ABSTRACT

AMBIDEXTROUS AI GOVERNANCE MODEL FOR ADVANCING BANKCO'S DIGITAL TRANSFORMATION THROUGH COBIT 2019 TRADITIONAL AND DEVOPS

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Integrating artificial intelligence (AI) in the banking industry accelerates digital transformation but presents significant governance challenges, particularly concerning algorithmic accountability, risk complexity, and evolving regulatory compliance. This study aims to design an ambidextrous AI governance model by combining the COBIT 2019 Traditional approach with the DevOps Focus Area. This study investigates BankCo, an Indonesian state-owned bank undergoing systemic digital transformation, to design an ambidextrous AI governance model that combines the COBIT 2019 Traditional and DevOps Focus Area frameworks. Using Design Science Research (DSR), the study adopts a case study approach. Data were collected through semi-structured interviews and structured questionnaires involving five key stakeholders and validated through triangulation with internal documents, including organizational policies, risk management frameworks, audit reports, and digital roadmaps. The analysis process was conducted iteratively until data saturation was achieved. The findings identify three prioritized Governance and Management Objectives (GMOs), selected based on design factors, DevOps focus areas, national regulations (POJK No. 11/2022 and SOE Minister Regulation No. PER-2/MBU/03/2023), and literature on AI governance. These include DSS05 (Managed Security Services), with gaps in threat detection and adversarial AI risk mitigation; MEA03 (Managed Compliance with External Requirements), lacking AI-specific compliance controls; and APO12 (Managed Risk), with weaknesses in risk profiling integration and predictive analytics. The proposed model applies the Resource-Risk-Value (RRV) approach to prioritize strategic initiatives and formulates 15 control recommendations based on the seven core components of COBIT 2019. Implementing these recommendations will increase the average capability maturity score from 3.55 to 3.92. This study contributes to developing an auditable and balanced AI governance framework, offering strategic guidance for financial institutions to adopt AI ethically, measurably, and sustainably.

Keywords: *Ambidextrous AI Governance, Digital Transformation, COBIT 2019, DevOps, DSS05, MEA03, APO12, Design Science Research, Case Study, Banking*.