

ABSTRACT

Ambidextrous AI Governance Design Based on COBIT 2019 Traditional and DevOps for TelCo's Digital Transformation

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Artificial Intelligence (AI) serves as a key enabler in the digital transformation of the telecommunications sector, enhancing operational efficiency and customer experience. However, TelCo faces challenges in aligning AI adoption with governance frameworks that balance stringent control with digital innovation. This study aims to develop an AI governance model based on an ambidextrous approach, integrating COBIT 2019 Traditional and DevOps. The research approach follows Design Science Research (DSR) and case study methodology in six iterative stages: problem identification, solution definition, design, development, demonstration, evaluation, and reflection. Data were collected through semi-structured interviews with key stakeholders and triangulated with internal documents. The analysis focuses on seven governance system components based on COBIT 2019, with primary emphasis on DSS05, MEA03, and APO12. The gap analysis identifies areas for improvement, such as optimizing cross-functional communication and enhancing structured risk management. Based on a Resource, Risk, and Value (RRV) analysis, 10 improvement recommendations were developed and prioritized within an implementation roadmap. Estimates suggest a capability increase from an average level of 3.77 to 3.95. This study is expected to contribute to AI governance models that are compliant, secure, and adaptive, while enriching the academic literature on ambidextrous approaches supporting sustainable digital transformation.

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