Audit of System Information on Accurate Accounting 5 Using COBIT 5 with Domain Monitoring, Evaluate, and Assess (Case Study on ATPIKA Semarang)

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Abstract – ATPIKA is a furniture and interior vocational higher education institution in Semarang. In its business activities, especially in recording transactions related to academics, ATPIKA uses accurate Accounting 5 desktop-based applications produced by PT. Cipta Piranti Sejahtera to assist ATPIKA in processing financial data accurately and quickly generating financial statements. Based on interviews with staff and directors, several problems were found. Another fact is ATPIKA has never conducted monitoring and evaluation of the system used. From all the problems that exist in ATPIKA, researchers are motivated to audit using the COBIT 5.0 framework using the MEA domain, which the domain focuses on monitoring, evaluation, and assessment of control. The results of this study after analyzing the level of capability in AEC are at level 3, namely the established process. The conclusion of this study is that ATPIKA has implemented every information technology governance process according to standards, but the understanding of the monitoring and control process on the use of information technology in the staff ranks is still lacking.

Keywords – Information Systems, Audit, COBIT 5.0, MEA

I. INTRODUCTION

Currently, technology is the main key in the business world to compete in an effective and efficient competitive manner. Using technology, especially information systems in accounting and financial practices have been widely practiced by various sectors, for example, the education sector.

One of the educational institutions in Semarang, ATPIKA is a furniture and interior vocational higher education institution. ATPIKA implements an information system in the form of accounting software to assist organizations in processing financial data.

In business activities, especially in recording transactions related to academic activities, ATPIKA has used Accurate Accounting 5. Accurate Accounting is a desktop-based accounting application produced by PT. Cipta Piranti Sejahtera. The purpose of this application aims to assist an organization in managing financial data accurately and quickly make financial reports. Although ATPIKA has implemented Accurate Accounting 5 in bookkeeping activities, there are still some problems that arise, such as unclear division of tasks and responsibilities, and the exchange of files or organizational data that still use WhatsApp or e-mail that can cause organizational assets to be unsafe.

The author is motivated to conduct a system governance audit to determine the level of information technology governance capabilities and assessment of the systems used and the organization's internal controls.

In this research, the authors use COBIT 5 with a domain that focuses on the supervision, assessment, and evaluation of internal control, namely MEA (Monitoring, Evaluate, and Assess). This Domain is relevant to the problems that have been described, where the technology usage in ATPIKA has never conducted monitoring, evaluation, or

assessment that refers to the Information Systems Audit and Control Association (ISACA) standards.

II. LITERATURE REVIEW

Information systems are a combination of interconnected components that work with the aim of collecting and storing and processing data into usable information.[1]

Accounting Information System is a system that collects and processes transaction data and presents financial information to interested parties. [2]

An accounting system as an administrative organization is a tool used to organize or compile or collect information related to company transactions, where staff, all company activities, materials, and machines are combined so that they can be used as well as possible. [3]

The company's cash disbursement system consists of two types: cash expenditure by check and expenditure by cash. Cash expenditures using checks are usually used to purchase or pay debt with large nominal amounts. Meanwhile, cash expenditures with cash are used to meet payments with a relatively small nominal amount. [4]

Information technology governance is a framework of policies, procedures, and collections of processes that aim to direct and control the company in order to achieve company goals so that the company has additional business value by balancing profits, information technology risks, and processes contained therein. [5]

The internal control system includes organizational structures, methods, and measures that are coordinated to maintain organizational wealth. Test the thoroughness and reliability of accounting data, drive efficiency, and encourage compliance with management policies.[6]

A framework of policies, procedures, and a collection of processes aimed at directing and having control of the company in achieving goals. [7]
The purpose of Information Technology Governance is:

a. Aligning information technology with organizational strategy as well as the realization of the advantages of implementing IT.
b. The implementation of information technology can provide opportunities for organizations and maximize the benefits of using IT.
c. Responsible for using IT resources.
d. Risk management related to information technology appropriately.

Framework COBIT (Control Objective for Information and Related Technology) is a framework created by ISACA, which is an organization that creates frameworks on IT management that assist in the process of conducting information system audits.[8]

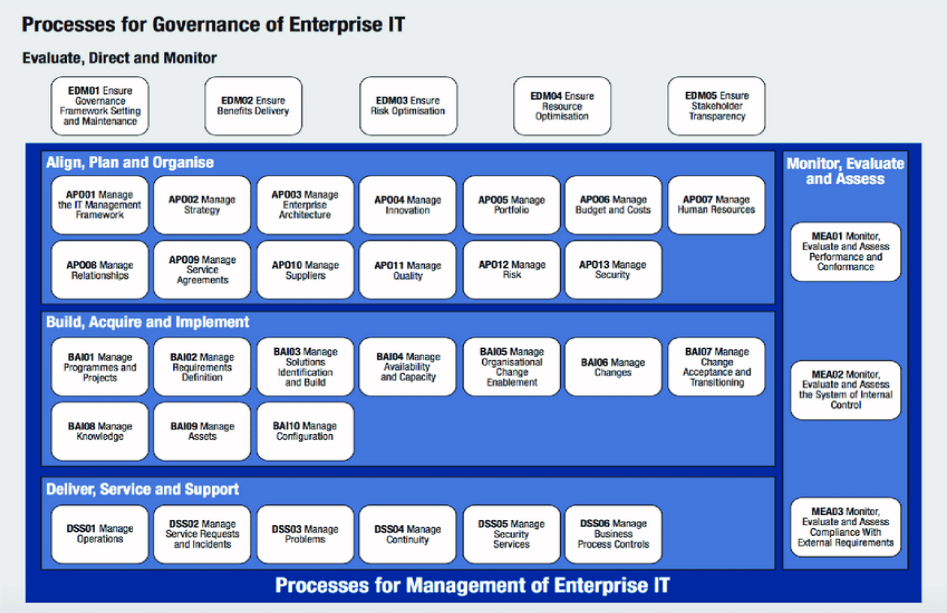

Figure 1 COBIT 5 Domain and Process

In COBIT 5.0 there are 5 domains that are important points used by auditors in conducting audits is :

a. *Evaluate, Direct, and Monitor (EDM),* wih 5 sub-process
b. *Align, Plans, and Organize (APO),* with 12 sub-process
c. *Build, Acquires, and Implement (BAI),* with 10 sub-processes
d. *Deliver, Service, and Support (DSS),* with 6 sub-process
e. *Monitor, Evaluate, and Asses (MEA),* with 3 sub-process

COBIT 5.0 has a capability model that is used to assess whether the domain is mature or not, the assessment process with 6 levels :

1. Level 0 – Incomplete
   The process is not implemented and even fails to achieve its process purpose.
2. Level 1 - Performed Process
   The company has implemented a process to achieve its process purpose.
3. Level 2 - Managed Process
   The company has run the IT process well so that it achieves its process purpose.
4. Level 3 – Established Process
   The company has implemented every IT process according to standards.
5. Level 4 – Predictable Process
   The company has implemented IT processes within predetermined limits in order to achieve the expected result.
6. Level 5 - Optimising Process
   The company has implemented IT processes and there is continuous improvement of IT processes.

Domain MEA (Monitoring, Evaluate, and Asses) is related to management performance, internal control, and compliance with rules and provides governance. The function of this domain is to ensure that all information technology processes can be controlled periodically for the purpose of maintaining quality and market needs. In this domain, there are 3 subdomains :

a. MEA 01 (Monitor, Evaluate, and Asses Performance, and Conformance
   This subdomain has a process objective of providing transparency of performance, conformance, and achievement of goals.

The process consists of collecting, proving, and evaluating IT business.

b. MEA 02 (Monitor, Evaluate, and Asses of Internal Control)
The process purpose of this subdomain is to obtain transparency for stakeholders regarding the adequacy of the system of internal controls and provide trust in operations, confidence in the achievement of enterprise objectives, and an adequate understanding of residual risk.

c. MEA 03 (Monitor, Evaluate, and Asses with External Requirement)
This subdomain aims to ensure the company's compliance with all external requirements. This last Subdomain evaluates IT processes and IT-supported business processes that are compliant with laws, regulations, and contractual requirements.

According to ISACA, in the assessment at each level, the results will be classified into 4 categories as follows :

N	0-15%	Not Achieved
P	15-50%	Partially Achieved
L	50-85%	Largely Achieved
F	85-100%	Fully Achieved

Figure 3. Scoring Scale

a. N (Not Achieved)
In this category, the process is more or less the achievement of the defined attribute in the assessed process. The range of values achieved is 0-15%.

b. P (Partially Achieved)
In this category, there is some evidence of an approach to and some achievement of, the defined attribute in the assessed process. Some aspects of the achievement of the attribute may be unpredictable. The range of values achieved is 15-50%.

c. L (Largely Achieved)
In this category, there is evidence of a systematic approach to, and significant achievement of, the defined attribute in the assessed process. Some weaknesses related to this attribute may exist in the assessment process. The range of values achieved is 50-85%.

d. F (Fully Achieved)
In this category, there is evidence of a complete and systematic approach to, and full achievement of, the defined attribute in the assessed process. There is no significant weakness related to this attribute exist in the assessment process. The range of values achieved is 85-100%.

According to ISACA (2012), a process is sufficient to achieve the category of Largely achieved (L) or Fully achieved (F) to be stated that the process has achieved a level of capability, but the process must achieve the category of Fully achieved (F) to be able to continue the assessment to the next capability level, for example, for a process to achieve capability level 3, then level 1 and 2 of the process must reach the category of Fully achieved (F), while capability level 3 is sufficient to reach the category of Largely achieved (L) or Fully achieved (F).

An information system audit is a process of collecting and assessing existing evidence in determining that computer systems can secure assets, maintain data integrity, and assist in achieving organizational goals effectively and using resources efficiently. [9]

Accurate Accounting 5 is a desktop-based accounting application produced by PT. Cipta Piranti Sejahtera is designed to meet the needs of organizations in accounting bookkeeping.

III. RESEARCH METHOD

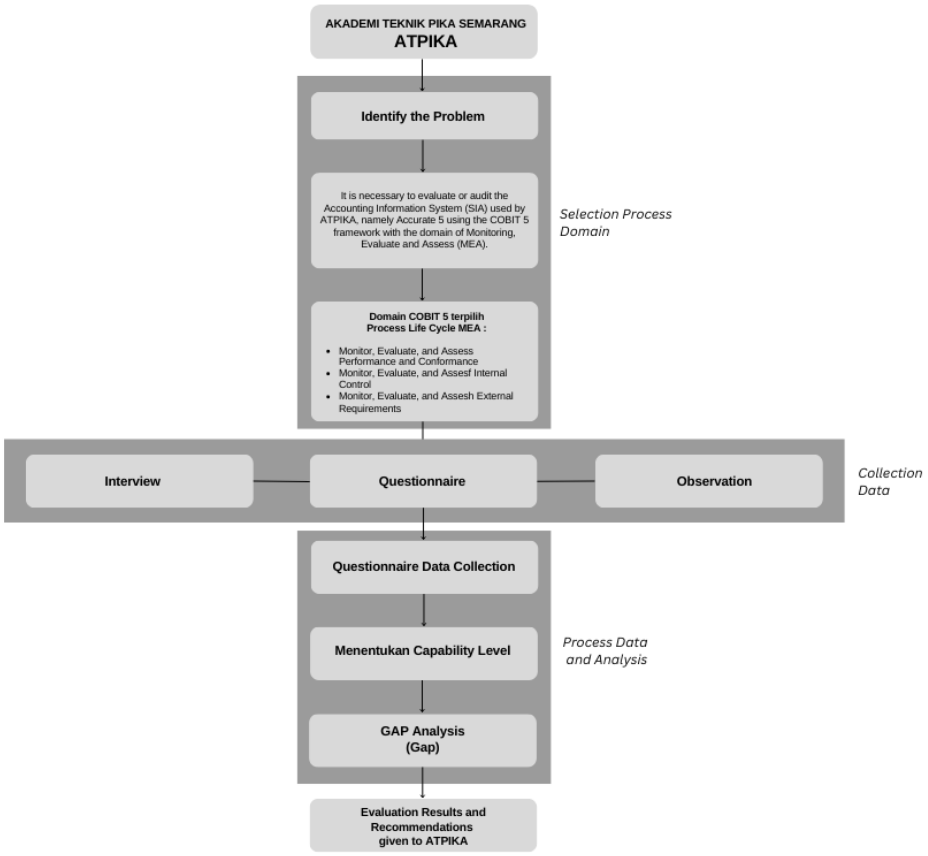

Figure 4. Framework Research

The following is an explanation of the framework used by the authors in this study :

1. The object of the study is ATPIKA (Akademi Teknik PIKA) located in Semarang, Indonesia.
2. The following are problems found in ATPIKA :
   - Division of duties and responsibilities in ATPIKA that is still lacking
   - ATPIKA's location with a separate head office, so that the exchange of information using WhatsApp and email, which can result in insecure organizational assets
   - No periodic checks on hardware and software.
   - Staff do not understand the evaluation and supervision of information technology.
3. Fewer opportunities from the problems found, namely the need to evaluate or audit the existing systems in ATPIKA by determining the level of IT governance capabilities to find out at which level of IT governance ATPIKA. Understand the evaluation and supervision of information technology.
4. In this study, the author conducted interviews with directors, employees, and IT divisions using research indicators that have been compiled based on the MEA (Monitor, Evaluate, and Asses) domain with MEA01, MEA02,

and MEA03 subdomains. After obtaining information from the interview, the author proceeded to determine the level of capability and scoring from the questionnaire. After scoring, proceed with analyzing the gap with the aim of finding the difference between the level of capability level and the expected level.

5. After analyzing the gap/GAP, proceed with the preparation of recommendations for improvement of the problems found. This recommendation is expected to help the company in solving existing problems.
6. After the researcher compiles recommendations, the researcher provides conclusions containing the results of the research and suggestions for future research.

IV. RESULTS AND DISCUSSION

A. Results and Discussion

After obtaining data from the interview, the researcher analyzed the results of the interview. Here are the results of the Petty Cash System Procedure, Payment Processing for Academic, and Capability Levels, and Recommendation :

a. Petty Cash System Procedure

NO	Accounting Theory Indicators	ATPIKA	Clarification
1	Petty cash funds are provided with the aim of paying expenses that are relatively small nominal and uneconomical when paying using checks	ATPIKA uses petty cash to pay small nominal expenses in cash, but if the nominal to be paid is large, ATPIKA will make payments by transfer via m-banking or internet banking.	In accordance with Accounting Theory
2	Petty Cash funds are held by employees or staff who specifically handle expenses related to petty cash, namely petty cash cashiers	Petty cash funds are held by Financial Admin staff who specifically handle all expenses and all matters related to finance at ATPIKA	In accordance with Accounting Theory
3	There are 2 methods of petty cash funds, namely fixed and fluctuation methods	ATPIKA uses the fluctuating petty cash method, which replenishes petty cash balances with irregular amounts and petty cash expenditures in accordance with ATPIKA's operational needs	In accordance with Accounting Theory
4	In the fluctuation method, if there is an expenditure from petty cash, it will be recorded immediately	If there is an expense, the Financial Admin will immediately disable it in the diary	In accordance with Accounting Theory
5	The nominal amount and time to replenish petty cash funds are determined according to the needs of the organization	ATPIKA in replenishing the nominal amount of petty cash is always adjusted to the needs of the organization including reserve money.	In accordance with Accounting Theory
6	When making payments using petty cash, you must attach related cash out proofs as proof documents	When making payments with petty cash, the user must keep proof of expenditure such as notes / receipts that will be attached as evidence, this is a form of responsibility for petty cash expenditure	In accordance with Accounting Theory
7	In the formation of petty cash, the balance sheet recording is as follows: e.g. petty cash Rp. 10.000.000,- so: (K) Petty Cash Rp. 10.000.000,- (D) Cash Rp. 10.000.000,-	Recording carried out by the Financial Admin when there is a petty cash formation: (K) Petty Cash Rp. 10.000.000,- (D) Cash Rp. 10.000.000,-	In accordance with Accounting Theory
8	If there is an outgoing transaction from petty cash, then the balance sheet recording is as follows: for example for practical needs Rp. 8.000.000,- so: (K) Practical Needs Fee Rp. 8.000.000,- (D) Petty Cash Rp. 8.000.000,-	Recording by the Financial Admin when a transaction comes out of petty cash: (K) Practical Needs Fee Rp. 8.000.000,- (D) Petty Cash Rp. 8.000.000,-	In accordance with Accounting Theory
9	In replenishing petty cash, the balance sheet recording is as follows: for example, petty cash is replenished with a nominal value of Rp. 5.000.000,- so:	Recording carried out by the Financial Admin for petty cash replenishment: (K) Petty Cash Rp. 5.000.000,- (D) Cash Rp. 5.000.000,-	In accordance with Accounting Theory

Figure 5. The Fluctuation Method According To Accounting Theory

Based on Table 1, it can be seen that ATPIKA applies a petty cash system that uses the fluctuation (not fixed) method based on accounting theory. By using the fluctuation method, overall ATPIKA's internal control of the petty cash system by applying in accordance with accounting theory standards.

b. Payment Processing for Academic

Academic administration, ATPIKA uses an application-based information system, namely Sevima Edlink. Sevima Edlink is an electronic learning application produced by PT Sentra Vidya Utama (SEVIMA). Sevima is an application that is devoted to the field of education, not only for learning, but Sevima is used by ATPIKA to assist students in taking KRS and administrative payments such as UKP, SKS, and several academic needs. To be able to do KRS or take courses, students are required to pay bills, because if students have not paid bills then they cannot process KRS.

c. Capability Levels of MEA

1) MEA 01 *(Monitor, Evaluate, and Assess Performance and Conformance)*

Maturity Level				
Processes		Current Maturity Level	Expect Maturity Level	GAP
MEA 01	*Monitor, Evaluate and Asses Perfomance and Conformance*	3.25	4	0.75

Figure 6. MEA 01 Maturity Level Result

From the process of calculating the results of the questionnaire, the average score in the MEA01 process is on a scale of 3.25 at the level of maturity level 3 with the category of Established Process, it can be said that ATPIKA has implemented standards on the use of IT in achieving its organizational goals.

There is a 0.75 GAP in MEA 01, the results are obtained from a comparison of current conditions (current maturity) with management expectations (expect maturity level). The existence of these gaps found imbalances in problems in monitoring IT processes. This is because the staff at ATPIKA do not really understand and are less aware of IT monitoring activities and processes and so on because the staff only knows that monitoring activities in the IT process are definitely carried out by ATPIKA as in achieving organizational goals, besides that the staff does not get an understanding of the IT supervision and control process. This IT monitoring process is only carried out and discussed together with the division heads.

2) MEA 02 *(Monitor, Evaluate, and Assess of Internal Control)*

Maturity Level				
Processes		Current Maturity Level	Maturity Level	GAP
MEA 02	*Monitor, Evaluate, and Assess of Internal Control*	3.20	4	0.80

Figure 7. MEA 02 Maturity Level Result

From the calculation process of the questionnaire results, the average score in the MEA02 process is on a scale of 3.20 at the maturity level 3 with the category of Established Process, it can be said that ATPIKA has carried out supervision, evaluation, internal control, and risk understanding quite well. There is a GAP of 0.85 the result is obtained from a comparison of current conditions (current maturity) with management expectations (expect maturity level).

There is a gap found in the internal condition of ATPIKA. Understanding of internal control from managers and staff at ATPIKA is still very lacking. A lack of understanding of procedures and policies that do not work well can lead to unexpected risks. Based on the results of an interview with the director of ATPIKA, the division of authority and responsibility does not work in carrying out their respective job functions that occur at ATPIKA. In addition, there is also a risk gap, based on the supporting data that the author gets, in the organizational structure there are concurrent positions in operationalization at ATPIKA.

3) MEA 03*(Monitor, Evaluate, and Assess with External Requirements)*

Maturity Level				
Processes		Current Maturity Level	Maturity Level	GAP
MEA 03	*Monitor, Evaluate, and Assess with External Requirements*	2.63	4	1.38

Figure 8. MEA 03 Maturity Level Result

From the process of calculating the results of the questionnaire, the average value in the MEA03 process was obtained on a scale of 2.63 at the level of maturity level 3 with the category of Established Process, it can be said that ATPIKA is lacking in supervising, evaluating, assessing external system needs. It can be seen in Table 4, that in MEA02 there is a GAP of 1.38 the results are obtained from the comparison of current conditions (current maturity) with management expectations (expect maturity level).

The gap is due to a lack of understanding of the needs of external requirements, both managers and staff. In the interview process, the author noted that ATPIKA did not receive advice on changes in rules and regulations related to information technology.

B. Recommendations

There are several suggestions for ATPIKA, namely:

a. A deeper understanding is needed for ATPIKA managers and staff in standards and procedures, especially the application of information technology, namely by providing training or debriefing. With this activity, staff can carry out these activities, and participate in supervising information technology so that supervisory activities can provide optimal results and organizational goals can be achieved as expected ATPIKA applies information technology in its business activities.
b. It is necessary to re-socialize SOPs in managing policies and authorities. In addition, providing sanctions if employees do not carry out their responsibilities in accordance with existing policies. That way the SOP is implemented well, consistently, and consistently and does not harm the organization.
c. Improvement activities are needed by providing training, understanding, and management of various types of risks, and understanding compliance with external requirements, namely to minimize the negative impact of weaknesses in understanding external requirements.

V. CONCLUSION

Based on the results of the analysis that the author has conducted on information technology governance using COBIT 5 with the MEA (Monitoring, Evaluate, and Asses) domain at ATPIKA Semarang through interviews with respondents, the following conclusions are obtained:

a. The accounting system used in the formation of petty cash, the use of petty

cash in purchases, and replenishment is good because it runs according to accounting procedures and theories. In addition, the formation of sections related to the transaction process to the recording of financial statements.

b. Based on the results of the analysis using the COBIT 5 capability level, the application of information systems at ATPIKA is categorized at level 3, namely the established process which can be interpreted that ATPIKA has implemented every information technology governance process according to standards.
c. ATPIKA understands the value of applying information system technology to be an important part of supporting business processes to be more effective and efficient in achieving organizational goals. In the internal control of the information system, ATPIKA has implemented a good security system for data access rights. In addition, ATPIKA also always carries out improvement activities if there are problems with the information technology used.
d. Although ATPIKA has supervised information technology, the activity is still not optimal. This happens because an understanding of the monitoring and control process on the use of information technology in the staff ranks is still lacking.
e. The current situation in ATPIKA is concurrent positions. By looking at the effectiveness of concurrent positions in carrying out business activities, employees who concurrently hold positions than their work or performance can be said to be less effective. Seeing the impact of this dual position can affect the performance of employees who are not in accordance with expectations, are not focused, and are overwhelmed by their work. In addition, ATPIKA in managing policies does not work well, where the division of authority and responsibility does not work as it should, it can be said to be 'fraud' because it is negligent in work procedures. Such negligence will have an impact on business implementation where data runs ineffectively and efficiently and affects the achievement of organizational goals that are not carried out properly.
f. There is a risk gap in external compliance monitoring activities, namely ATPIKA is weak in understanding external requirements.

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