

## Analysis of Output Cost Standards in Performance Based Budgeting Framework

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### Abstract

*Performance Based Budgeting becomes a reference in making work plans and Budgets in Ministries/ Institutions. Performance-Based Budgeting encourages the concept of value for money which is based on 3 (three) aspects, that is economical, efficiency and effectiveness. This budgeting approach is carried out through 3 (three) components, that is performance indicators, cost standards and performance evaluation. Cost Standard in the Minister of Finance Regulation No. 232/2020 consists of Input Cost Standards, Output Cost Standards and Cost Standard Structures. Output cost standards are used as a reference for the cost of achieving activity outputs. In its implementation, the use of output cost standards has not been widely used, until now only 33 of the 102 Ministries/ Institutions or around 32%. And from the research conducted by most of the Ministries/ Institutions that have implemented the output cost standards are also inconsistent during the allocation process, that is the standard output costs that have been set are not used in the making of work plans and budgets. The calculation of output costs standart can be done with a modern cost accounting approach using Activity Based Costing (ABC) System that is based on the activities needed to achieve the output target. And by using this method output costs can be calculated more accurately so that they are more efficient and effective, and cost reduction strategies can be carried out through activity management.*

**Keywords :** Output Cost Standar, Performance Based Budgeting, Activity Based Costing

### Abstrak

Penganggaran Berbasis Kinerja menjadi acuan dalam penyusunan rencana kerja dan anggaran di Kementerian/Lembaga. Penganggaran Berbasis Kinerja mendorong konsep *value for money* yang didasarkan pada 3 (tiga) aspek, yaitu ekonomis, efisiensi dan efektifitas. Pendekatan penganggaran ini dilakukan melalui 3 (tiga) komponen yaitu indikator kinerja, standar biaya dan evaluasi kinerja. Standar Biaya dalam PMK No. 232 Tahun 2020 terdiri dari Standar Biaya Masukan, Standar Biaya Keluaran dan Struktur Standar Biaya. Standar Biaya Keluaran digunakan sebagai acuan biaya pencapaian keluaran kegiatan. Dalam implementasinya, penggunaan Standar Biaya Keluaran belum banyak digunakan, hingga saat ini hanya 33 dari 102 Kementerian/Lembaga atau sekitar 32%. Dan dari penelitian yang dilakukan oleh sebagian besar Kementerian/Lembaga yang telah menerapkan Standar Biaya Keluaran juga tidak konsisten pada saat proses pengalokasian, yaitu Standar Biaya Keluaran yang telah ditetapkan tidak digunakan dalam pembuatan Rencana Kerja dan Anggaran. Perhitungan Standar Biaya Keluaran dapat dilakukan dengan pendekatan akuntansi biaya modern menggunakan *Activity Based Costing (ABC) System* yang didasarkan pada aktivitas yang dibutuhkan untuk mencapai suatu target keluaran. Dan dengan menggunakan metode ini biaya kegiatan dapat dihitung dengan lebih akurat sehingga lebih efisien dan efektif, dan strategi pengurangan biaya dapat dilakukan melalui manajemen aktivitas.

**Kata kunci :** Standar Biaya Keluaran, Penganggaran Berbasis Kinerja, *Activity Based Costing*

## INTRODUCTION

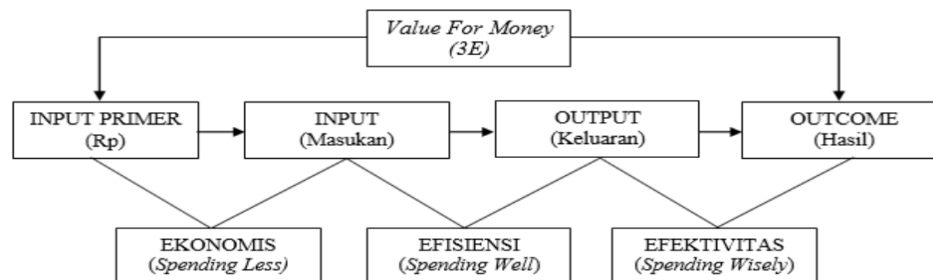
In order to improve the quality of planning and budgeting, planning and budgeting reforms continue to be carried out, starting with the issuance of Law no. 17/2003 concerning State Finance. The explanation states that there are 3 (three) pillars needed in the budgeting system, namely the unified budget, performance based budgeting and the medium term expenditure framework.

The Performance-Based Budgeting approach is considered the most important of the three budgeting approaches. According to Government Regulation No. 90/2010 concerning the Preparation of Budgets Work Plans of State Ministries/Institutions, to realize Performance-Based Budgeting it is necessary to have 3 (three) components, namely: performance indicators, standard cost and performance evaluation. This approach emphasizes value for money, focusing on three key aspects: economy, efficiency, and effectiveness. In the context of corruption, the implementation of Output Cost Standards (OCS) becomes crucial as it can help mitigate risks associated with financial mismanagement and enhance accountability ((Silitonga et al., 2015)

Performance-Based Budgeting is the embodiment of budget management according to the concept of value for money which is based on three main elements (3E) namely economy, efficiency and effectiveness. Output cost standards are critical in the framework of performance-based budgeting (PBB), particularly within public institutions. They serve as benchmarks for evaluating the costs associated with achieving specific outputs, thereby promoting efficiency, effectiveness, and transparency in public financial management ((Silitonga et al., 2023)

Value for money is achieved if the organization utilizes minimum input costs to produce optimal output to achieve organizational goals. The idea of value for money in the public sector is exemplified strongly, in line with the demand for public accounting and increased implementation of good governance. Good governance in the context of performance-based budgeting emphasizes the importance of transparent, efficient, and effective budgeting practices ((Karunia et al., 2023)

It is believed that improvements in accountability and performance of the public sector will increase because of the implementation of value for money

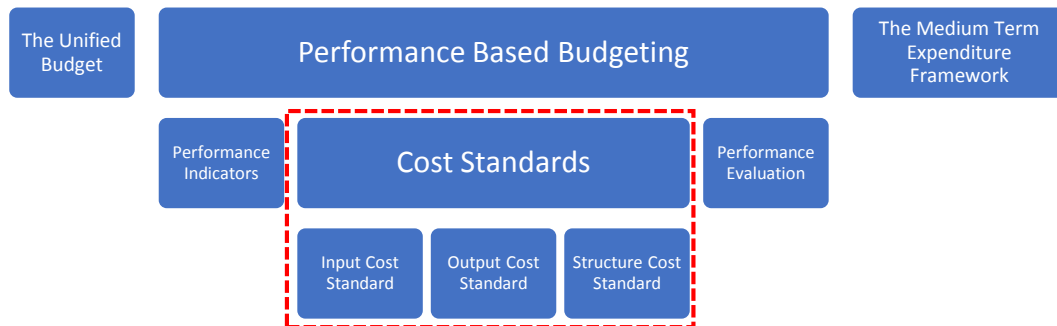


The economic principle is the acquisition of inputs with certain quality and quantity at the lowest price. Efficiency is the achievement of maximum output with certain inputs or the use of low inputs to achieve certain outputs. While effectiveness is the level of achievement of program results (outcomes) with the set targets. In simple terms, efficiency is the output compared to the input, while the effectiveness is the outcome compared to the output.

The Budget Work Plan is prepared based on work performance in order to obtain the maximum benefit by using limited resources. Therefore, the programs and activities of the State Ministries/Institutions must be directed to achieve the results and outputs that have been determined in accordance with the Government Work Plan. In addition, the preparation of the budget needed to carry out activities must be based on the unit cost of output or activity in order to achieve efficiency.

In line with that, the standard cost as one of the components of Performance-Based Budgeting is needed as a reference in making the Budget Work Plan. This is regulated in The Minister of Finance Regulation No. 71/2013 concerning Guidelines for Cost Standards, Cost Structure Standards and Indexation in the Preparation of the Budget

Work Plan. The cost standard guidelines in question consist of : input cost standard, output cost standard and structure cost standard.



The preparation of output cost standard is useful for obtaining value for money in budget allocations for achieving activity outputs at the planning level. The output cost standard that has been compiled can be used as a reference for the preparation of the same/similar output. While the benefits of preparing the output cost standard are:

1. As an effort to improve the quality of planning to ensure a more efficient budget allocation process.
2. Accelerate the preparation and review of the Budgets Work Plans of State Ministries/Institutions, especially for activities whose outputs are continuous.
3. Facilitate the implementation of monitoring and evaluation in achieving the output.

## THEORETICAL STUDY

### Performance-Based Budgeting

Performance Budgeting (Radhiansyah, Emil. 2014) is basically a budget preparation and management system that is oriented towards achieving results or performance. This performance reflects the efficiency and effectiveness of public services that are automatically oriented to the public interest (Mardiasmo, 2002). They help ensure that resources are allocated efficiently and effectively towards delivering desired outcomes. By setting these standards, public institutions can better manage their expenditure and optimize resource utilization ((Suryanto et al., 2023).

In addition, performance budgeting also shows the budgeting process that seeks to link the goals of the organization with the use of its resources. In this case, the principle of budgeting is focused on increasing efficiency by classifying activities and measuring costs (Ikhsan, 2006).

The process of operational activities can be said to be efficient if a certain product or work can be achieved with the lowest possible use of resources and funds (spending well). Effectiveness is the relationship between output and goals or objectives to be achieved. Operational activities are said to be effective if the activity process reaches the final policy goals and objectives (spending wisely).

The conceptual foundations underlying the implementation of Performance-Based Budgeting include (Kamaroesid, Harry. 2013) :

1. Budget allocation is oriented to performance (output and outcome oriented)
2. Program/activity budget allocation is based on work unit functions attached to the organizational structure (money follow function)
3. There is flexibility in budget management while maintaining the principle of accountability (let the manager manages)

The conceptual basis mentioned in the context of implementing Performance-Based Budgeting aims to :

1. Shows the linkage between funding and the performance to be achieved (directly linkage between performance and budget)
2. Increase efficiency and transparency in budgeting (operational efficiency)
3. Increase flexibility and accountability of units in carrying out tasks and budget management (more flexibility and accountability)

So that the Performance-Based Budgeting can be operationalized using the following instruments:

1. Performance indicators are instruments used to measure performance.
2. Standard cost, is a unit cost that is determined in the form of standard input costs and standard output costs as a reference for calculating budget needs.
3. Performance evaluation is an assessment of the achievement of performance targets, consistency of planning and implementation, and realization of budget absorption.

Based on the conceptual basis, the purpose of implementing Performance-Based Budgeting and the instruments used, it can be concluded that operationally the main principle of implementing Performance-Based Budgeting is a clear link between the policies contained in the national planning document and budget allocations managed by the State Ministries/Institutions according to their functions (reflected in the organizational structure).

### **Cost Standards**

Cost standards are costs that are determined in advance which are the amount of costs that should be incurred to make one unit of product or to finance certain activities, under certain economic, efficiency, and other factors assumptions (Mulyadi, 2015). The costs that should be incurred mean that the costs that are determined in advance are a guide in the actual spending. If the actual cost deviates from the standard cost, then what is considered correct is the standard cost as long as the assumptions underlying its determination do not change.

Cost standards are an important tool in assessing the implementation of predetermined policies. If the cost standard is set realistically, this will stimulate the implementer to carry out his work efficiently and effectively because the implementer already knows how the work should be carried out and at what cost level the work should be carried out.

The level of tightness of cost standards is a problem in itself. Although the required standards have been clearly defined, their implementation is highly dependent on changes in the production process or the implementation of activities. The state of the production process or the implementation of activities often changes, while standard improvements are rarely carried out. If the standard is often improved, this will cause the standard to be less effective as a measuring tool for implementation. However, if improvements are not made, even though there have been significant changes in production, there will be an inaccurate and unrealistic measurement of the implementation.

Standards can be classified on the basis of the level of tightness as follows:

1. Theoretical standards, also called ideal standards, are the most efficient level that can be achieved by implementers. But perfect execution can rarely be achieved by people or machines.
2. Average past costs, if standard costs are determined by calculating the average past costs, this standard tends to be a loose standard.
3. Normal standards, based on estimated future costs under the assumption of normal economic conditions and activities. Average costs in the past adjusted for the estimated state of costs in the future.

4. The best achievable implementation, based on the best achievable level of implementation taking into account the inefficiencies of activities that cannot be avoided.

The deviation of the actual cost from the standard is called the variance. The difference between the actual cost and the standard cost is analyzed and from this analysis the cause of the occurrence is investigated to then find a way to overcome the occurrence of an adverse difference.

Cost standards are needed as a reference for budget implementation to run efficiently. The definition of efficiency is closely related to the concept of productivity, which is done by using a comparison between the output produced and the input used. The process of operational activities can be said to be efficient if a certain product or work can be achieved by using the lowest possible resources and funds. (Mardiasmo, 2002).

Performance is relative, so there must be comparative data. With the comparison data, it is possible to assess whether the planned programs and activities are more efficient than the comparison data. A program or activity is said to be more efficient if to achieve a certain output it requires a lower cost compared to the baseline data or at a certain cost, a larger output will be obtained than the basic data. (Taufiq Ritonga, Irwan. 2012).

### **Activity Based Costing (ABC) System**

In making the budget plan for output cost standards, the right approach is needed. The calculation method that is currently growing rapidly is Activity Based Costing. Activity Based Costing System is an activity-based cost information system (Mulyadi, 2007). Because many activities are found throughout the organization, the Activity Based Costing System can be applied to for-profit or not-for-profit organizations, including public organizations. The Activity Based Costing System does not only focus on calculating the cost of products/services, but includes a broader perspective, namely cost reduction through activity management. There are significant positive correlations between service quality, user satisfaction, and user loyalty. For instance, improved service quality leads to higher user satisfaction, which subsequently enhances user loyalty towards e-learning systems ((Rahayu et al., 2023)

The difference between the calculation of the Traditional Costing Method with the Activity Based Costing System (Widjaja, Amin. 2009), among others:

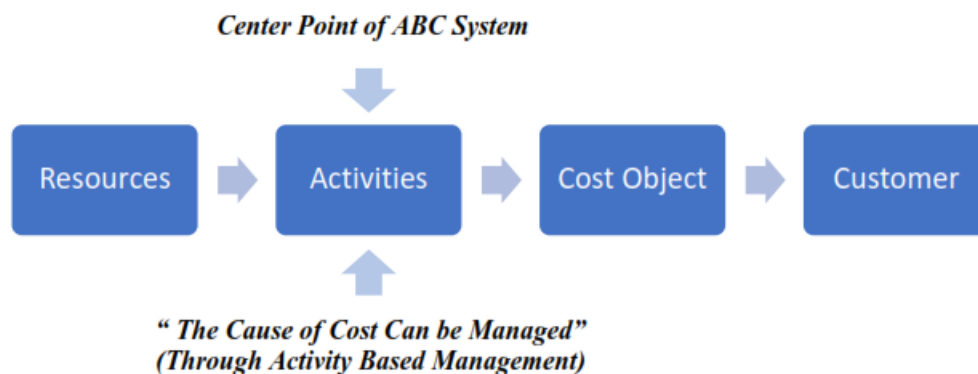
1. Activity Based Costing uses activity-based cost drivers including those based on volume or not, while Traditional Costing Method uses volume-based cost drivers.
2. Activity Based Costing assigns the first overhead to the activity cost center and the second to the product or service, while the Traditional Costing Method assigns the first overhead to the department and the second to the product/service.
3. Activity Based Costing focuses on managing processes and activities and solving cross-functional problems, while the Traditional Costing Method focuses on managing the costs of functional departments or responsibility centers.

Activity Based Costing System is considered superior because it focuses more on cost, quality, and time factors, while the Traditional Costing Method prioritizes short-term financial performance, such as profit.

There are two basic beliefs that underlie the Activity Based Costing system, namely:

1. Cost is caused, costs are caused and the cause of costs is activity
2. The causes of cost can be managed, the causes of costs (ie activities) can be managed.

These two basic beliefs are illustrated more clearly in figure below



## METHODS

The research method uses a qualitative-descriptive method, which is a method to describe the object of research qualitatively. The writing uses a literature study data collection method related to the application of Activity-Based Costing. This is intended to provide guidance in making standard output costs based on Activity Based Costing System. This method is used because it is based on activities so that it can be applied to public organizations and the causes of costs can be managed so that they are more efficient.

Since there is a lot of literature related to Activity Based Costing System, the authors used several criteria in selecting articles from textbooks, scientific journals and on-line searches. First, because its changing rapidly in today's environment, the author uses mostly sources published from 2000. Second, considering the author's goal to provide a practical understanding of the use of Activity Based Costing Systems in the public sector, this article focuses on practices in the public sector.

## RESULT AND DISCUSSION

There are three main challenges for public sector organizations related to the cost of service aspect. First, they must set the correct cost of each service they provide. Second, they must ensure that the processes by which the services they provide are as efficient as possible. Third, they must make comparisons between their costs and those of their counterparts in the private sector. One of the weaknesses of the traditional method of costing is the occurrence of improper loading, resulting in undercosting or overcosting. Undercosting occurs when costs are charged less than the amount they should be. While overcosting occurs when costs are charged more than the amount that should be.

How are these two weaknesses described at the level of public sector organization? Undercosting will cause an inefficient cost of services, because the costs incurred should be greater so that undercosting costs will cause organizational activities to not run well (the output produced is not equivalent to the input issued). Overcosting will cause a cost of service that is too expensive so that the costs will be greater than the benefits so that the mission of the public sector will not be achieved. Although this ABC system looks more complex than the traditional costing system, it is capable of producing more accurate cost calculations.

Management accounting offers a solution to the problem of undercosting and overcosting, namely the concept of Activity Based Costing (ABC), that is the assignment of a cost based on activity. So that the costs incurred will be in accordance with the efforts made.



at the level of the public sector ABC will make a cost of service in accordance with the activities carried out in the provision of public services.

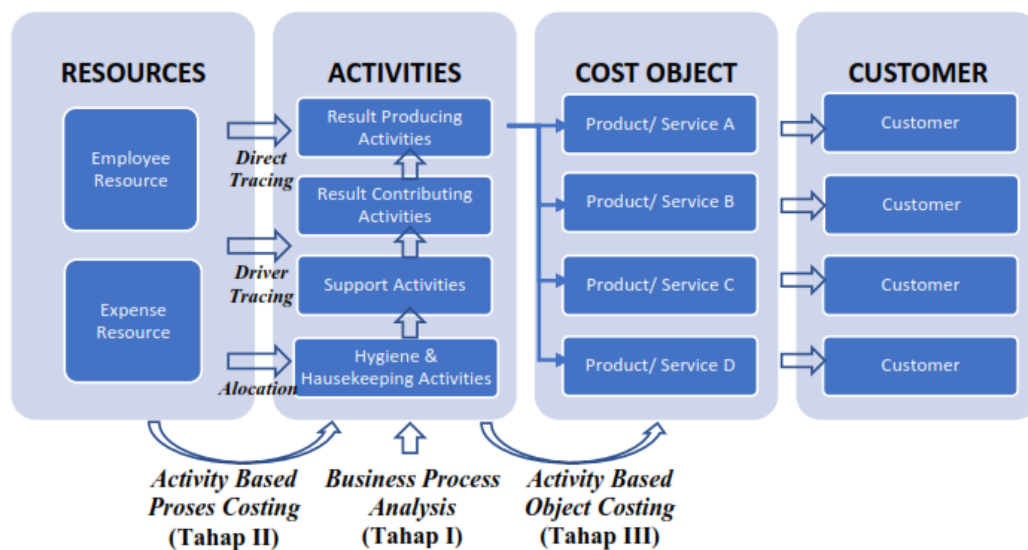
ABC has been developed in organizations as a solution to problems that cannot be solved properly by traditional cost systems, there are various definitions that explain the ABC cost system itself. Definition of the ABC cost system as follows : "a system which is a costing approach that focuses on activities as a fundamental cost object. This ABC system uses the costs of these activities as a basis for allocating costs to other cost objects such as product, service or customer" (Horngren, 2006).

In the ABC system, products are defined as goods, services or other activities carried out by the organization. All the products mentioned above are produced through organizational activities and these activities consume resources. Costs are not distributed directly to products but are assigned to activities that cause them to arise. The costs for each of these activities are then assigned to the product in question.

The design of output cost with the ABC System methods includes three main stages (Mulyadi, 2007), namely:

1. Business Process Analysis (BPA)
2. Designing of Activity Based Process Costing (ABPC)
3. Designing of Activity Based Object Costing. (ABOC)

The framework for data processing in the ABC System is described in figure below.



The first stage is an analysis of the business processes carried out by the organization through a Business Process Analysis (BPA). This stage aims to map the various activities used by the organization to produce products/services for customers, besides that BPA is also to look for various opportunities for improvement to the processes used by the organization in generating value for customers. The analytical business process is consists of the following steps:

1. Identification of business process
2. Identification of sub-process and activities
3. Implementation of process value analysis
4. Development of improvement plans

Activities can also be classified as follows:

1. Repetitive and non-repetitive activities.  
Repetitive activities are carried out repeatedly or continuously, while non-repetitive activities are only carried out once.
2. Primary and secondary activities.  
Primary activities are activities that have a direct contribution to the activities of the organizational unit, while secondary activities support primary activities.
3. Activities that have added value and do not have added value.  
Activities that have added value are activities that directly provide benefits to the organization.

The second stage is the design of Activity Based Costing Process (ABCP). After the activities used by the organization are mapped and various information about the activities are collected in the BPA, then a data processing process is designed to assign resources to activities. ABPC design consists of the following steps:

1. Assignment of resources to activities.  
It takes two stages to assign resources to activities, namely identifying the characteristics of resources and choosing how to load them in the form of direct tracing, allocation, driver tracing.
2. Providing activity cost information and information about activities.  
Cost information and information about activities produced by ABPC are useful for: measuring performance, calculating target cost reduction and calculating accurate estimates of budgeted costs.

The third stage is design of Activity Based Object Costing (ABOC). At this stage a data processing system is designed to produce accurate product/service cost information. ABOC design consists of the following steps:

1. Designing a model for assigning direct costs to products/services
2. Designing a model for assigning indirect costs to products/services

A simple example of using the ABC system can be seen in the imposition of intensive inpatient rates in hospitals. If using the traditional cost system, the imposition of tariffs only uses one activity driver, namely the duration of hospitalization. This means that each patient is charged the same rate for each person per day. Whereas intensive inpatient unit services consist of lodging, food provision, monitoring and care. If using the ABC system, the activity driver consists of the duration of lodging, provision of food, monitoring and maintenance. This means that the rate charged depends on the severity of the patient's condition, so that the rates charged are more accurate.

The objective of this paper has been to show how ABC can be used as a tool for determining true costs in the public sector and help organization make better decisions based on more accurate costing information. ABC can assign activity costs to service, or customer that consumes resources in order to measure profitability and provide cost-effective and timely information better than traditional accounting system. ABC enables managers to understand profitability better. In implementing ABC, when determining the cost drivers for each activity, it is important that managers do not get bogged down with too many details that cannot be explained. However, a system that is too general may not be accurate enough. Customers, whether internal or external, need to be prepared for the changes to come. The organization should educate customers to prepare them before starting the implementation process. In implementing ABC, the organization should set-up a balanced team that gets input from all parties involved: finance staff, information technology staff, human resources, so forth. ABC implementation must have the support



of all levels in a organization. ABC requires a new way of thinking from all the organization's functions (Chea, Ashoford. 2011).

ABC can be useful for the public sector (Urban, Andrew. 2008), among others, namely :

1. Budgeting and cost control (link costs to outputs), namely ABC can budget costs in accordance with the principle of cost effectiveness, so that the resulting output comes from costs that are in accordance with the activities carried out.
2. Performance measurement (link costs to outcomes), namely ABC can measure performance in an integrative way between costs and activities carried out.
3. Setting fees, ABC can play a role in the preparation of public service costs, which will later be used in determining the price of public services.
4. Program evaluation, ABC can play a role in evaluating activities in the program, such as removing activities that are too costly or doing re-engineering.
5. Cost comparability, ABC allows costs to be compared according to existing activities

Beside of the information above, the ABC system is designed to allow organizations to obtain abundant information about the activities that cause costs. With this information on activities the organization will be able to develop activity management plans that promise significant cost reductions. Significant cost reductions can only be achieved through a planning process that uses reliable data on the causes of costs.

Judging from the benefits provided by the ABC system, this has the potential to be used by public sector organizations. However, several conditions are needed so that the ABC system can be implemented in Indonesia (Nur Afiah, Nunuy. 2010), namely :

1. The existence of financial management regulations and accounting standards available to implement ABC system
2. Adequate financial system
3. Cost data is available in detail
4. Output data is available in detail
5. HR staff can operate/ are ready to implement ABC system

## CONCLUSION

As shown in this paper, ABC is not only appropriate for use in a manufacturing environment; it is also most appropriate for service organizations such as financial institutions, the healthcare industry, and government organizations. In fact, some banking and financial institutions have been applying the concept for years under other names. One of them is unit costing, which is used to calculate the cost of banking services by determining the cost and consumption of each unit of output of functions required to deliver the service.

Based on the information above, the use of ABC for the calculation of output costs is very possible to do. This will contribute to the realization of accurate output cost standards so that they are more efficient and effective. The cost reduction strategy can also be evaluated through activity management.

The main steps for implementing an ABC system are :

1. Define the target outputs
2. Identifying the required activities
3. Assigning resource costs to these activities
4. Placing these activities on the target outputs

The implementation of the ABC system is not just a change to the cost information system used by the organization. ABC system is essentially a new management style used to manage organizations to enter a competitive and turbulent environment. The components that make up the new management style are : shifting personnel mindsets, implementing new toolset: ABC System, changing skillset needed to manage change on an activity basis.

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