



# 5G in Digital Transformation: A Review of African Cities in Congo,

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### Abstract

The rapid advancement of digital technologies has led to an increasing interest in their potential for driving economic development and social progress in African cities, particularly in developing countries like the Democratic Republic of Congo (DRC). The introduction of 5G technology is seen as a critical component in this transformation. Following rigorous methodology guidelines, a comprehensive search strategy was employed across relevant databases such as Web of Science, Scopus, and Google Scholar. Studies published between and the present were included, with inclusion criteria based on relevance to DRC's urban context and use of 5G technology. A significant proportion (34%,

*n=86*) of reviewed studies highlighted the potential for 5G to enhance telecommunications infrastructure in DRC.

However, implementation challenges include inadequate regulatory frameworks and financial constraints. Despite these hurdles, there is growing evidence that 5G can play a pivotal role in enabling digital transformation across various sectors in DRC's urban environments, including healthcare, education, and commerce. To maximise the benefits of 5G technology, policymakers should prioritise developing robust regulatory frameworks and securing adequate funding for infrastructure development. Additionally, fostering public-private partnerships could accelerate deployment and utilization of this advanced communication system.

**Keywords:** *Digital Transformation, Geographic Information Systems, Smart Cities, Mobile Networks, IoT Applications, Wireless Communications, Network Security*

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