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**A GIS INTEGRATED ASSET MANAGEMENT SYSTEM FOR URBAN  
ROADS IN UGANDA**

**BY**

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## **ABSTRACT**

This research focused on developing a GIS integrated asset management system for urban roads in Uganda with a case study on Lira town, which is one of the 22 municipalities that have changed face in the last 10 years. The main objective of this study was to analyze effectiveness of the GIS integrated asset management system for urban roads infrastructure and develop improvement strategies. The research examined the level of institutional involvement in urban roads asset management, the available policies and regulations in the sub sector with identification of major constraints. Assessment of the asset condition and management system in Lira municipality was made. The research undertook a triangulated approach by using both quantitative and qualitative designs. Questionnaires, interviews and personal observations were used to collect data which were thereafter analyzed using the SPSS software. The key challenges in urban roads asset management were found to be, Poor funding, political interference, lack of institutional awareness and capacity, in appropriate asset management system among others. Aging assets, poor condition of drainage and pavement were common with no clear plan to immediately revamp them. It was recommended that, capacity building of the technical staff and contractors in GIS integrated asset management and contract management respectively should be done to improve on asset lifecycle delivery. The research unveiled that, there was urgent need to improve asset condition in Lira right from physical planning, pavement design, drainage design and road furniture replacement. It was suggested that, revamping of these assets could be better done through the formation of an authority, ‘Urban Re-Development Authority’. A GIS integrated asset management framework model was suggested for roads asset management. Further research was proposed to be conducted in other municipalities to ascertain their asset management status.