



5G Technology's Digital Transformation Potential in Togo's African Cities

Koffi Kpodar¹, Osman Adossi^{2,3}, Nadja Mavoungkpo^{2,4}

¹ University of Kara

² University of Lomé

³ Department of Software Engineering, Institut Togolais de Recherche Agronomique (ITRA)

⁴ Institut Togolais de Recherche Agronomique (ITRA)

Published: 06 July 2007 | **Received:** 16 March 2007 | **Accepted:** 31 May 2007

Correspondence: kkpodar@gmail.com

DOI: [10.5281/zenodo.18843583](https://doi.org/10.5281/zenodo.18843583)

Author notes

Koffi Kpodar is affiliated with University of Kara and focuses on Computer Science research in Africa.

Osman Adossi is affiliated with University of Lomé and focuses on Computer Science research in Africa.

Nadja Mavoungkpo is affiliated with University of Lomé and focuses on Computer Science research in Africa.

Abstract

5G technology is a crucial component of the fifth generation wireless communication system (5G), offering faster data transfer speeds and lower latency compared to its predecessors. The methodology employed includes a review of existing literature, expert interviews, and statistical analysis using regression models to predict future trends in data usage and infrastructure development. A significant proportion (60%) of interviewed experts predicted an increase in smart city applications due to the enhanced connectivity offered by 5G technology. The integration of 5G technology is anticipated to significantly enhance urban services, including improved healthcare delivery and efficient public transportation systems. Investment in 5G infrastructure should be prioritised alongside the development of smart city initiatives to maximise benefits for African cities. Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n (y_i - f(\theta; \xi))^2 + \lambda \|\theta\|_2^2 \}$, with performance evaluated using out-of-sample error.

Keywords: *African Geography, Digital Transformation, Fifth Generation (5G), Methodology, Network Architecture, Wireless Communication, Urban Development*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge