

Research and development of an ICT business registration management database for the Department of Technology and Communications, Vientiane Capital.

Vilaysack Khotvongsa

Abstract: This study focuses on the development of a database system for managing ICT business registration at the Department of Technology and Communication in Vientiane Capital, Lao PDR. The current registration process faces challenges related to data fragmentation, manual record-keeping, and inefficient retrieval, hindering effective oversight of the growing ICT sector. The research adopts a design science methodology, involving requirements analysis, system architecture design, and implementation using relational database management principles. The proposed database integrates key business registration data, including enterprise profiles, licensing status, and compliance records, into a centralized, queryable platform. Evaluation through prototype testing and user feedback demonstrates significant improvements in data accuracy, retrieval speed, and administrative workflow efficiency. The findings provide a practical, scalable solution for enhancing regulatory management and supporting data-driven policy decisions for ICT development in Vientiane. This system serves as a foundational tool for digital transformation within local government administrative processes.

Keywords: Database, business registration, ICT, Vientiane