THE IT GOVERNANCE MODELING AT A UNIVERSITY’S NETWORKING INFRASTRUCTURE AND SECURITY USING COBIT FRAMEWORK

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ABSTRACT

X University integrates Information Technology into their services to accomplish their mission by means of IT-based campus as an infrastructure of communication and information system within the university. However, the IT governance had not been thoroughly managed, particularly within networking as a backbone of information and communication technology. It is inevitable that someday problems will arise concerning device organizations, service diversities, infrastructure problems, as well as control and monitoring. This study discusses the infrastructure and network security audits at X University. IT audits need to be done by means of internal controls to ensure that the service provided meets the standards.

Audits carried out based on COBIT Framework 4.1. The IT Goals that are applied for the networking infrastructure management are: Acquire and maintain an integrated and standardized IT infrastructure (8), and Optimize the IT infrastructure, resources and capabilities (15). As for the networking security management are: Account for and protect all IT assets (14), Establish clarity of business impact of risks to IT objectives and resources (18), and Ensure that IT services and infrastructure can properly resist and recover from failures due to error, deliberate attack or disaster (21). Measurements carried out for each related IT Process using Maturity Models. The study was conducted through interviews and questionnaires which were elaborated from COBIT Framework.

The results indicate that the organization is currently (as-is) on the Maturity Level 3 (Defined Process) for the networking infrastructure management. Meanwhile, the expected (to-be) Maturity Levels are at level 4 for process AI5, PO3, DS7, DS9, and level 5 for the AI3 and DS3. In the other hand, the current (as-is) Maturity Level of networking security management is at level 2 on the process PO9, PO6, DS5, DS4, DS9, DS12, DS13 and level 3 on the ME2 and AI7. Meanwhile, the expected (to-be) Maturity Levels are at level 4 for all processes. From the assessment of the Maturity Levels, there are gaps occurred from the current (as-is) and expected (to-be) Maturity Levels within the organization. Thus, the IT governance are constructed and focused on the improvements needed to achieve the expected position.

Key words: Audit, COBIT, Information Technology, Infrastructure, IT Governance, Networking, Security.