

# Development of Office Building Asset Management's Standard for Public Works Highway in Kabupaten Jember

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**Abstract**— *Government spends a lot of money in infrastructure, including buildings. And it increases by years. Therefore, a research to formulate how to well manage our public building is needed. The method of this research is formulating Standard Building Assets Management which can be rationally implemented in The Office of Public Works Highway in Jember. It should be based on the theory of asset management, the ministerial regulations and best practise guideline of Queensland government building. The results of this study is the cycle of building asset management. These are Planning, Procurement, Administration (Registration and Certification of assets), Management in Use (Assesment, Operation and Maintenance) and Disposal.*

**Keywords**—*Asset Life Cycle, Asset Management, Public/Government Building*

## I. INTRODUCTION

Building is a physical manifestation of a construction work that blends with its domicile, partly or wholly located above and / or in the soil and / or water, which serves as a human being doing business, either for residential or place of residence, religious activities, activities business, social activities, cultural, and special activities. Maintenance of buildings is done as an activity to maintain the reliability of the building along with the infrastructures and ingredients so that the building is always worthy function.

According to the regulation of The Jember regency, the main task of Office of Public Works Highways Jember is to manage the Jember road network. For this duty, The office of Public Works Highways Jember has several office buildings consisting of 1 (one) complex of the main building, 1 (one) complex of building at equipment and supplies and 14 (fourteen) buildings of Technical Implementation Unit which are widespreaded in the various areas that have to be managed properly.

In the theory of assets management, the concept of life cycle asset management consists of four phases, namely: the planning, acquisition, operation and maintenance, revitalization / disposal [4].

The existing regulations on public assets management, The government regulation [1] and regulation of ministry of home affairs [2] deal assets in general. Special standard for office building is not yet specifically define.

Strategic Asset Management Framework of

Queensland, Australia as a best practise to have broader understanding in implementation of building asset management splits into four phases [3]. There are Planning, Investment/Procurement, Management in use and Disposal. Therefore, office building management's standard for Public Works Highway in Jember is needed.

## II. METHOD

The method of this research is to formulate a standard building asset management which can be rationally implemented in The Office of Public Works Highway in Jember by comparing the theory of asset management with the ministerial regulations, local regulations and the Queensland Asset Management Framework to formulate a standart of management public building managed by Jember local government.

## III. RESULTS AND DISCUSSION

### A. Theory of Assets Management

The concept of life cycle asset management implies a hole of life holistic process. According to The Essence of Asset Managemnet – A Guide, The life cycle of assets consist of four phases. There are Planning, Acquisition, Operation and Maintenance and Revitalisation/ Disposal.

Planning sometimes called as Asset Planning and Budgeting Phase. In this phase an entity shall develop is public service delivery strategy based on community needs.

In Acquisition Phase, and organisation shall proceed to acquire asset following certain sound practises.

The third phase is Operation and Maintenance. In this phase, organisation has to ensure that it is in full control of the assets, in respect to reliable knowledge about the assets, including information about the assets working conditions, full records of full proper maintenance and other up to date details.

And the last phase is Revitalisation/ Disposal Phase. When the lifecycle of asset comes to its end., the asset maybe renewed to start a new lifecycle or be disposed of. However, as assets are public investment , decision must be made trough proper examination and sound economic appraisal.

All of the phases can be seen in Figure 2 below.

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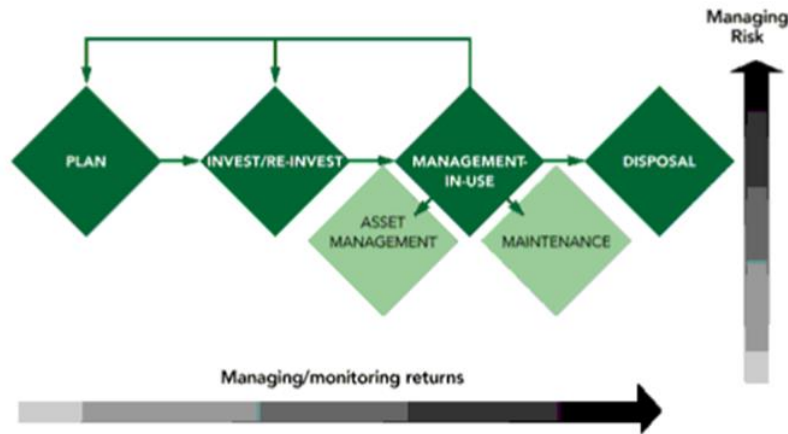


Figure 1. The Journey Of Assets

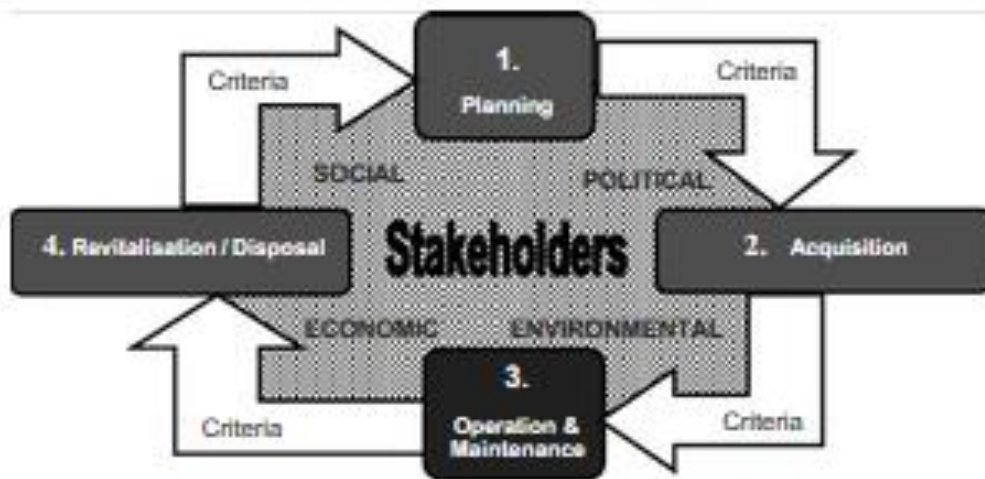


Figure 2. Life Cycle Asset Management Process

### B. Asset Management in Other Countries

Building assets have a life-cycle – they are planned, created, used, managed and disposed of when no longer required. According to The Strategic Asset Management Framework of Queensland, Australia as a best practise to have broader understanding in implementation of building asset management splits into four phases. There are Planning, Investment/Procurement, Management in use and Disposal.

Asset planning is a cyclical process which should provide input into the annual State Budget process and other strategic plans required under legislation and Government policy.

Second phase, Capital investment/procurement planning is the foundation for the delivery of government building projects. It incorporates defining capital investment projects, preparing budget documentation and formulating investment/acquisition plans. Project delivery involves the development of a project brief, selecting the procurement strategy and the consultants/contractors, design and construction, and

handover.

Third phase, Management of building maintenance is a fundamental part of strategic asset management. Building assets must be properly maintained in order to support service delivery needs. The contribution of maintenance to overall building performance is considerable. Information from maintenance assessments of existing buildings is useful to asset planning and design and construction processes for any subsequent capital works investments.

The last phase is a Disposal phase. Effective asset disposal planning is critical to the management of a department's building asset base. Disposing of surplus buildings, in accordance with an asset disposal plan, ensures that they do not become a maintenance and/or financial burden. It may also free up funds required for capital works, influence decision-making and support the forward estimates and budget processes by enabling reinvestment of disposal revenue.

All of the phases can be seen in Figure 3 below

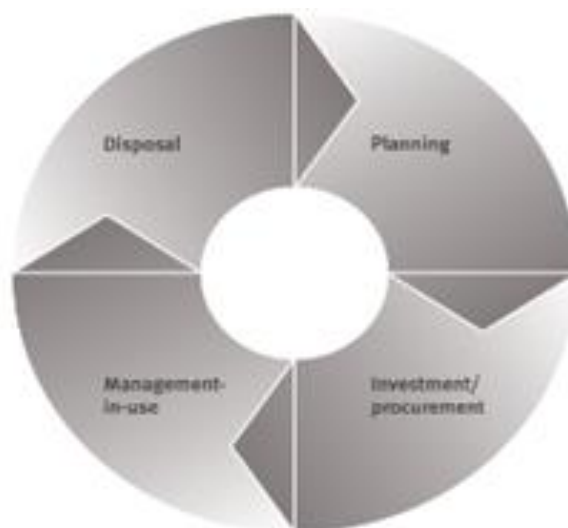


Figure 3. Life Cycle of Assets

### C. Regulations of Public Assets Management

The existing regulations on public assets management, The government regulation and regulation of ministry of home affairs deal assets in general. Special standard for office building is not yet specifically define.

#### 1) The Government Regulation No.27/2014

The Government Regulation Number 27/2014 governing the management of state property/ assets. This regulation splits the management of state assets into several phases, namely Planning, Procurement, Using, Administration, Utilization, Protection and Maintenance, Assesment, Disposal, Alienation, Supervision and Control, and Removal.

The planning stage directed to planning of needed and budgeting. Planning of needs include procurement planning, maintenance, Utilization, Transfer, and Removal of asset State / Local. Requirements Planning is one of the bases for the Ministry /Institution / work unit area in the budget proposal for the provision of new requirements (new initiative), basic numbers (baseline) and the preparation of work plans and budgets.

Procurement / acquisition stage implemented based on the principle of efficient, effective, transparent and open, competitive, fair, and accountable. In this stage, an organisation shall proceed to acquire assets, including to construction of assets.

Stage of using relates with the asset handover, asset reporting and asset status determination.

Phase of administration associated with asset inventory. Asset's inventory is conducted every 5 years.

Next phase is utilization. In this phase the use of set forms as: leasing, cooperation utilization, build up to the transfer and handover to build up.

Protection and maintenance phase is about how to protect the state assets including safeguards to administrative, physical safeguards and legal safeguards. Asset certification is in this phase. This phase also regulates how to maintan state assets in order to achieve optimum asset life.

Assessment phase is carried out to draw up the financial balance, utilization and alienation. Assessment of state property carried out by the appraiser assigned by the

government or public appraiser predetermined. Assessment conducted to recalculate the value of state assets, whether favorable or not as the basis for the removal or destruction of assets.

Disposal conducted to dispose the asset from the list of users or a list of local asset. Disposal of assets occurred due to diversion of usage status, alienation, removal.

Asset property of state / regional which unneeded can transferable by sale, exchange, grant or equity participation in central government / local government. So, this phase called Alienation Phase.

Next phase is Supervision and Control. This phase is to control and to observed the existing assets to match its function and its existence.

And the last phase is Removal. Assets property of the state that can not be used, exploited or transferred can be destroyed or removed. Removal implemented by storing up in landfills, burning, drowning or destroying according to the rules.

#### 2) The Regulation of Ministry of Home Affairs No.17/2007

Regulation of ministry of home affairs is a derivative of government regulations No.27/2014 about management of state property, but the regulation of ministry of home affairs is set on management of local property / local government property.

Regulation of Ministry of Home Affairs splits assets management phase into 13 (thirteen) phases. There are several phases similar to the government regulations above. That phases are Planning, Procurement, Using, Administration, Utilization, Protection and Maintenance, Assesment, Disposal and Supervision & Control. whereas the different phases are the phase of reception, storage, distribution, financing phase and compensation phase. Definition of each phase is almost the same as described earlier in Government Regulation No. 27/2014.

Reception, storage and distribution related to results of procurement that received by the Depositary of assets. Receipt of goods from a third party based on the Letter of Agreement. Receipt of goods can be donations, endowments, grants and delivery of community.

Funding related to the budget. Whether it comes from

the regional budget or other budget. Compensation relating to claim or administrative and criminal sanctions that happen in the event of irregularities in the asset

management.

The comparison of asset phases from the literatures shown on table 1 below.

TABLE 1.  
COMPARISON OF ASSET PHASES

| The Essence of Asset Management (A) | SAMF of Queensland (B)  | Government Regulation No.27/2014 (C) | Regulation of ministry of home affairs No.17/2007 (D) |
|-------------------------------------|-------------------------|--------------------------------------|-------------------------------------------------------|
| Planning                            | Planning                | Planning                             | Planning                                              |
| Acquisition                         | Investment/ Procurement | Procurement                          | Procurement                                           |
|                                     |                         | Using                                | Reception, Storage, Distribution                      |
|                                     |                         | Administration                       | Using                                                 |
|                                     |                         | Utilization                          | Administration                                        |
| Operation & Maintenance             | Management in Use       | Protection & Maintenance             | Utilization                                           |
|                                     |                         | Assessment                           | Protection & maintenance                              |
|                                     |                         | Disposal                             | Assessment                                            |
|                                     |                         | Alienation                           | Disposal                                              |
| Revitalisation/ Disposal            | Disposal                | Supervision & Control                | Alienation                                            |
|                                     |                         | Removal                              | Supervision & Control                                 |
|                                     |                         | Removal                              | Financing                                             |
|                                     |                         | Removal                              | Compensation                                          |

The table is a comparison table of asset management stages on some literatures. That literatures are the theory of asset management from The Essence of Asset Management as literature A, literature B is the asset management guidelines in the state of Queensland, Australia, literature C in the form of Government Regulation No.27 / 2014 on the management of state property, and the last literature D is the Regulation of ministry of home affairs No. 17/2007 on asset management of local government.

Each phase are evaluated whether it is appropriate for office building and for management capacity on office of public works highway's.

The planning is very important phase. Planning is not only used in constructing new buildings, but also used to plan building's operational and maintenance. Planning is very important because it relates to the planning of needs or planning next stages. In the four literatures used, there are the planning phase, therefore, this phase will be retained as one of phase in buildings asset management.

The second phase is investment and procurement. Since the building is a public building. This phase only consist of procurement stage. Choosing the right partner in procurement will affect the quality of building. In the literatures B, C, D, there are investments and procurement phase. While the literature A defines as an Acquisition phase. In principle this phase is almost the same and relates with to the procurement of assets. This phase contains the design, the selection of partners and construction. Therefore, this stage is maintained as the second phase.

Phase of reception, storage and distribution are more suitable for mobile objects, so for the assets building, this stage is not required.

In the literature C and D, there is a phase of Using and phase of Administration. This phase is not much different and yet similar, containing the asset inventory and asset certification. So the two phases are simplified to the administrative phase. The fourth phase is administration phase. This phase consist of assets registration and certification. This stage is necessary to complete asset information system that includes all the information as well as building physical activity records, maintenance activities history that will make it easier to determine what decisions will be taken in the next management in use.

The next phase is Management in Use. The fourth phase is obtained from the literature. In literature A simply classify into operation and maintenance phase. literature B also classifies as the management phase in use, whereas the literature C and D split into several phases, namely utilization, protection and maintenance and assessment. That phase essentially existed as "using" phase of the buildings asset. Therefore, the phase of the phases can be categorized in one phase, Management in Use. This stage is very important since it consist of Maintenance and Operation of the building and assessment to assess the value of assets on the financial balance.

The last phase is Disposal phase. This phase is very rare in public building assets. Disposal can means disposing the building to be rebuilt. This phase also includes how the alienation, because some buildings used office of public works highway in Jember are borrowed from other

institutions. This phase does not include building's selling and leasing. Supervision and Control is required to determine whether the buildings asset can still be used, or needs to be revitalized. Asset removal of buildings is very rare. Removal usually occurs to mobile asset. financing phase also can not be applied to buildings asset, because this stage is used to finance the destruction of assets, while the assets of the building at office of the Public Works Highways, Jember there has never been destroyed. Phase of Compensation can not be applied because there had been no use of assets other than buildings for their own

use. There are not building leased or loaned, so at this late stage can be simplified into a single phases namely disposal phase.

From these comparisons, this research obtains the five phases that can be applied in buildings asset management. They are Planning, Procurement, Administration, Management in Use and the last, Disposal phase.

The result of comparison process to get the phase that reasonably can be implied to building assets can be shown at Table 2 below.

TABLE 2.  
 THE PROCESS TO DETERMINING THE PHASE OF BUILDING ASSETS

| The Essence of Asset Management (A) | SAMF of Queensland (B)    | Government Regulation No.27/2014 (C) | Regulation of ministry of home affairs No.17/2007 (D)  | Stage / Phase (Result)   |
|-------------------------------------|---------------------------|--------------------------------------|--------------------------------------------------------|--------------------------|
| Planning ✓                          | Planning ✓                | Planning ✓                           | Planning ✓                                             | <b>Planning</b>          |
| Acquisition ✓                       | Investment/ Procurement ✓ | Procurement ✓                        | Procurement ✓                                          | <b>Procurement</b>       |
|                                     |                           | Using ✓                              | <del>Reception, Storage, Distribution</del><br>Using ✓ | <b>Administration</b>    |
|                                     |                           | Administration ✓                     | Administration ✓                                       |                          |
| Operation & Maintenance             | Management in Use         | Utilization                          | Utilization                                            | <b>Management in Use</b> |
|                                     |                           | Protection & Maintenance             | Protection & maintenance                               |                          |
|                                     |                           | Assessment                           | Assessment                                             |                          |
| Revitalisation/ Disposal ✓          | Disposal ✓                | Disposal ✓                           | Disposal                                               | <b>Disposal</b>          |
|                                     |                           | Alienation ✓                         | Alienation ✓                                           |                          |
|                                     |                           | Supervision & Control ✓              | Supervision & Control ✓                                |                          |
|                                     |                           | <del>Removal</del>                   | <del>Financing</del><br><del>Compensation</del>        |                          |
|                                     |                           |                                      |                                                        |                          |

From the result from table 2 above, we can get the stages/ phases are planning, procurement, administration, management in use and disposal.

IV. CONCLUSION

The results of this study is the cycle of building asset management that can be implemented rationally in The Office of Public Works Highway in Jember based on the views of researchers are Planning stage; Procurement stage; Administration stage that consist of Registration and Certification of assets; Management in Use stage that consist of Assesment, Operation and Maintenance and Disposal stage.

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