

ABSTRACT

Telkom University (Tel-U) is a private university located in Bandung, West Java. Established on August 14, 2013, from the merger of four institutions under the Telkom Education Foundation namely Telkom Institute of Technology, Telkom Institute of Management, Telkom Polytechnic, and Telkom STISI—Tel-U is one of the first private universities to achieve Superior accreditation by BAN-PT. It has repeatedly been recognized as one of the Best Private Universities in Indonesia and is among the Best Universities in Indonesia. Telkom University has seen annual increases in new student enrollment: 6,968 students in 2019, 7,554 in 2020, and 8,981 in 2023. The campus covers an area of approximately 50 hectares, featuring more than 10 buildings. It currently serves 36,894 students and employs 1,183 educational staff and lecturers. Telkom University provides Tuc-Tuc transportation to facilitate mobility for the academic community. However, students and staff at Telkom University have reported difficulties using this service. Common issues include not knowing the real-time location of the Tuc-Tuc vehicles or their schedules, leading to delays in attending classes and challenges in utilizing the service. This research applies design thinking and quality function deployment (QFD) to address these issues. Design thinking helps to understand user needs in a step-by-step process, while QFD focuses on optimizing the design prototype according to user preferences and technical priorities. After designing the prototype, it undergoes testing to evaluate its effectiveness and user acceptability. The final result is the development of a real-time tracking, monitoring, and scheduling system, aimed at allowing users to track the Tuc-Tuc vehicles and view their operating hours in real time.

Keywords: *Development, Tracking, Monitoring and System Scheduling Real Time, Design Thinking, Quality Fuction Development (QFD)*