

## **ABSTRACT**

Implementation of risk management is important in every project, especially to make sure that the project runs according to plan and minimizing possible negative impacts. This essay aims to apply ISO 31000:2011 to make Risk Register and Risk Treatment in the Phase 2 of Join Planning Program (JPP) Project at PT XYZ using the Failure Mode and Effect Analysis (FMEA) method.

PT XYZ is a company engaged in the field of Fiber Optic-based communication services. As a company that has many projects in it, of course PT XYZ faces various risks in implementing its projects including project delays that can have an impact everywhere if not immediately reduced. Therefore, this essay will identify the risks that may occur, analyze the impacts, and design effective risk mitigation strategies.

By using the FMEA method, the identified risks are ranked based on severity (Severity), likelihood of occurrence (Occurrence), and detection capability (Detection) which will be processed into a Risk Priority Number (RPN) and then calculated to determine the treatment of the priority risk.

The results of this essay indicate that the design of Risk Register and Risk Treatment can be done based on ISO 31000:2011 process and the FMEA method. The designed Risk Register and Risk Treatment are expected to help PT XYZ in reducing the possibility of risk and its impacts, so that the project can run more effectively and efficiently.

**Keywords: Risk Management, ISO 31000, FMEA, Join Planning Program**