

Application of RFID technology and information technology in public asset management at Thai Nguyen University

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Abstract: This study investigates the application of Radio Frequency Identification (RFID) and Information Technology (IT) in managing public assets at Thai Nguyen University. Facing challenges of asset loss, inventory inaccuracies, and inefficient manual tracking, the university requires a modernized management system. The research proposes and evaluates an integrated solution combining RFID hardware with a centralized IT database. Through system design, implementation, and performance analysis, the study demonstrates that RFID technology enables real-time, automated asset identification and tracking, significantly reducing inventory time and human error. The IT platform provides a transparent, accessible interface for asset lifecycle management, from acquisition to disposal. Findings indicate that the integrated system enhances accountability, optimizes resource allocation, and improves overall operational efficiency. The research concludes that deploying RFID and IT is a viable strategy for modernizing public asset management in higher education institutions, offering a scalable model for similar organizations in Vietnam.

Keywords: RFID, information technology, public asset management, Thai Nguyen University