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THE EVALUATION OF FIXED ASSET MANAGEMENT THROUGH TOTAL LIFE-CYCLE ASSET MANAGEMENT (TLAM) APPROACH

Yudi Sihombing

Master of Accounting Program, Faculty of Economics and Business, Universitas Indonesia
yudisihombing47@gmail.com

Desi Adhariani, Ph.D.

Master of Accounting Program, Faculty of Economics and Business, Universitas Indonesia
desiadharis@gmail.com

FIXED ASSET MANAGEMENT THROUGH THE TOTAL LIFE-CYCLE ASSET MANAGEMENT (TLAM) FRAMEWORK

*Yudi Sihombing**, *Desi Adhariani*

Master of Accounting Program, Faculty of Economics and Business, Universitas
Indonesia

ABSTRACT

The purpose of this case study is to evaluate the fixed asset management mechanisms. This research uses a qualitative approach with a study case method in PT ABC that operates in an energy-providing service area. The data collection is done through document evaluations and interviews. The research instrument used in this research is the Total Life-Cycle Asset Management Theory (TLAM). The research results show that there are still business processes that are not yet effectively executed. It is suggested to improve the understanding of fixed asset management, to optimize digitalization in promoting the effectiveness and efficiency of fixed asset management in PT ABC, as well as support, commitment, and consistency of Work Plan Program planning' alignment for additional fixed assets, with the company's vision, strategies, and fundamental values.

Keywords: Fixed Asset(s), Fixed Asset Management, Total Life-Cycle Asset
Management

* Corresponding Author's Email: widya.febriani@ui.ac.id

1. INTRODUCTION

Fixed asset is one of the integral components in the execution of a business' operations in almost all business organizations, particularly the ones that work in capital-dominated businesses. PT ABC is a state-owned corporation that operates activities by focusing on energy distribution and customer services around Jakarta. Based on its financial statement in 2021, PT ABC had a total fixed asset of IDR 25.58 trillion, as shown in Table 1 below:

Table 1. PT ABC's Statement of Financial Position for the Year of 2020 – 2021

DESCRIPTION	Dec 31, 2020 (in IDR trillion)	Dec 31, 2021 (in IDR trillion)
ASSETS	30.55	30.87
Fixed Assets (net)	25.59	25.58
Investment Property	0.004	0.004
Constructions In Progress (CIP)	1.54	1.60
Other Assets	0.055	0.051
Liquid Assets	3.35	3.56

Source : PT ABC's Financial Statements, self-processed

With the total fixed assets the domineering element in the company's assets, in general, PT ABC needs to manage and control its owned assets as the responsibilities to the government State Budget's fund allocation entrusted to the company. The complexity of fixed assets owned by PT ABC is one of the reasons for managing fixed assets, especially in an effort to save maintenance costs besides to increase reliability. Hence, the company needs sustainable fixed asset management strategies to create reliable energy supplies, serve the best for the government and customers, and achieve the optimal assets' economic ages for efficiency purpose. In line with such statements, Campbell *et al.* (2011) states that the asset performance's balances and risks and costs are some of the ways to achieve an optimal efficiency solution, for example, decreasing the demands of changes in spare parts.

According to Wills (2009), problems with conditions require attention on the efficiency of public assets with usage that is not yet optimal in terms of physical and economical aspects. These problems include government properties, inadequate maintenance, or fixing assets, and asset-related decision-making processes that still neglect the opportunity costs. The implication is that several issues can potentially arise regarding fixed asset management

in PT ABC. There are several possible issues, such as the ownership of the asset that does not match due to organizational changes, as well as assets that are new or still in the guarantee period. However, the materials have been changed, and the ownership of the asset's existence does not align due to relocation without adequate administration procedures.

PT ABC encounters several issues related to management with the significance and complexity of its fixed assets, as follows:

1. The balance of fixed assets, which is reported in the company's financial statements, may not match the results of the physical inventory in the field. This is possible, for instance, when fixed assets have been relocated or dismantled, but no adjustment was made to the master data and accounting record system.
2. There are assets in a severely damaged condition yet to be submitted for the process of fixed assets disposal. This is possible, for instance, due to the moratorium in 2018, which was later lifted in 2019, preventing the disposal of fixed assets within one year.
3. Changes in organizational structure, such as in 2016, resulted in the existence of fixed assets that do not match their ownership.
4. Accumulation of damaged materials and Non-Operating Fixed Assets (ATTB) in the warehouse which ultimately reduces the function of the warehouse. Routine maintenance work is carried out, but if it is not followed by a consistent of ATTB removal process, it is possible for material and ATTB to accumulate in the warehouse.
5. There may be fixed assets whose whereabouts are unclear due to the transfer of assets without adequate administrative procedures.

In addition to the five issues mentioned above, another issue that needs further examination is the incompatibility of asset's quantity between SAP ERP system (accounting records) and Enterprise Asset Management (EAM). Based on the PT ABC Distribution Network Asset Data Structure Book (2019), EAM which refers to the Public Available Specification (PAS)-55 standard should present information on asset performance in a fair and sustainable manner. However, the processes that occur in accounting distributions are very likely to produce different information outputs. Through this research, an evaluation by using the Total Life-Cycle Asset Management (TLAM) framework for the implementation of fixed asset management is conducted.

The current business process has several weaknesses, such as not achieving targets or frequently resulting problems in other processes that need to be anticipate and improve immediately. Thus, it becomes extremely crucial for companies to pay attention to their fixed asset management strategies to provide accurate and high-quality information. The complexity of fixed assets owned by PT ABC certainly needs extra attention in terms of fixed asset management. Therefore, this topic becomes crucial to be a research object.

Meta (2013) argues that optimizing fixed asset accounting in the process of planning and budgeting fixed assets, will require activities that are logistically and culturally accepted.

This logical activity starts from the understanding of directors and executives in the accounting area that accounting information can be used in managing asset planning/strategy and budgeting, maintenance and use of fixed assets, and even monitoring, storage and control of fixed assets, including decisions to remove assets. Suryanianra (2016) agreed with the research conducted by Meta (2013), saying that to maximize the role of accounting information system, it requires the support of laws and regulations related to potential problems that may arise or minimize risks in the management of fixed assets. Supporting this argument, Mahardika (2017) adds that in order to minimalize such risks, there is a requirement for additional controlling activities because the existing controlling activities are considered ineffective.

This study aims to evaluate the implementation of Standard Operating Procedures (SOP)/Standards on Accounting for fixed assets and applicable regulations in managing fixed assets in PT ABC. The result shows that in the process of managing fixed assets at PT ABC, there are still obstacles that require attention, especially in terms of process effectiveness and efficiency. Furthermore, the activities of fixed asset management require an integrated accounting information system for reporting and preparation of SOPs to ensure proper evaluation results.

2. LITERATURE REVIEW

2.1. FIXED ASSET MANAGEMENT

According to Hastings (2015), a management asset is the meeting point of technical and business goals. A manager of assets is responsible for bringing together technical and commercial expertise to satisfy business needs related to overall assets effectively and efficiently. It involves a number of specific professional activity areas in terms of asset valuations, asset acquisitions, and logistic support during the assets' life cycle.

ISO 55000 (ISO, 2014) defined asset management as the coordination of activities within a company to realize the optimization of value. It was further described as a series of activities involving the identification of assets and funding needs, acquisition, provision of logistical support and maintenance, as well as disposal and renewal. In 2008, the Royal Institute of Chartered Surveyors (RICS) designed asset management manuals for public sectors that specified land and building. This manual includes two definitions, and the first is related to what is intended for assets' bases.

In addition, Jones and White (2008, p.ix) defined that an asset base is the total land and building owned or occupied by an organization. The second definition is related to asset management which is defined in the same RICS manual as an activity that ensures an organization's land and building are optimally structured for the company's benefit. These are achieved by aligning the asset base with the company's goals and targets. Moreover, to get to the asset management optimization, business acumen is required to the point of

comprehensive understanding in terms. The whole process indicates the entire steps in the Total Life-Cycle Asset Management (TLAM) framework.

2.2. TOTAL LIFE-CYCLE ASSET MANAGEMENT (TLAM)

In this study, the implementation of asset management evaluated by using the Total Life-Cycle Asset Management (TLAM) framework proposed by Campbell et al. (2011). Campbell et al. (2011) explain that there is a classification of fixed asset management cycles called Total Life-Cycle Asset Management (TLAM). The inter-cycle linkage causes each evaluation carried out to be a single unit that cannot be separated to obtain optimal benefits. New South Wales Government Asset Management Committee (GAMC) (2003) states that TLAM is a strategic management of fixed assets to provide the best company support in service delivery and achieving optimal performance.

The stages in the Total Life-Cycle Asset Management (TLAM) systematics are as follows:

a. Asset Strategy

The asset management strategy framework is useful for ensuring quality information for management in making decisions to invest and manage assets. This activity will help to achieve strategic goals, especially those related to the fixed assets of an organization. Asset management decisions must be based on a proper evaluation that considers all costs and benefits over the useful life of the asset and combines them with explicit analysis and determination of an acceptable level of risk. Good management strategies, both long-term and short-term management will provide accurate and reliable information on the company's needs for fixed assets (fixed assets). In addition, a strong and accurate strategy will have an impact on the risk of loss that can be minimized as well as an increase on the profit side.

b. Plan

The planning stage contains how the company clearly defines asset targets, standards, policies, and procedures that focus on asset management efforts and strategies. Companies may wish to develop policies and standards and undertake asset management portfolio planning. This allows them to plan an entire portfolio of assets. Through this stage, it is expected to be able to provide information regarding the level of company needs for fixed assets that will be managed, both long-term and short-term management. In addition, strong and accurate planning will increase company profits and reduce the risk of future losses. At this stage, PT ABC has a strategy for managing fixed assets regulated in The Ministry of State-Owned Enterprises Decree Number: KEP-101/MBU/2002 which is the basis for preparing a work plan and budget at PT ABC.

c. Evaluate and Design

At this stage, an asset evaluation process is carried out if it is obtained through a purchase, or designing an asset to be built. Activities in this stage include developing a

- capital assessment model, which provides assistance in making purchasing decisions. Companies can use the help of facility planning supported by computer technology that can be used to reduce the complexity of managing buildings, storage, and factories.
- d. **Create and Procure**
This stage involves activities to create, build, procure the planned assets. This process is related to the operational pattern of an organization, starting from financing to managing its assets. This stage is considered to have the most visible impact because there is a disbursement of funds for asset management. In its implementation, this stage also includes project capital management, optimization of automated and computerized material resources (e-MRO), as well as new project procurement and delivery strategies. The implementation of this stage at PT ABC is regulated in the Director Regulation 022.P.DIR.2020.
 - e. **Operate**
Operating assets according to the strategy that has been set in stage (1) using standards, policies, procedures, and feedback to Total Asset Life-Cycle Management (TLAM). The operation of fixed assets is the stage that has the most influence on the performance of a company because it will generate value that plays a role in generating profits. At this stage, technology support is needed to help provide an overview of the realization of the distribution and performance of assets to be used as a tool for planning new asset acquisitions.
 - f. **Maintain**
In order to support the strategy and achievement of targets in assets, companies need to carry out maintenance for the purpose of maintaining asset performance. Maintaining assets requires the support of adequate policies and procedures so that they become optimal in an effort to achieve Total Life-Cycle Asset Management (TLAM). Maintenance costs and resources can change the total cost of ownership from maintenance costs to asset discontinuation/asset downtime. To maximize maintenance, companies can use EAM which allows companies to track, perform maintenance and integrated monitoring of all their assets.
 - g. **Modify**
Fixed assets need to be modified if necessary. Before that, the company needs to ensure the suitability of the asset modifications with the regulated strategies, policies and procedures. Usually fixed assets that require modification/update are assets related to technology which often change very quickly. This modification stage is an important element in optimizing the use of assets so that these assets can be used for a longer time.
 - h. **Dispose**
This stage includes the stages of disposal, termination, or liquidation of assets following existing strategies, policies and procedures. The disposal can have significant financial implications beyond reimbursement.

3. RESEARCH METHODS

This research is a qualitative-based research on the study case with descriptive analysis, which aims at evaluating the conformity of fixed asset management in PT ABC based on the Total Asset Life-Cycle Management (TLAM) frameworks. This research thoroughly analyzes the data related to fixed asset management as well as the applicable Standard Operating Procedures (SOP) and regulations. The stages used are as follows:

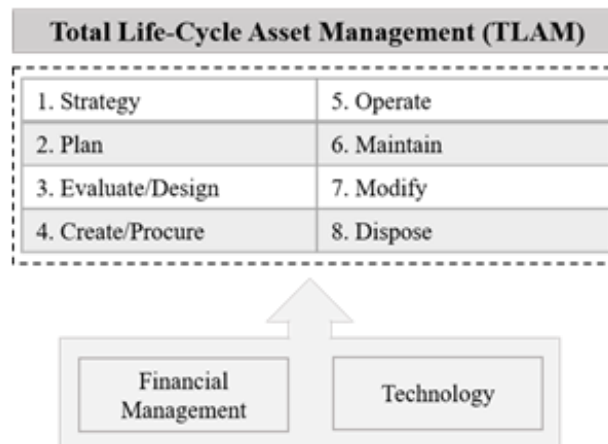


Figure 2.1. The Total Life-Cycle Asset Management (TLAM) Mechanisms
Source: Campbell *et al.* (2011), self-processed

Every step, starting from the asset strategy steps, which are about the asset identification needed in the company, the funding needs, starting the creation/construction process, or through procurements, are then continued until the asset maintenance phases, asset removals or modification process. All steps in the Total Life-cycle Asset Management (TLAM) framework are related to the implementation of applicable Standard Operational Procedure (SOP) and regulations in the organization's environment, such as the Book of the Distribution Network Asset Data Structure of PT ABC (2019); the Accounting Policy of PT ABC (2017), and conducting detailed evaluations on the assets' actual conditions in SAP (Financial Statement) and other related reports.

The data collection methods are executed through document evaluations and interviews. The interviews were semi-structured interviews conducted online and offline. The interviews focus on efforts to dig up information about business processes in PT ABC, especially in fields other than accounting related to fixed asset management. The resource persons in this study were Assistant Manager of Distribution Asset Management, Construction Planning Manager, Accounting Manager, and Procurement Officer. The role of each field interviewed included the role of finance in terms of budget planning, identification of asset expenditure transactions, to the process of writing off fixed assets. The

document evaluation methods were done through the observation mechanisms on the procurement and the material warehouses administration processes in PT ABC's environments up to the procedures of fixed asset removals. The data were analyzed according to this case study's purposes to obtain in depth information on the efforts to improve PT ABC's fixed asset management.

The discussion scope in this research is limited to the reviews that discuss accounting in fixed asset management on the researched objects. Fixed assets mean the land, buildings, distribution networks, distribution sub-stations, other distribution equipment, general equipment, telecommunications, vehicles, and spare parts materials. The research object is focused on one of PT ABC's units, which is the unit located in DKI Jakarta. Through this research, it is expected to understand the constraints in fixed asset management and to provide constructive recommendations.

4. ORGANIZATION PROFILE

PT ABC is a company that concentrates on business processes and customer service in the energy sector, which was founded in the 80s. From the beginning of its establishment until 2015, PT ABC has had business coverage in Jakarta and Tangerang. Then in 2015 a new unit was formed located in Tangerang, so that the city of Tangerang separated itself from the working area of DKI Jakarta. As a result of changes in the company's internal environment, there are also changes in organizational structure, customer and revenue growth targets, changes in company performance targets and network reliability levels. The working area of PT ABC is currently divided into 17 business units. PT ABC is located in DKI Jakarta.

PT ABC's customer growth continues to increase with an average increase of 9% per year. The increase in the number of customers and the increase in energy consumption have encouraged PT ABC to continue to build distribution networks in terms of numbers, area coverage and higher utilization rates. Increasing the quantity and utilization of distribution network assets requires good and proper asset management so that the beneficiaries of the distribution assets can be utilized optimally with efficient performance and cost.

5. RESULTS AND DISCUSSION

1. Fixed Asset Planning and Strategies

Fixed asset planning is the most crucial step in executing its management. The implementation in PT ABC begins with asset planning, and strategic steps are carried out simultaneously in the Planning Department. Then, the making of the contract/work order will be executed by the Procurement Officer Department, while the Construction Division will carry out the process for the asset distribution.

The Ministry of State-Owned Enterprises Decree Number: KEP-101/MBU/2002 on Work Plan Formulation and State-Owned Enterprises' Budgets has regulated the planning of State-owned product needs until the fixed asset removal steps. Specifically, the fixed asset management mechanisms, particularly on the advice of budgeting procurement in PT ABC's environment, are regulated inside the Director Regulation Number 0036.P/DIR/2016 on the Budget Planning and Controlling in PT ABC's environments. This regulation mentions two types of budgets, namely Investment and Operational.

After the budget planning processes are executed, the procedures on the product procurement planning and investment work services will continue. Based on the Director Regulation 022.P.DIR.2020, it is defined that procurement planning is the process of organizing the product/service procurement needs based on PT ABC's Product/Service Procurement portfolio, which consists of the Routine Needs, Leverage Needs, Critical/Bottleneck Needs and the Strategy Needs. It considers the estimated quality, quantity, time, place, socioeconomic goals, and costs, based on the Business Plan and/or the approved Company Work and Budgeting Plans. It also considers the consolidation potential in the corporation/main unit levels. The procurement planning step on PT ABC has been conducted on the needs analysis based on the notes in the Company's Work and Budgeting Plans or the Electric Power Procurement Effort Plans. It makes adjustments to the work's execution times and the availability of the budgets. This things are in line with the procurement targets that the company expects to achieve, which are the right qualities and quantities, locations, times, socio-economic goals, and costs.

According to the TLAM framework, the planning step is crucial because it significantly affects the asset performance qualities. Meanwhile, PT ABC applies the step-by-step that aligns with the procurement targets and the value for money concept with a long-term orientation for the company. This indicates that by applying the value-for-money concept, the procurement planning mechanism has been based on optimal customer service strategies. However, the constraint that the company frequently faces is the difference in understanding the concept of what identifications actually constitutes an asset. As discussed in the previous chapter, there are 2 (two) types of budget in PT ABC's environment: the operational budget and the investment budget. If the whole activity is basically all about building/purchasing new installations, then the activities use the Investment Budget part. But in practice often, the uses of these two budgets do not align with the purposes.

When it comes to managing fixed assets, related users, including the Accounting department, often encounter 2 (two) main problems, which are about what roles each party play. Second, how do companies execute a good asset management planning process. One of the challenges for PT ABC is how to determine the impacts of each process on the final processes in an asset, which creates optimal profits. Therefore, it is necessary to have a proper understanding of the recognition of fixed assets according to the accounting standards (PSAK 16).

2. Fixed Asset Procurement or Acquisition

The product and service procurement is a part of the asset management process after the budget planning processes are approved. The Director Regulation 022.P.DIR.2020 defines the product and service procurement process as the product and service procurement activities that involve the product/service procurement initiation (identification of needs and budgeting), product/service procurement planning, product/service procurement's execution processes, the signing of Agreements/Contracts, the executions of Agreements/Contracts, and the handing parts of the execution results of the Agreements/Contracts.

The interviews conducted with PT ABC's Procurement Executor Officer show that the price evaluation step has an adequate influence on fixed asset management. There are 2 (two) types of price evaluation: the lowest price and the economic life cost system. The Economic Life Cost System concept evaluation provides the potential for better guarantees in optimizing the efficiency of asset maintenance costs. This is because the frequency of troubles on installations/machines and the frequency of material replacements can be minimized. After all, the company has focused on value for money, not just on the Low - Cost strategy. These things will impact the achievement of Cost of Provision (BPP) targets, particularly the maintenance cost part (Budgeting Post 53), which will directly affect the increase of revenue for optimal contribution from fixed asset performance.

Compared with the Total Life-Cycle Asset Management (TLAM) framework, the price evaluation conducted by PT ABC does not only focus on the low cost strategy but also the value for money that focuses on the assets' purposes on long-term bases. The alignments conducted by PT ABC have been relevant in terms of the company's goals as the organization that provides optimal services for the customers and the asset procurement mechanism directly related to the strategic plans and the impacts on the business' sustainability.

The point that requires attention in the fixed asset acquisition lies in the fixed asset construction progress phases themselves, especially the Construction In Progress (CIP) balance. The data obtained from PT ABC's 2021 Financial Statement showed that the Construction In Progress (CIP) balance is IDR 1.6 trillion. The author found that 64% of the total balance is the Construction In Progresses (CIP) with the already-finished construction progresses but not yet settled to the fixed assets.

The Construction In Progress (CIP) that becomes the ongoing project in the next years has an average proportion of more than 50% compared to the total CIP balance for that year. It means that many investment works become multi-year investments when they actually should be short-term (requires more than one year to finish). The CIP that does not seem to end according to the execution targets will impact other sides, regardless of the constraints. The impacts of the unending physical labor on the field will impact several things below:

- a. The unattained budget absorption because the payment is done /made by the percentage of completed physical labor.
- b. The revenue acquisition target becomes delayed due to the on-field physical progress.
- c. The addition of overhead costs, which are the general borrowing costs

In reality, material reconciliations that mentioned before become the constraints for the finance department to settle CIP to fixed assets. Other than that, following things that also create constraints that significantly affect the CIP completion and require mandatory attention is: the issuance of the Commissioning Certificate, which constrains other Accountability Reports. Therefore, the recordings on fixed assets are completed based on the user's Accountability Report. As a result, the administration disciplines from the planning process to when the project is reported will greatly affect the quality of recording fixed assets in the Finance Department.

3. The Operations of Fixed Assets

The usage and utilization of fixed assets in PT ABC's environment are based on the 2019 Edition of the Book of the Distribution Network Asset Data Structure. The operations specifically for fixed assets in PT ABC's networks are done by the Distribution Department, while the fixed assets, like buildings, land equipment and general equipment, are done by the General and Communication Department. These recordings on distribution network system assets are grouped based on the Single Line Diagram and were given individual asset codes for every asset. Hence, the asset identity codes will always start with the group's codes.

There are frequent misunderstandings between the asset classes and asset classes in realizing the recognition of fixed assets. The definition built on both terms is limited to the contexts in the Asset Data Structure Standards of PT ABC. The Asset Class are the primary assets related to the groupings in the Equipment Cataloge. Hence, it makes the adjustment of operational and accounting recordings convenient. On the other side, the Asset Classes are the asset branches that consist of asset collections built into electric power networks.

Further identification of the relations between assets should be made to make the distribution network asset management more convenient. In these ways, we use the "Primary Assets" and the "Related Assets" as the terms. The Asset Relations in this standardization mean the relations between the Primary Assets (MDU) and the Related Assets (Non-MDU). The Primary Assets, referred to as the House Assets, are the primary assets with other assets that work for those primary assets. Meanwhile, the assets that work for the primary assets will be referred to as the Related Assets.

In operating fixed assets, PT ABC monitors its distribution asset operations through asset location recognition. The company needs such things for the sake of maintenance and

improving its customer service. The recognition activity, or the asset location identification, can be done through on-field surveys of asset data, computed and mapped them through the Geographical Information System (GIS). The mappings on distribution network assets require understanding to determine the assets with direct geographical relationships and those that do not. Monitoring of electrical connectivity that describe the electrical current works will be more convenient/ easier to identify using spatial analysis. Therefore, the company will be convenient/easier to get the trouble's locations if there are any troubles in a network.

4. Fixed Assets Maintenance

Managing maintenance is more than only fixing and preventing; it encompasses every asset's life cycle, starting from choosing the asset types to disposal. The crucial decisions for the fixed assets' life cycle optimization that should be made include the machine installations/equipment component replacement, work equipment replacement, evaluations on examination results, and requirements for the sources needed to maintain fixed assets.

In reality, PT ABC has chosen the best choice. They not only consider the technical aspects but also the historical maintenance data, the cost information, and sensitivity tests to ensure that the organizational goals are being met long-term. The situations and conditions that require attention: replacements when operational costs increase due to usage, machine replacement when they are in standby mode, and replacement of fixed assets, are done by maximizing the assets' performance.

In general, the maintenance costs that can be capitalized are the capital expenditures with the following characteristics:

- Adding the capacities from the existing fixed assets (Repowering dan Uprating).
- Improving the fixed assets' output quality (Rehabilitation dan Upgrade).
- Adding and/or expanding on fixed assets that have more than one year benefits, technically and based on the economic values.
- Replacing the recorded equipment on an estimated code.

The interviews conducted with the Assistant Manager (AMN) of Distribution Asset Management at PT ABC concluded that the constraints that the teams frequently find in the distribution asset maintenance processes are all about data accuracy and that the integration of related applications are not yet done real-time. In PT ABC, there are 2 (two) types of application that support the distribution asset maintenance processes: the Distribution Network Master and the Enterprise Asset Management (EAM). Both applications are run in parallel, yet, they are not effectively integrated. The concept for these two applications are the same, yet, today, PT ABC is in the process of perfecting the EAM Application, so they can accommodate the user's needs in terms of distribution asset managements.

Conceptually, their executions are also in line with the Total Life-Cycle Asset Management (TLAM) framework. However, the thing that becomes a special concern is that PT ABC has not yet focused on the business processes' effectiveness and efficiency in terms of asset management, particularly in fixed asset maintenance activities. In line with that, AMN of Distribution Asset Management also stated that the majority of maintenance activities are based on the constraint reports, not on the condition mappings and asset's periodical ages to then be planned to maintain routinely. If PT ABC can hand in the risk map information periodically and in real-time, then the efforts in optimizing the distribution asset's performance can be attained, and the efficiency due to the maintenance cost can also be optimized.

5. Fixed Assets Disposal

One of the asset management in PT ABC is the fixed asset removal activity. The fixed asset removals are the actions of removing assets from the lists of assets recorded in the SAP ERP system by issuing Office Letters/Memos supported with the appendixes of Form of AE.1, AE.2, AE.3, and AE.4. The procedure for the write-off of fixed assets must go through at least 4 (four) stages, namely AE 1, AE 2, AE 3, and AE 4. All these stages are carried out with approval from different parties, namely level 2 and level 1 units. PT ABC, Internal Supervisory Unit, Head Office, Board of Commissioners, and related Ministries. The Office Memo is the document that contains advice for fixed asset removals issued from PT ABC's Level 2 unit. The fixed asset removal activities will waive PT ABC as the asset owner and user from administration and physical responsibilities from the fixed assets that have been removed.

The withdrawals and the removals of fixed assets in PT ABC's environment are done by considering why the fixed assets cannot operate normally. These are due to the impossible-to-operate conditions of the asset's technical-physical conditions, no longer economical, that will be relocated, old technologies, and other reasons that can cause those assets not to operate on a normal basis. Other than the above-mentioned reasons, the fixed asset removals in PT ABC's environment are also done through consideration and encouraged by a transformational program, "GREEN," which involves the sustainable asset/facility management, fixed asset removals that emit excessive carbon emissions (already stale). That regulations become in line with the 2050's Zero Carbon program, in which PT ABC is one of the companies that give huge contributions in the achievement of carbon emission targets on 2050.

In PT ABC, the fixed asset removal processes can be done through sales, exchanges, and reimbursements of fixed assets with equity participation. In order to provide accurate and reliable administration processes, PT ABC has had proper fixed asset removal procedures. The fixed asset removal procedures in PT ABC itself use the AE 1, AE 2, AE 3, and AE 4 forms. Other than those four forms, the issuance of fixed asset removal advice

should be supported by risk reviews, economic reviews, explanation of the reasons for the write-offs/takeovers. The overall documents will be forwarded to the Board of Commissioners to get approval for removals.

There are 2 (two) types of fixed assets removal approvals in PT ABC: approvals from the Board of Commissioners and from the General Meetings of Shareholders. The write-off approvals can be done because, based on the laws and regulations and/or the rulings that have permanent legal forces, the fixed assets no longer belong to PT ABC. Because of that, the fixed asset removal approvals should go through the General Meetings of Shareholders. Other than such conditions, the fixed asset removal approvals should go through the Board of Commissioners. PT ABC's fixed asset removal procedures go through a series of steps that people often deem complicated and quite time-consuming. The reasons for the complicated executions of these fixed asset removal processes are also caused by the accuracy level between the physical stock data versus the SAP data and the SAP data versus the Online Warehouse Assets data, the return materials/non-operating fixed assets that do not have the in-application database that can be monitored conveniently, both in the Online Warehouse Assets and in SAP, the patterns or the supply processes in providing end-to-end materials based on the material stock data are not yet available, and the physical standardization of warehouses is not yet present.

PT ABC still needs to focus their attention on the creation of information systems that accommodate the needs of end-to-end fixed asset management. That way, the processes can run effectively and efficiently according to the perspectives of BPP and the fixed asset management execution times.

6. CONCLUSION AND RECOMMENDATION

This case study was conducted and focuses on fixed asset accounting in the context of fixed asset management which includes procedures and management information systems for optimizing fixed asset management. Fixed assets referred to in this case study are part of the property owned by PT ABC which is limited to fixed assets attributable such as land, distribution networks, distribution substations and other distribution equipment. The reason for selecting the asset class discussed in this case study are the asset class has a fairly large value and has a significant effect on company performance.

This case study concludes the following points based on the analysis and discussions conducted in accordance to the Total Life-Cycle Asset Management (TLAM) framework:

- a. In PT ABC, the fixed asset management cycles are done by 2 (two) types of user: operational users and administrative users. The operational users are those in the construction and distribution department, while the administrative users are those in the finance, planning, and procurement officer departments. The operational users are responsible for the installation/construction, operations, and maintenance, up to the

decisions to remove fixed assets. Meanwhile, the administrative users are responsible for the whole fixed asset management administration processes that involve budget planning processes or activities and accounting reports.

- b. The whole regulations on the fixed asset management regulations and business processes in PT ABC are already comprehensive and adequately accommodated. However, in reality, the author still found some points that require attention, such as:
 - There are differences in the fixed asset recognition principles in users in the Distribution department and the Finance department. As a result, there are different information outputs. Thus, these things have potential in creating biased information.
 - There are differences in the principle of recognition of fixed assets in the distribution and financial sector users, so that there is a different output of information and has the potential to cause biased information. In addition, there is no integration between EAM and SAP ERP applications, so that both distribution and finance have different sources of data and information on fixed assets.
 - The fixed asset recognition processes still have problems in the administrative processes, especially on the material reconciliation and the on-field operational constraints. For that matter, the fixed asset recognition processes become constrained.
 - In the process of removing fixed assets, there are still obstacles and issues that need to be considered, especially in terms of process effectiveness and efficiency. Obstacles in the process of removing fixed assets will have an impact on the accumulation of damaged materials and ATTB in warehouses, legal consequences from waste or ATTB that have the potential to disrupt the surrounding environment including those exposed to Hazardous and Toxic Materials (B3), loss of potential income outside of operations from the auction results. the emergence of costs for the physical management of ATTB in the warehouse, as well as the potential emergence of efforts to increase warehouse capacity, as well as the potential for loss of savings in Cost of Supply (BPP) for depreciation expense on non-operating fixed assets (ATTB) which has not been written off for fixed assets.
- c. Based on the Total Life-Cycle Asset Management (TLAM) framework, PT ABC has done the fixed asset management procedures by focusing attention on performance optimization, the assets' economic values, and the value for money. The most frequently found constraint is the difference in concept understanding about what identifications are actually becoming the assets. Thus, there will be potential for differences between the planned versus the realized budgets.

As a corrective action, here are recommendations that can be applied in PT ABC in optimizing the fixed assets management, including:

1. Strive for the integration of accounting data with operational data that takes into account the smooth flow of data, which can be carried out with the support of standard Operating Procedures (SOP) which are interconnected between related parts (users).
2. Improve the process of digitization and monitoring of material balances so that the adequacy of material in the unit through the process of supplying upstream to downstream (manufacturers to users) can improve services for new and existing customers.
3. In the long term, PT ABC should be consistent in carrying out maintenance and replacement of fixed assets by prioritizing Value for Money which is based on environmentally friendly practices and aligned with government strategies and priorities. The successful of fixed asset management cannot be separated from the role of a leader. Based on the Total Life-Cycle Asset Management framework, asset management will run optimally if it is linked to the company's vision, strategy and fundamental values. So that the leadership should be committed and consistent in aligning the plan for additional fixed assets with the vision, strategy and fundamental values of the company.

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