

## ABSTRACT

*PT. Aprillia Profesional Teknologi (PT. APT) is a private company operating in the telecommunications sector which is currently appointed by BAKTI Kominfo as a provider company for the construction of Base Transceiver Stations (BTS) in blankspot areas or areas which not transmitting telecommunications signals. The implementation of USO Blankspot BTS maintenance creates internal and external risks. The company has not implemented standard risk management. On this basis, it is necessary to have risk management design and an internal monitoring system for the device. This research aims to design map of core business process, design Enterprise Risk Management based on ISO 31000:2018 including a risk mitigation design and design a device performance monitoring system. This research uses risk management methods and system development life cycle (SDLC) with the Agile Model in designing an internal monitoring system. In this research, value stream mapping is used, which is a quality management tool in lean software development that can structure the current state of a process by opening opportunities to make improvements and reduce waste. The internal monitoring system application design is then prepared in a unified modeling language which is a visual modeling method used as a means of designing object-oriented systems using data flow diagrams, use case diagrams, activity diagrams, sequence diagrams and class diagrams.*

*The result of this research is a mapping of the main business processes and the risk mapping obtained is that there are 22 internal operational risks, 8 internal financial risks and 5 internal technology risks, while there are 4 external – social risks. The results of the risk mapping are then responded to whether avoidance, transfer, reduction, or retention should be carried out. Once risks are identified, the next step is to design a managerial mitigation framework that can be used as a guide in risk management. From the results of this management plan and mitigation framework, feedback received from stakeholders stated that ERM planning based on ISO 31000: 2018 was well accepted and became a proposal for further implementation. In addition to the risk management plan, the result of this research is to design an internal monitoring system to monitor the uptime of installed devices. The combination of risk management and internal monitoring is expected to maximize company value and minimize risk.*

*Keywords: Business Process, Enterprise Risk Management, Network Monitoring System, Base Transceiver Station Blankspot Universal Service Obligation, System Development Life Cycle, Agile Model.*