

CHAPTER I

INTRODUCTION

1.1. Background

Development is being carried out continuously by developing countries for the prosperity of the people in their country. Development carried out to improve welfare includes a variety of supporting facilities and assets in people's lives. Good and planned development can be seen from planned infrastructure development. A building such as hospitals, hotels, schools, and so on has to be constructed to fulfill peoples' needs. Indonesia is a developing country because the government is working on existing development. Not only in big cities, but is development also carried out in various other regions.

The office is a hall (room, building and house) where a job is used to take care (an agency or company); a workplace. The establishment of an office aims to provide communication services and recording of information properly and in a controlled manner. The office has several kinds of functions such as receiving information, recording information, organizing information, providing information, and protecting assets or assets. In this study the office used to be an office building in Jayapura. The function of this office building is to become a media center office that will be used for the upcoming 2020 National Sports

Games. Media center itself is a technology-based or online-based management center that is used to collect, manage, provide, and disseminate information from the central government, provincial government, and district / city government to the public and accommodate public transportation feedback on government policies.

In working on an infrastructure project, the contractors are given the trust to process and allocate the funds provided for the success of building the infrastructure. For large infrastructure development projects, the funds needed will also be large. So they use some form of forecasting method that is accepted to predict results.

This research was conducted to assess the total cost of ownership of facilities by using the Life Cycle Cost (LCC) method. This method is very useful in calculating all costs to obtain, own, and dispose of buildings or systems. Life Cycle Cost is a mathematical method used to form or support decisions and is usually used when considering choices. This is an audited financial rating system for shared exclusive alternatives that can be used to promote the desired and eliminate unwanted in the financial environment. LCC is needed because decisions made at the design stage will have an impact on performance (maintenance costs) at a later stage. The LCC helps evaluate decisions at the design stage, looking at the economic implications. The specific objectives of the LCC include: Evaluating investment options and opportunities effectively; evaluating the project in terms of total (life cycle costs), not the total initial costs;

ensuring effective asset management throughout its life. In this research, the project used is an office, the office building located in Jayapura, Papua, Indonesia. The existence of this research is expected to be an alternative project that meets the same performance requirements, but different with respect to initial costs and operating costs. It can be compared so that one chooses to maximize net savings.

The purpose of the LCC is to manage the process repeated from the planning to the destruction or replacement of assets, to manage the LCC (long-term) of the short-term savings, to ensure the appropriate consistent quality service of the designed building, to improve sustainability and lowers the risk of failure and maximize the potential and advantages of the provision of services, in order to minimize the associated costs throughout the life of the building itself.

Analysis of the LCC of a design process that is important in controlling the cost of initial and future costs in possession of an investment project. Therefore, it is necessary to do an LCC analysis study to determine the cost of any category contained in an office building construction project at the office, and also see how much the total costs incurred by a project development a building ranging from the design phase of the technical life of the building are.

1.2. Statement of the Problem

How to properly calculate the money expended for office buildings at the beginning of the construction, up to 25 years the structure is used with the life cycle cost method. Based on the description above, the Life cycle cost method can

represent an excellent way to manage the costs that can occur when owning and maintaining a structure. This is done so that the building can be operated throughout the predicted time.

1.3. Research Objective

The objective of this study is to identify the proportion of costs and make a 25-year long-term plan using life cycle cost analysis (LCC) at the Office Building in Jayapura, Papua.

1.4. Research Scope

The research object in this final project remain the office building at Jayapura. Life Cycle Cost (LCC) analysis is carried out on building components including (1) initial costs, namely the costs required to construct the office building; (2) operational costs are costs required because of the activities carried out in the building; (3) maintenance and replacement costs, namely the cost of maintaining and replacing components for 25 years of use of the building.