CHAPTER I INTRODUCTION

I.1 Background

In running a prosperous government, of course, it is necessary to have good employees or state apparatus, so that the government process can run in a more organized and systematic manner. Furthermore, a country can have a good government quality if they can manage the nature, people, and culture of the country wisely.

In order to implement an open, participatory, innovative, and accountable government, and to improve the quality of public services, an application system is needed. That application is projected to be able to meet all the needs of the personnel management business process and integrate the data with the other related system. This is in line with article 2 of Government Regulation no. 11 of (2017) concerning the Management of Civil Servants, states that "The Civil Service Agency is given the authority to conduct development and implementation of national State Civil Apparatus (ASN) management which consists of the preparation and determination of needs, procurement, ranks and positions, career development, career patterns, promotions, transfers, performance appraisal, remuneration and benefits, rewards, discipline, dismissal, pension and old-age benefits and protection".

The use of adequate and advanced technology is deemed necessary to support a more integrated, systematic and effective personnel management. Where this is reinforced by the existence of government regulations that require the creation of management system information. Based on Law Number 5 of 2014 concerning State Civil Apparatus has mandated the development of ASN Information Systems to ensure the creation of efficiency, effectiveness, and accuracy of decision making in ASN management. This law is created to support good and comprehensively integrated management of ASN management based on ICT.

This integrated system is needed to process data and information on apparatus both at the central and regional levels. This integrated system can also perform interoperability functions to collect information from various existing information systems, therefore this civil service information system is feasible and needs to be

created. This information system will optimized the Big Data and Analytical Engine technology to assist the government in implementing data integration through the Electronic-Based Government System (SPBE).

The information system application is made for the Government, Ministries/Institutions (Central and Regional) as well as ASN (PNS and PPPK) and NON-ASN which includes the development of mobile, implementing and testing the system, providing a warranty period of 1 (one) year, system documentation, and knowledge transfer in the form of knowledge sharing. In this case, this civil service system information system is requested by PT. XYZ which is an agency that is mandated to be able to regulate and manage the information system of ASN, that wants to make an information system called the "Civil Service Information System application".

The problems analysis in the advanced or second Civil Service Information System application project was based on the root problems that had occurred in the chronology of the previous project, or the first project of the Civil Service Information System application by PT. XYZ, as well as the following interviews conducted. Based on the chronology of the Civil Service Information System application by PT. XYZ and several interviews conducted, it was found that most of the project activities experience delays caused by the risks that have not been fully identified that cause the project to be added. As for this information system project, it is known that the root cause that causes the software project to be delayed is the lack of project risk data in the process and completion where this problem can be described as follows:

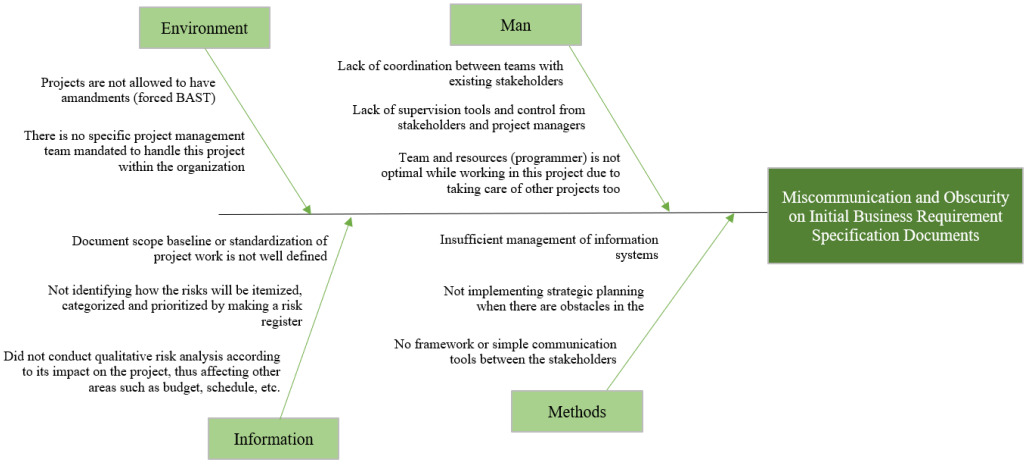

Figure I. 1 Root Cause Diagram

Based on Figure I.1 above, there are several cause factors during the Civil Service Information System application project that can be mapped into 4 aspects, which are man, methods, information, and environment. There are some factors involves regarding why there is a miscommunication and obscurity on initial business requirement specification documents which also causes delays in project work, which are lack of coordination between teams that work with existing stakeholders, document scope baseline or standardization of project work is not well defined, and besides that this project was also forced to be carried out by BAST because this project is a government projects that are difficult to amend. The other aspect like resource or man aspect are lack of supervision tools control from stakeholders and project managers, this project is also divided into two teams. Where the first team worked on the 'Performance' section and the second team worked on the 'Personnel Management' section. The other aspects like method, where there is work to be done outside the SOW, for example the creation of business processes also one of the causes that affecting delays, miscommunication, and obscurity on initial business requirement specification documents on the project.

Civil Service Information System application project is estimated to take 4 (four) calendar months, starting in March 2021 with an estimated completion in July 2021. However, in July 2021 the project feature module is still in the early development stage. This is because in the previous month the focus was on working on business process documents which had not been done by PT XYZ at the beginning. Although administratively BAST has been carried out, internal project amendments are still being implemented to complete the feature module deliverables of the project. Meanwhile, the following is a project work progress as of 27 December 2021.

Table I. 1 Work Progress in December 2021 for The First Project

Source: PT. XYZ

Work Progress as of 27 December 2021 for First Project (web version)		
No	**Module Features**	**% Progress**
1	Performance Management	70%
2	Personnel Management	59.7%
3	Presence Management	50.8%
4	Helpdesk	72%
5	Dashboard	17%

Since in December 2021 the work on the feature module of the application is still not 100% complete, as a result, the project was delayed until January 2022. In conclusion, it takes10 (ten) months' work times and there has been a delay in the Civil Service Information System application project (web version) by PT.XYZ for 6 (six) months. To overcome this problem in sub-chapter I.2 will be discussed alternative solutions to existing problems.

Before we jump to the alternative solution, it is better to know the project canvas that happen on this project first. Project canvas itself is a simple tool that can assist us in leading projects. By knowing the framework which covers the basic principles and fundamentals of projects that can be applied by any individual, team, organization, that could help leaders and organizations through the project life cycle, mostly at the beginning of the project.

The data that is included in this project canvas, was obtained from the results of interviews with the project manager of the Advanced Civil Service Information System application project that can be seen in **ATTACHMENT B.**

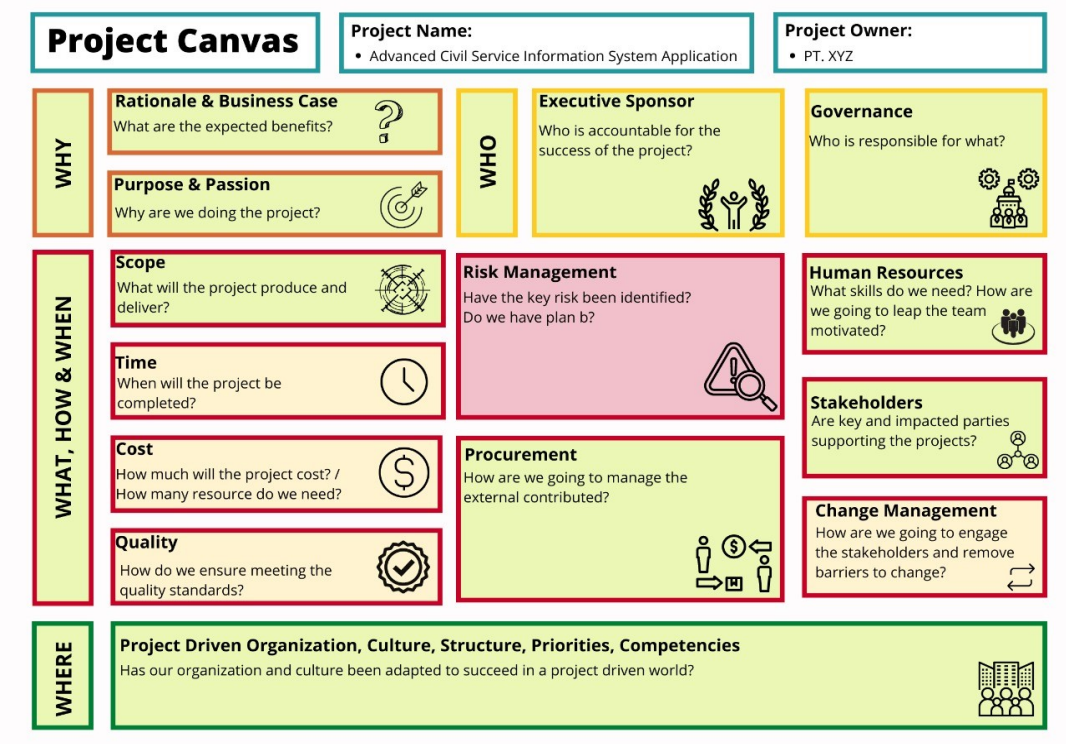

Figure I. 2 Pre-design Identification of Project Canvas in ACSIS App Project

In the results of the interview, it was found that the risk dimensions have not been analysed in this project, so they are marked in red. On the other hand, for the dimensions of time, cost, quality, as well as change management, there has been no detailed and definitive analysis regarding these dimensions, so they are marked with a yellow colour. The rest which is coloured green indicates that the point has been identified in advance by PT.XYZ.

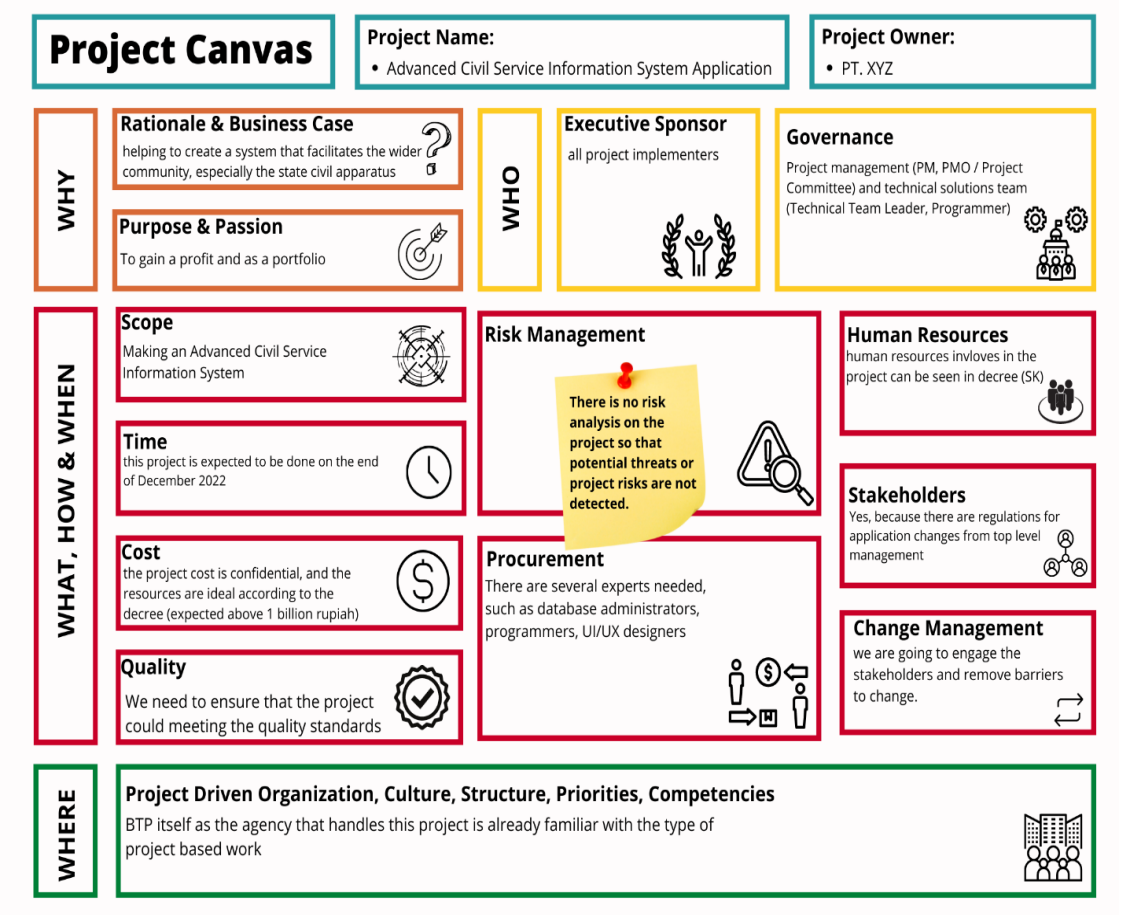

Figure I. 3 Project Canvas of Advanced Civil Service Information System

Based on the results of the project canvas that has been analyzed from its four main domains, namely 'Why', Who, 'What, How & When', and 'Where' domains we know that it is necessary for PT. XYZ to have a risk management analysis on the project. Furthermore, this study will use a probability impact matrix as a tool that will be used to assess the risks that will occur in the Advanced Civil Service Information System project and start by doing risk identification. Next is sub-chapter I.2 that will be discussed a more detail alternative solutions to the existing problems.

I.2 Alternative Solution

The following is an alternative solution to the existing problem:

Table I. 2 Alternative Solution

No	Root of the problem	Potential Solution
1.	Not implementing strategic planning when there are obstacles in the implementation process, and there is no framework or communication tools between the stakeholders	Project canvas gives for users a common communication framework for all bodies involved in the project process
2.	On the first project implementation (web version) there is an amendment due to the absence of a baseline, especially the risk baseline. This has resulted in many workers do not know the risks of each activity and what is the appropriate response if the risk occurs.	Risk register design and risk response for the Advanced Civil Service Information System application
3.	Lack of supervision tools and control from stakeholders and project managers	Dashboard design for Monitoring and Control
4.	Unbalanced team competencies, collaboration and internal team work ethic are still lacking	Designing responsibility assignment matrix
5.	Projects are not allowed to have amendments (terminate contract or closing)	Designing a proposed closing project completion strategy

Based on the results of interviews with project stakeholders, it was concluded that all problems that arise are the result absence of a baseline, especially the risk baseline. This has resulted in many workers do not know the risks of each activity and what is the appropriate response if the risk occurs. In this study, researchers will focus on designing risk registers and risk response using the qualitative analysis for the Advanced Civil Service Information System application the formulation of the problem from the design will be explained in subsection I.3.

I.3 Problem Formulation

From the description above, this research will discuss 3 points, namely:

1. How to design the qualitative risk analysis using risk response in Advanced Civil Service Information System application project at PT.XYZ?
2. How to identify and register risk in Advanced Civil Service Information System application project at PT.XYZ?
3. How to response risk in Advanced Civil Service Information System application project at PT.XYZ?

I.4 Research Objective

The objectives of this final project can be seen below:

1. Designing qualitative risk analysis using risk register in ACSIS application project at PT.XYZ?
2. Designing a risk register to identify risk in ACSIS application project at PT.XYZ.
3. Designing a risk response in response to ACSIS application project at PT.XYZ.

I.5 Research Benefit

The following are the benefits of this final project:

1. Able to learn and apply industrial engineering and project management in terms of designing a qualitative risk assessment on projects.
2. From the initiated project canvas, it can become an initial document for PT. XYZ in designing Civil Service Information System application (Mobile Ver)
3. Identify the project risks of making the Civil Service Information System application project application.
4. It is expected to improve the quality of deliverables as well as the completion time of the follow-up project for the Advanced Civil Service Information System application project.
5. Mitigate and determine project risk priorities for the creation of the Advanced Civil Service Information System application project application.
6. The results of this study can be used as a reference for researchers and references for other students and a lesson learn who will discuss similar project in the future.

I.6 Writing Systematics

The writing systematics used in this research are as follows:

Chapter I **Introduction**

Chapter I contains a systematic description of the background, problem formulation, research objectives, research limitations, research benefits and research systematics.

Chapter II **Literature Review**

Chapter II reviews the results of previous research by discussing the literature review, including a literature review of the methods used for the problem under study, and the reasons for choosing this approach to address the existing problems.

Chapter III **Problem Solving Methodology**

Chapter III contains the content in the form of making a conceptual model that relates the object of research related to the steps taken in researching research. This chapter also discusses systematic problem solving starting from input, process, to writing output.

Chapter IV **Integrated System Design**

Chapter IV contains content in the form of data processing starting from project canvas, risk analysis input, risk data processing, risk registers to risk response which aims to solve the problem formulation.

Chapter V **Analysis of Results and Evaluation**

Implementation and testing contain the content of data analysis that has been processed previously in chapter IV and explains in detail the research objectives that function to solve the problem formulation.

Chapter VI **Conclusions and Suggestions**

This chapter contains contents in the form of suggestions and conclusions on the research carried out and contains contents in the form of solving problem formulations. Then, the authors provide suggestions for research that has been completed.