

I. INTRODUCTION

The role of technology in human activities at this time is indeed very large. Almost all organizations have opened their eyes by paying attention to technological developments, especially information technology[1]. In recent years, as a result of the development of industry 4.0 and competition between competitors, Information Technology is one of the important needs for every company or business organization, this is proven by almost all business organizations or companies that have used it in all of their business value chains.[2]. However, with the existence of this information technology, it is undeniable that there are risks that can result in delays and even not achieving the goals of using information technology if these risks are not addressed and managed properly[3].

The development of information technology in the banking world has brought changes in the approach to business strategies carried out by companies, by placing information technology as the main element in the development of innovation in products and services[4]. Examples of the use of information technology are in electronic banking (e-banking) services, e-banking products in the form of ATMs, Mobile Banking, PhoneBanking, and Message Banking, some of which are innovations in services where changing manual transaction services are based on technology.[5]

Bank XYZ is one of the banking companies which is a regional-owned bank. With a service system based on information technology, of course, Bank XYZ has IT risks. Some of the risks and problems that can arise due to the incorrect application of information technology can cause business process losses such as financial losses, the company's reputation will decline due to a decrease in the level of public trust, and others.[6].

Problems that arise in XYZ banks include an error where when making a transaction, it cannot continue the transaction. This happens because of a disturbance in the network infrastructure, with this problem causing the system to be unable to perform transactions.

Another problem that arises at Bank XYZ is a problem with the application server, where the server is sometimes full at hours that are not the time to do maintenance, with this problem it makes it less convenient to make transactions because the system feels slow, and even transaction failures occur. Seeing the importance of the system for the company, the researcher wants to conduct an analysis and audit of XYZ Bank's E-banking service system

Therefore, IT risk management analysis is needed so that these risks can be avoided or mitigated if they occur. Based on this background, this research will implement IT Risk Management using the ISO 31000 standard which will focus on the risk aspects of the service system[7]. As has also been used in a research journal entitled "Risk Analysis of Microfinance Conversion Based on ISO 31000 PT. Bank BRI Syariah. Tbk Aceh" which both use the ISO 31000 Framework in their research, but the journal is limited to the scope of research in the section organizational finance. so that in this study, researchers want to take another scope, namely the problem of organizational application services.

In the ISO 31000 analysis there are several stages, namely, Communication and Consultation, Establishing the Context, Risk Assessment, Risk Treatment, Monitoring and Review, and Recording and Reporting.[8][9].With the risk research using ISO 31000, this will produce a document containing risk mapping and risk treatment which will later become one of the references in Bank XYZ application services.