Africa Rising: How Geospatial data analytics is transforming governance on the continent

By Dustin Homer   6 Mar 2018

Data has officially overtaken crude oil as the most valuable resource in the world. Insights gained from data analysis are increasingly used to guide better decision-making for governments and businesses. In Africa, the potential of data to improve governance is just beginning to make itself felt.

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Vast, largely rural, and with limited technological infrastructure, Africa has long presented a unique challenge for traditional data collection. But with the rise of mobile connectivity, the Internet of Things and accessible satellite data, a more complete picture of the continent and its people is possible. In the hands of the right people, this picture can guide Africa to a more prosperous and stable future.

Previous writings from Fraym have highlighted the ways in which data can help businesses thrive in African markets where consumer information is hard to come by – but this benefit is far from limited to the commercial sphere. It can also help governments understand their populations and their nations more clearly, driving mindful development, improved efficiencies and better service delivery.

This is how:

1. **Understanding the continent's most pressing problems -** Innovative data sources are being used to produce fascinating and practical insights in Africa. For example, studies have used satellite images of night-time electric illumination to estimate economic growth. Others have used daytime image characteristics (such as the quality of materials used for roofing in a specific region) to identify and map poverty more accurately. If cross-referenced with official government data and other household-level statistics, this geospatial data can help policymakers understand the conditions in which their constituents live. Providing access to healthcare, ensuring food and water access, and encouraging the disenfranchised to take meaningful part in the economy all start with a thorough "on the ground" understanding of a population's most urgent challenges. Creative, multi-pronged approaches to geospatial data analysis can ensure that no constituent needs are left "in the dark."

2. **Planning for a future of smart solutions -** Much of Africa is seen by the world as a "blank slate". ripe with potential

for infrastructure, business and community development. But how will governments know the impact their decisions have on those they are trying to empower? As Africa's towns turn into cities, and its cities grow into super-cities, steps must be taken to make these spaces sustainable for their inhabitants—and the environment, as well. For example, geospatial data on changes in land usage and patterns of expansion serve a predictive function that can help governments create more responsive and agile urban planning strategies. Such strategies ensure sustainability and efficiency in areas like traffic systems and road networks, waste disposal, placement of public services and much more. The city of Johannesburg is already using geospatial data analysis to better understand poverty, jobs, housing, transport and spatial inequality in their quest to achieve objectives set out in the Spatial Development Framework 2040. Africa's other major cities can similarly unlock these types of insights as they work to accelerate their development.

Good governance is essential to socio-political stability – an urgent and continuous goal for the entire African continent – and data-driven policies are essential to achieving true African prosperity.

With the technologies to gather it, the processing power to make sense of it, and the political will to use it for the good of the people, geospatial data holds limitless potential to guide governmental decision-making to ever-greater outcomes. Undoubtedly, those governments who embrace the vastness of this potential are those that will make the biggest strides in improving lives across the continent.

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