

## **ABSTRACT**

*The development of information technology today has led to a better direction in the enterprise world. Good information technology plays a very important role in supporting the company's operational activities and company business processes. PT. Nocola IoT Solution focuses on system integration, core services, weighting systems, IoT development, software development, communication, navigation services, training. In company activities, IT risk management plays an important role and must be seen from the aspects of principles, policies, frameworks, applications, infrastructure and services so companies can produce maximum decisions. Because every company has risks, especially IT risks, so that it can affect business processes. However, the problem at PT Nocola IoT Solution is that it has not implemented IT risk management properly, but only performs standard IT security without managing risk mitigation that will occur in the future. This research was conducted in order to determine the current IT risk conditions at PT. Nocola IoT Solution using COBIT 5 for Risk which is framework an international standard that can be used as a reference in managing information technology resources in helping companies. The purpose of this study is to obtain the results of risk management analysis and provide general IT risk management recommendations. In COBIT 5 for Risk, there are stages in carrying out risk management including conducting risk scenarios, conducting risk analysis, determining risks to be taken, determining responses to risks, conducting evaluations and reviews, determining risk priorities and making risk action plans. In this study, it focuses on the enabler principle, policies & framework and Service, application & infrastructure with the data obtained from this research are primary data and secondary data from interviews and related documents provided by PT Nocola IoT Solution. To collect data used by interviewing PT. Nocola IoT Solution as an object of research, and producing primary data in the form of current IT risk conditions, and secondary data in the form of company profiles, organizational structures, and policies owned by PT. Nocola IoT solutions. In the risk assessment of each aspect of the enablers of COBIT 5 for Risk, there is a gap between the current conditions and the ideal*

*conditions of COBIT 5 for Risk so that this study produces recommendations based enablers on their COBIT 5 for Risk for PT Nocola IoT Solution. Before getting a recommendation, made strategic alignment of enterprise goals to enterprise goals COBIT 5 with a value of 10, then enterprise goals COBIT 5 to IT-related goals with a value of 9, and IT-related goals to IT-related processes with the highest score of 8, then a risk approach is carried out from determining pain points, determining risk criteria, analyzing risks and determining risk priorities. Then from the two activities, the priority of the process will be determined which will be the domain to conduct an assessment on each aspect and get the results that is EDM01 Ensure Governance Framework Setting and Maintenance, APO02 Manage Strategy, APO07 Manage Human Resource, APO08 Manage Relationships, and BAI08 Manage Knowledge and the main processes are EDM03 Ensure Risk Optimization and APO12 Manage Risk. Then and carried out assessment was on aspects of principle, policies & framework and for aspects of Service, application & infrastructure, and found several documents and applications that did not exist or were not appropriate, after that proceeded with gap analysis to analyze and define the data and documents that had been collected previously. . And from the results of the gap analysis, it is found that the recommendations given are divided into 2, namely process and technology. Recommendations for enablers principle, policies & framework are included in the aspect in the process form of IT risk management policies for PT Nocola IoT Solution. Recommendations can be a reference or guideline in carrying out assessments for future IT risk management and achieving ideal conditions in accordance with COBIT 5 for Risk. Next to enabler Service, application & infrastructure, the recommendations given are aspects technology in the form of recommendations for tools that can support IT risk management activities at PT Nocola IoT Solution.*

*Keywords— COBIT 5 for Risk, IT Risk Management, Seven Enabler*