in Accra by road, traffic jams have a negative effect on many other areas such as business, emergency response, the environment, education and healthcare.

The IBM report lists a number of areas where technology can help. While the long-term goal should be the construction of a modern mass public transit system, instrumented, interconnected and intelligent technologies can help in the meantime to form the basis of a smarter transportation system. Smart and networked traffic lights could help to ease the flow of traffic through the city. Cameras and social media technologies could help monitor the road network and provide intelligence to decision makers. By using Big Data technologies to analyze mobile phone data, city officials could gain a clearer view of how people move around within the city and how the existing transportation systems could be enhanced.

The Energy to Grow

Ghana has grown so fast in recent years that electricity supply has become a serious problem and Accra regularly suffers from load-shedding and blackouts. The IBM report highlights energy source diversification from Ghana's current 77 percent reliance on hydro-electricity as key to improving supply as well as establishing new commercial enterprises. For example, telco provider Airtel is piloting the use of wind and solar power as a backup to grid power for its mobile stations in Ghana - an alternative to the costly and environmentally unfriendly generators that businesses rely on.

"Telecommunications sites that are near grid power will always use grid power and in Ghana that comes to about 70 percent of sites. But even those that are on grid power still have generators to back them up because of the grid's lack of reliability," said Philip Sowah, CEO of Airtel Ghana.

Smart meters can help monitor and manage electricity distribution and smart grids can help energy providers anticipate and isolate problems limiting impact on lives and business. By building a smarter energy system, Accra can help lay the groundwork for future investment and economic growth.

Laying the Foundations for Smarter Cities Across Africa

In addition to working alongside leaders in Accra, IBM is actively engaged in dialogue with cities across Africa to help public and private sectors address urban challenges and opportunities. In 2012, an IBM Smarter Cities Challenge team was deployed in Nairobi, Kenya to advise on technology solutions to resolve Nairobi's traffic challenges; while another team spent a month in the city of Tshwane, South Africa developing a crowdsourcing solution to improve the city's water management system and enable citizens to report water leaks. Further teams will be deployed in other African cities this year. IBM's new Africa Research Lab is also developing pilot solutions to optimize traffic management, public safety and government services.

To download the IBM report, visit: <http://www.ibm.com/ibm/gh/en/accra-smarter-city.html>

To view a film about Accra's transition to a smarter city, visit:

<http://youtu.be/EaZBAP2IhyQ>

For more information on IBM's strategy for Africa, visit:

<http://www-03.ibm.com/press/us/en/presskit/34710.wss>

To join the global debate on smarter cities, visit:

http://www.linkedin.com/groups/Smarter-Cities-Connect-3451751?trk=myg_ugrp_ovr

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