

ABSTRACT

This research examines the business ecosystem architecture within the scope of the Internet of Things (IoT), specifically in the transportation industry, an area that has not been extensively explored in academic literature. Using a business ecosystem architecture approach, this study aims to analyze the dynamics and interactions within the IoT business ecosystem, which are crucial for the competitiveness and long-term resilience of companies. The research methodology employs five stages: (1) identification of ecosystem boundaries; (2) identification of actors and their roles; (3) identification of value propositions of the actors; (4) identification of actor interactions; and (5) verification of the business ecosystem architecture design. A qualitative approach through a case study at Telkom is applied, with informants consisting of internal and external sources providing practical and comprehensive perspectives on the IoT business ecosystem. Data collection is carried out through in-depth interviews, and literature reviews. The findings of this research are expected to provide comprehensive insights into the IoT business ecosystem in the transportation sector, supporting Telkom in refining business strategies and enhancing competitiveness in the IoT sector. The study results indicate that mapping the IoT business ecosystem in the transportation sector at Telkom Indonesia highlights several challenges, such as limited human resource readiness and a lack of local device manufacturers, leading to reduced competitiveness of IoT solutions. The government can support by implementing policies that encourage the use of local products and investment in infrastructure. Telkom plays a role as a solution provider in the business ecosystem. Collaboration with other actors, including device providers, application developers, and customers, is key to addressing challenges and optimizing the potential of the IoT service ecosystem in the transportation sector.

Keywords: Business Ecosystem, Ecosystem Architecture, Internet of Things, IoT