Accounting Information System Design in iFrames : Case Study on Health Sector Blud of Jakarta Province

Bramadhani Tribuana [1][*] and Machmudin Eka Prasetya [2]
[1,2] Universitas Indonesia, Depok, Indonesia

Abstract

This research was conducted based on the absence of an adequate accounting information system (AIS) that can be applied to the Regional Public Service Agency (BLUD) on Jakarta Provincial Government and integrated with budget planning, asset, and inventory information system. This fact is supported by the Indonesian Supreme Audit Institution (BPK) report (2016) that states the existing AIS does not provide complete reporting features, and as a consequence, the stages of preparing financial statements are still done manually.

This research is expected to help identify information system needs, as well as provide logical model designs of AIS as a part of Integrated Financial Reporting and Management Information System (iFRAMES) that are graphically described in data flow diagrams.

This research use case study with data triangulation approach, including interviews and document review. Contingency Theory and PIECES Framework are used in analyzing organizational needs for AIS and using the Framework for the Application of System Thinking (FAST) developed by Whitten and Bentley (2007) as a basis for systems development method theory. This study found that the absence of an adequate AIS has the potential to cause various things, including incomplete accounting cycle, increasing the risk of error in recording and classifying account.

Keywords: *Accounting Information System, Government Accounting, Integrated Information System, PPK BLUD, SIA BLUD*

1. Introduction

By the mandate of Government Regulation Number 71 (2010), government accounting began to enter a new phase in 2015. PP 71/2010 mandated the obligation to apply accrual-based accounting in the 2015 fiscal year, after being given tolerance to be able to apply accounting cash-based towards accruals in the transition period between the 2010 fiscal year and the 2014 fiscal year. As a consequence of the change in the implementation of cash-based accounting to accruals into accrual-based accounting, the components of financial statements becoming more complex, from four types becoming seven types of report, as shown below.

Table 1 Comparison of Cash Toward Accrual Base and Accrual Base Financial Report Components (PP 71/2010)

Cash Toward Accrual Basis	Accrual Basis
1. Budget Realization Report	1. Budget Realization Report
2. Balance Sheet	2. Statement of Changes in Surplus Budget Balance
3. Cash Flow Statement	3. Balance Sheet
4. Notes of Financial Statements	4. Statement of Operational Activities
	5. Cash Flow Statement
	6. Statement of Changes in Equity
	7. Notes of Financial Statements

Regional Public Service Agency (BLUD) is an institution within the local government that is formed to provide services to the community in the form of goods

---

* Corresponding author. *Email address*: bramadhanitribuana@gmail.com

and services sold without prioritizing profit and in carrying out its activities based on the principles of efficiency and productivity (Government Regulation No 71, 2010). As stipulated in the PP 71/2010, BLUD as recipients of regional government budgets has the same obligation to prepare financial statements using the same accounting standards as the reporting entities that organizationally supervise it. Thus the BLUD in DKI Jakarta Province must compile financial statements using accrual-based government accounting standards in accordance with Governor Regulation Number 204 about Accounting Policies of Jakarta Province (2016) which are derivative regulations from PP 71/2010. Therefore BLUD is one of the accounting entities that must prepare financial statements to be more complex based on the seven components of the predetermined financial statements.

Increasing the complexity of financial reporting requires a need for an adequate information system in order to be able to present financial reports with more quality. However, even though the complexity of financial reports increases, local governments, especially BLUDs, do not have adequate accounting information systems. This is in line with what was revealed by the Supreme Audit Agency (BPK) in the 2016 Financial Examination Report (LHP), which states that the information system used by the DKI Jakarta Provincial Government has not provided complete reporting features, and the preparation of Financial Statements DKI Jakarta Provincial Government is still done manually by using Microsoft Excel (BPK, 2016). According to BPK (2016), the absence of an inadequate information system can result in the risk of journaling errors and the risk of using the wrong account. Not only that, based on the initial interview conducted at one of the Head of Administration in one of BLUD, states that the accounting information system that is currently available is still not integrated with the asset information system and budget planning information system. It causes several processes must be done in manually and time-consuming, which should be eliminated if the system has been well integrated.

Based on these problems, it is expected that this study can identify the needs of the accounting information system at the BLUD and propose a draft logical model of the integrated BLUD Accounting Information System with the asset information system and budget planning information system. This study uses Contingency Theory and PIECES Framework in analyzing organizational needs related to accounting information systems and using the Framework for the Application of System Thinking (FAST) developed by Whitten and Bentley (2007) as a theoretical basis for systems development methods.

2. Literature Study
2.1. Accounting Information System

According to Romney and Steinbart (2015) defines a system as a set, two or more interrelated components that interact to achieve a goal. While information is defined as data that has been compiled and processed to give meaning and improve decision making, thus Accounting Information Systems can be defined as a system that collects, records, stores, and processes data to produce information for decision-makers, including people, procedures and instructions, data, software, information technology infrastructure, and internal controls and security measurements (Romney & Steinbart, 2015). Accounting information system collects and processes transaction data and then disseminates the financial information to interested parties (Kieso, Weygandt, & Warfield, 2016). From that definition, we can know that the accounting information system can vary widely from one organization to another, follow the characteristics and needs of the organization.

2.2. Contingency Theory and Previous Study

Contingency Theory is one theory that is generally used in research related to information systems. According to Galbraith in Reinking (2012), the Contingency approach is based on two main findings from several large-scale empirical studies, namely the first is that there is no one best way of managing organizations, second is that each method used in organizing or managing an organization is not as effective. Thus the management method of an organization is not necessarily the same between one another but depends on external and internal conditions of the organization. Whereas according to Otley cited by Reinking (2012), Contingency Views in information technology and information systems are based on the principle that there is no information system that can be applied universally to all companies in all situations. For this reason, in carrying out the system development process, an analysis of the information system needs of an organization is needed, both from the internal and external sides of the organization.

According to Wilkinson as cited by Soudani, (2012), Accounting Information System (AIS) is vital to all organizations. In the private sector, the previous study shows that accounting information system affects organizational effectiveness (Onaolapo & Odetayo, 2012). The research also supported by research conducted by Soudani (2012) which stated that SIA was found to be the variable that most impacts the financial performance of registered companies in the Dubai Financial Market. In the public sector, the previous study shows that information systems have a significant positive influence on the readiness of the implementation of accrual-based accounting in the government (Permana & Wiratmaja, 2016). Not only that, research conducted by Delima (2015), Andriani (2010), Winidyaningrum (2010), Indriasari (2008) explains that the use of information technology has a significant effect on the timeliness of financial reporting of local governments. Other research conducted by Kartika and Safitri (2018) and Karmila et al. (2014) even show that the use of information technology has a positive influence on the reliability of local government financial reporting. Thus it can be concluded that the use of information technology is not only important for organizational effectiveness in private sector companies but also necessary for public sector organizations to be able to improve the reliability and timeliness of financial reporting.

2.3. Framework for the Application System Thinking (FAST)

There are various methodologies that can be used to develop and design systems. The methodology used in this study is Framework for the Application of System Thinking (FAST), the methodology developed by Whitten and Bentley (2007), which divide the system development stages into eight interrelated stages, namely:

1. Scope Definition

   The first stage of the FAST methodology is scope definition; this stage serves to identify problems that are feasible to calculate, and determine the scope of the problem and identify obstacles or constraints in the design and development of the system. The expected outcome of the scope definition stage is a problem statement that provides a brief overview of problems, opportunities, and directives related to the system to be developed. For this reason, PIECES framework analysis which is developed by James Wetherbe (Whitten and Bentley, 2007) can be a useful tool in identifying and categorizing these three things.

2. Problem Analysis

   The stages of problem analysis function to study the existing system and analyze the findings to provide a deeper understanding. The expected outcome

at this stage is a series of system improvement objectives that come from a thorough understanding of the problem.

3. Requirement Analysis

This stage is done by defining the needs and priorities of the organization, approaching the user to find out what they need or those they do not need on the system that is being designed or developed through interviews, questionnaires, and meetings. The results of the analysis are then poured into the requirement statement. This stage is the most critical stage in system development. Errors or omissions in carrying out requirements analysis will have an impact on user dissatisfaction with the system that has been developed and has the potential to require extra expenses in making modifications.

4. Logical Design

At the stage of logical design, what is done is to translate the requirement statement (the previous stage) which is usually made in the form of words, into an image called system models. One example of a system model commonly used is the Data Flow Diagram.

5. Decision Analysis

The fifth stage is analyzing and identifying alternative technical solutions that are possible to do, then recommending the best choice of solutions by considering technical, operational, economic, time and risk aspects.

6. Physical Design and Integration

The sixth stage is Physical Design and Integration, which at this stage carried out a transformation of business requirements that have been poured into logical system models into physical design specifications that will guide the system development.

7. Construction and Testing

At this stage, a system is made, which at this stage is expected to have an output in the form of a system that is ready for implementation (trial).

8. Installation and Delivery

The last stage is to install the system and transition from the old system to the new system, both hardware, and software, and conduct socialization, mentoring and training to the user so that they can help overcome the problems that generally occur when transitioning until the user can operate the system properly.

In this study, the stages to be carried out are four initial stages, namely scope definition, problem analysis requirement analysis, requirement analysis, and logical design.

3. Research Methodology
3.1. Research Methods

The research method used in this study is a case study with a mixed research or triangulation approach. Case studies are one of several ways to conduct social science research. In general case studies are a choice of research methods to answer the question "how" or "why" in a study. Alternatively, in other words, case study research can be used to answer research questions that are exploratory, descriptive, and explanatory (Stake, 2000). Mixed Research approach is research that involves mixing quantitative and qualitative methods or other paradigm characteristics (Johnson & Christensen, 2016). Mixed approach between quantitative and qualitative is often mentioned in many literatures with various names and definitions, including integrative research (Johnson & Onwuegbuzie, 2004) and mixed research (Johnson & Christensen, 2016). There are four types of triangulation, namely data triangulation, investigator triangulation, theory triangulation, and methodology triangulation. In this study, the triangulation approach used is data triangulation, where there is a combination of research data

used between quantitative data in the form of a review of Audited Provincial Government of DKI Jakarta Financial Report (LKPD) data, and qualitative data in the form of interviews, and review of related documents. The interview process was carried out as a complement to the document review process related to the information system process flow needed and to analyze problems and solutions using PIECES framework analysis which classifies problems into 6 categories namely Performance, Information, Economics, Control, Efficiency, and Service.

3.2. Data Collection and Unit of Analysis

This study uses primary data obtained directly from interview activities carried out on financial report managers, verifiers, treasurers and other parties related to the financial reporting preparation process at the Health Office and several BLUDs below. While the secondary data used are Government Regulations, Minister of Home Affairs Regulations, Governor Regulations, Statements of Government Accounting Standards (PSAP), Financial Statements of the DKI Jakarta Provincial Government Audited (LKPD), and Reports on Audit Examinations of the Supreme Audit Agency (LHP BPK).

The unit of analysis in this study uses Single-Case multiple embedded units of analysis, where the unit of analysis studied consists of several units that are not on the same level.

The DKI Jakarta Provincial Health Office is part of the organizers of government affairs in the health sector, which carries out several functions including supervision, monitoring, control, guidance and evaluation of RSUD / RSKD services as well as coordinating the implementation of tasks and functions of several subordinate units including the RSUD / RSKD and Puskesmas. RSUD / RSKD is the Technical Implementation Unit of the Health Service in individual health services (curative, rehabilitative and promotive), while the Puskesmas is the Technical Implementation Unit of the Health Service in the implementation of health services that organizes public health efforts and first-level individual health efforts (prioritizing promotive efforts and preventive). Both are led by a head who is responsible to the Head of the DKI Jakarta Provincial Health Office.

The DKI Jakarta Provincial Health Office has 74 BLUD units spread throughout the DKI Jakarta Province. The 74 BLUD units consist of 44 BLUD Puskesmas, 27 Type D hospitals, Regional Health Laboratories (Labkesda), Emergency Ambulance (AGD) and Employee Health Service Centers (PPKP). The focus of this research is to analyze the accounting information system requirements needed by the DKI Jakarta Provincial Public Service Board, which is under the DKI Jakarta Provincial Health Office, especially the Type D Regional Hospital and Puskesmas.

3.3. Data Analysis

This study using a deductive approach to conclude from collected data during the research. According to FAST methodology, the first stage is doing scope definition and continued by problem analysis using PIECES Framework related to Contingency Theory for constructing a problem statement and improvement objectives. In the third stage, this study analyzing organizational requirements related to accounting information systems by describing and comparing data obtained during research and considering the improvement objectives. In the final stage, logical modeling will be carried out based on the requirement analysis result. This modeling stages will construct an Accounting Information System logical model called Accounting and Reporting Information System (ARISE) as one module that is part of the integrated system design in the application of the Integrated Financial Reporting and Management Information System (iFRAMES).

4. RESULTS
4.1. Contingency Theory analysis within Scope definition and Problem Analysis

If we refer to the contingency theory, the management method of an organization is not necessarily the same with one another but depends on external and internal conditions of the organization. Similarly, the information system development process is needed in order to manage the organization. According to Otley cited by Reinking (2012), the Contingency Theory view in information technology and information systems is based on the principle that there is no information system that can be applied universally to all companies in all situations. For this reason, in carrying out the system development process, an analysis of the information system needs of an organization is needed, both from the internal and external sides of the organization.

In this study, the scope definition and problem analysis carried out by constructing the problem statement and improvement objectives that are reviewed from the internal and external sides of the organization using PIECES framework analysis developed by James Wetherbe (Whitten & Bentley, 2007). PIECES framework analysis classifies problems into six categories consisting of Performance, Information, Economics, Control, Efficiency, and Service. The following is the result of identifying problems related to accounting information systems obtained from the results of interviews and reviews of related documents.

Table 2 PIECES Framework Analysis

PIECES	Problem	Impact / Improvement Objectives
Performance	• BLUD Financial Report data cannot be accessed in real time	• It is difficult to obtain related financial report at any time because the data cannot be accessed anytime, anywhere.
	• SPJ Verification process done manually	• Verification process consume much time and response time analysis cannot be carried out related to the SPJ verification process
Information	• There is no data record of rejected BPJS claim	• BLUD will not be able to analyze potential lost income related to BPJS claim, even though its essential for continuous improvement, for maximizing any potential income
	• There is no adequate information system, which can facilitate making various types of reports thoroughly	• Inconsistency in the format of reports made by BLUDs, and incompatibility of report formats with applicable regulatory standards (BPK, 2016)
Economics	• The process of reconciliation still has to be done face to face, by visiting relevant parties such as the Regional Health Agency (Dinkes) and Regional Financial Management Agency (BPKD)	• The process of reconciliation is quite time-consuming and costly

Control / Security	• The level of security of financial data is very low because it only uses spreadsheet applications	• Data become vulnerable to be accessed and changed illegally by unauthorized parties.
	• Do not have a digitally certified approval mechanism	• Confidentiality of data is poorly maintained, digital documents containing financial data and signing are vulnerable to falsification
Efficiency of People & Process	• Preparation of financial statements is still done manually with a spreadsheet application	• Requires a longer time
	• There is no system that is integrated with the budget, assets and inventory	• Tend to potentially have inconsistencies between the data contained in financial statements with the asset and budget managers
Service to Stakeholders	• The implementation of the BLUD Financial Administration Goverance has not been fully adequate (BPK, 2016)	• Causing inaccuracies and inconsistencies in financial data (BPK, 2016)

4.2. Requirement Analysis

After carrying out scope definition and problem analysis, the next step is to carry out requirement analysis, namely by defining the organization's needs and priorities for the information system that will be created based on problem statement and improvement objectives. Based on that, there are several functions expected to provided in the accounting and financial reporting information systems that will be made:

Table 3 Requirement Statement

PIECES	Improvement Objectives	Solution / Requirement
Performance	• It is difficult to obtain related financial report at any time because the data cannot be accessed anytime, anywhere.	• Need an Information system that can be accessed online
	• Verification process consume much time and response time analysis cannot be carried out related to the SPJ verification process	• Need an information system that can facilitate the verification process and a time stamp feature so that that response time analysis can be carried out
Information	• BLUD will not be able to analyze potential lost income related to BPJS claim, even though its essential for continuous improvement, for maximizing any potential income	• Need an information system that can record BPJS claim data and apply analysis related to accepted and rejected BPJS claims

	• Inconsistency in the format of reports made by BLUDs, and incompatibility of report formats with applicable regulatory standards (BPK, 2016)	• Need an information system that can facilitate making complete financial reports
Economics	• The process of reconciliation is quite time-consuming and costly	• Need an information system that can facilitate ease of interaction related to the reconciliation process
Control / Security	• Data become vulnerable to be accessed and changed illegally by unauthorized parties.	• Need an information system that has an adequate level of security
	• Confidentiality of data is poorly maintained, digital documents containing financial data and signing are vulnerable to falsification	• Need an information system that has a digital signature feature is needed to ensure the authenticity of digital documents (integrity), avoid denial, and maintain the confidentiality of documents.
Efficiency of People & Process	• Requires a longer time	• Need an information system that can facilitate the process of preparing financial statements
	• Tend to potentially have inconsistencies between the data contained in financial statements with the asset and budget managers	• Need an accounting information system that is integrated with the asset system, and a budget planning system
Service	• Causing inaccuracies and inconsistencies in financial data (BPK, 2016)	• Need an information system that facilitates the financial management process in order to eliminate repeated errors

4.3. Integrated Information System Structure Design

This study presents a logical model of accounting and reporting information system that is integrated with several other information systems such as asset and inventory information systems, as well as budget planning information systems. The accounting information system is named the Accounting and Reporting Information System or can be abbreviated as ARISE. ARISE is one part of an integrated information system structure called iFRAMES which stands for Integrated Financial Reporting and Management Information System. iFRAMES is an integrated information system structure or framework consisting of 4 modules that have different functions, namely: BORDERS (Budgeting, Monitoring and Evaluation Information System), ARISE (Accounting and Reporting Information System), ASSIST (Asset and Inventory Information System) and Procurement Information System. The focus of this study is to design the logical design needed on ARISE. The relation between iFRAMES structure and ARISE shows in Figure 1
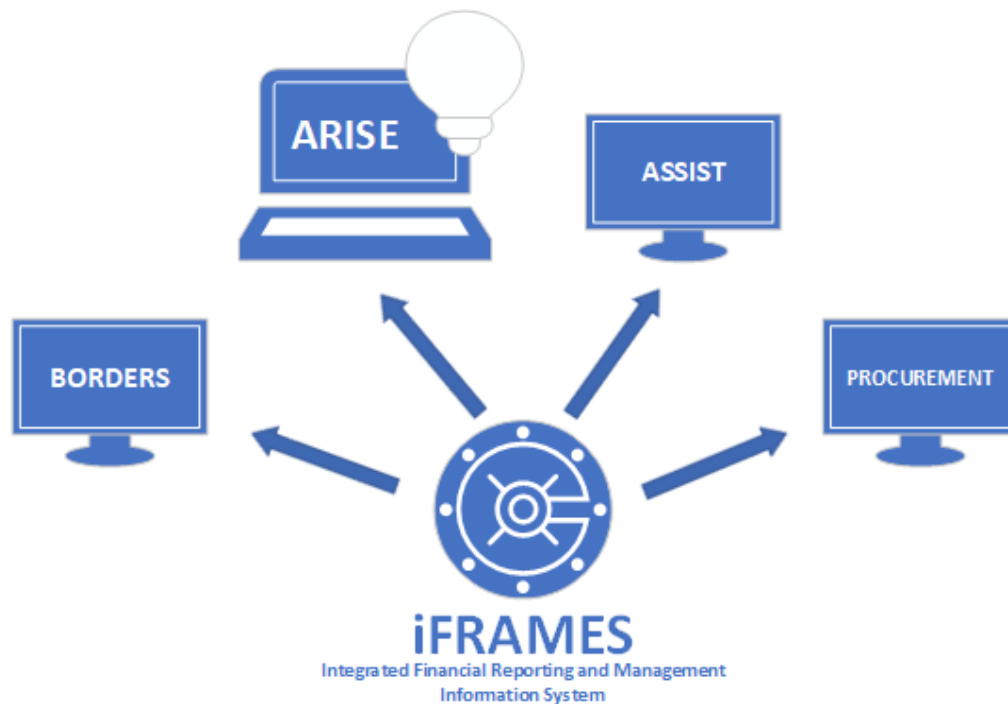
Figure 1 Integrated Information System Structure of iFRAMES

4.4. Accounting and Reporting Information System (ARISE) Logical Design (Data Flow Diagram)

Based on the data collection that has been done and the analysis that has been carried out, this study presents a logical design (data flow diagram) of Accounting and Reporting Information System (ARISE) which is described in 2 diagrams, namely:

1. ARISE Context Data Flow Diagram

Context data flow diagram will describe the data flow that occurs between ARISE and external entities that will interact with the system. The external entity will interact with the system as the input provider or as the recipient of the output of the system, whether it is part of the organization or parties outside the organization. The following is an illustration of context diagram on ARISE.

Figure 2 ARISE Logical Design (Context Diagram)

2. ARISE Data Flow Diagram Level 1

Level 1 data flow diagrams will present a more detailed data flow design that describes the data flow that occurs in ARISE. In it, there are seven pieces of processes that will be carried out by the system in response to the flow of data coming from external entities, as well as data stores. Here is an illustration of data flow diagram level 1 on ARISE.
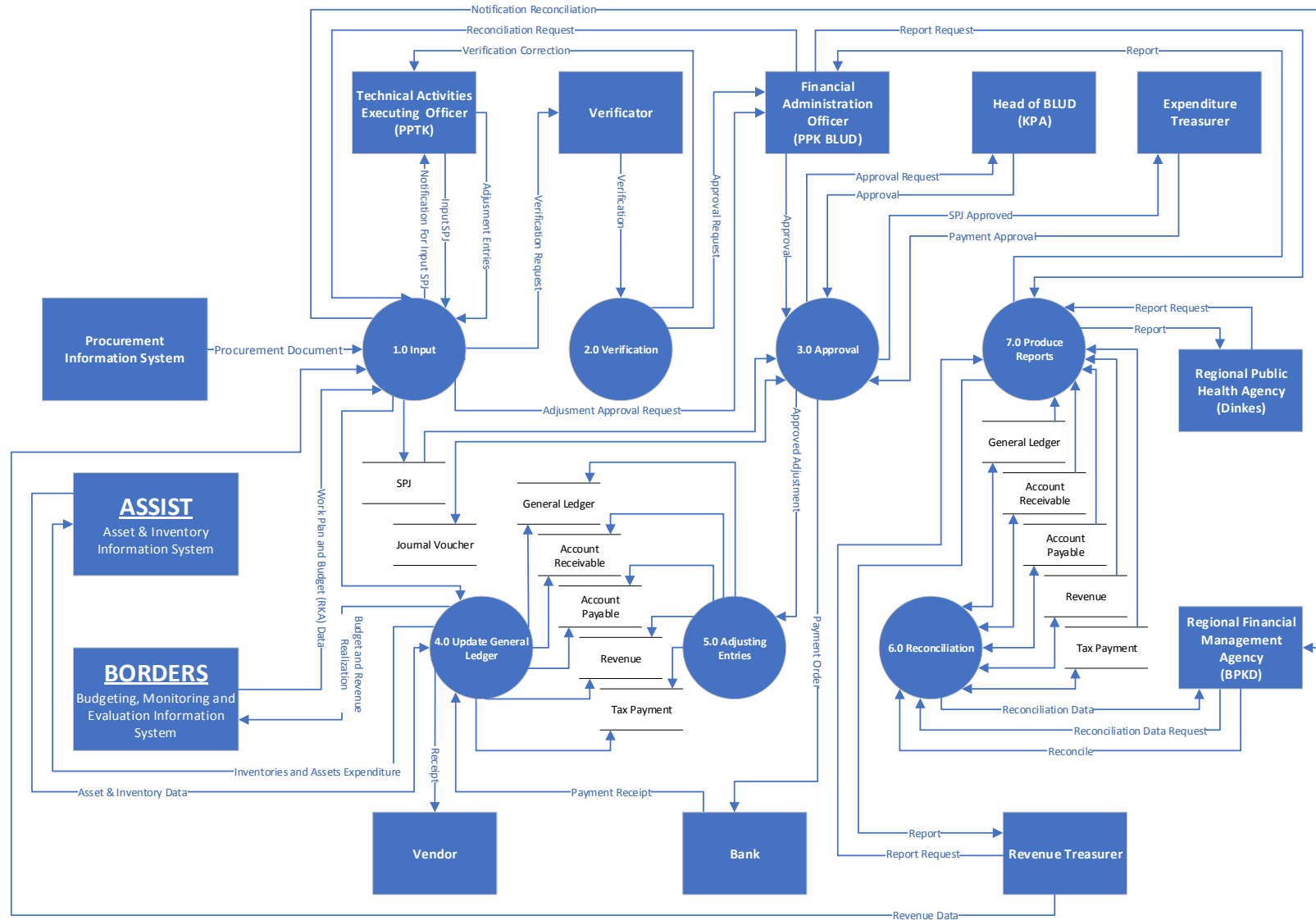
5. DISCUSSION

Accounting and Reporting Information System (ARISE) is designed as part of an integrated system (iFRAMES) that interacts with three other modules, namely: Budgeting, Monitoring and Evaluation Information System (BORDERS), Asset and Inventory Information System (ASSIST), and Procurement Information System. ARISE's logical design was created to answer the BLUD needs related to the accounting and financial reporting process. The data flow in ARISE starts with input from procurement information system which then becomes a trigger to raise a notification to PPTK to input the required expense documents (SPJ). The SPJ that has been inputted will then forward the notification to the verifier to be able to check the completeness of the SPJ. The verified SPJ will then be forwarded to Financial Management Official (PPK) and Head of BLUD (KPA) if they have met the requirements. If the SPJ not yet completed, then the data will return to PPTK accompanied by a note that state the corrections so that PPTK can fulfill the requirement. ARISE will include a time stamp feature to record the time of events happening, related to the data flow that occurs within it. The time stamp data can be used for analyzing response time of related parties so that analysis can be carried out on the performance evaluation of the organization.

In addition to documenting SPJ and facilitating the verification process, ARISE also added a reconciliation feature that is generally carried out by BLUDs with BPKD. The reconciliation feature is expected to be able to increase the efficiency and savings of the budget related to reconciliation events. Regarding control and security, the ARISE features Digital Signature which is certified by the Electronic Certification Agency (BSrE). The digital signature feature expected to improve the quality of information because by applying digital signatures, confidentiality and data integrity a document will become more secure. Besides that, this digital signature can also prevent the denial of responsibility for verification and approval that has been carried out.

The integration of ARISE with asset and inventory systems and the budget is expected to prevent data inconsistencies, and better document and data documentation. Data flow that occurs will flow to other systems in real time (online), thus ensuring data does not change and will be consistent between the information systems with each other. Besides that, ARISE as an online based application will also make it easier for users to access data whenever and wherever needed.

In the end, ARISE expected can facilitate the accounting process properly and correctly starting from journaling to the preparation of financial reports and other reports that are expected to improve organizational performance related to financial management.

6. CONCLUSION

The current way of work which is manually doing some part of the financial reporting process using a spreadsheet application makes the process becomes susceptible to errors, data inconsistencies, inefficient time, inaccurate data, and weak data security and confidentiality. In the end, the absence of an information system that supports financial reporting and management of BLUD has resulted in the implementation of a BLUD financial governance has not been entirely adequate (BPK, 2016).

Based on the information explained earlier, from the internal and external organization viewpoint as stated in the Contingency Theory and then described in 6 aspects used in the PIECES Framework (performance, information, economic, control, efficiency, and services). It concluded that BLUD requires an information system that integrated with several information systems related and several features that can help overcome current problems and maximize existing improvement opportunities.

For that reason, ARISE logical design and analysis of system requirements that have been carried out in this study hopefully can answer the needs of BLUD to be able

to assist BLUDs in implementing adequate BLUD financial administration governance.

This study has limited data and sufficient time to be able to identify and design a procurement information system that should be able to become a unit with accounting and financial reporting information systems. For this reason, further research expected can carry out further case studies on BLUDs to design logical designs and analyze needs for procurement information systems. This study also has not conducted an analysis related to application control features that can be used in the system more deeply, so that further research is expected to be able to conduct further case studies on the needs of application control features that are meet BLUD requirements. In addition, deepening of case studies can also be done at different types of BLUDs, with the hope that they can give further improvements to the logical model design so that it can be used by various types of BLUDs in the provincial government of DKI Jakarta.

References

Andriani, W. (2010). Pengaruh Kapasitas Sumber Daya Manusia dan Pemanfaatan Teknologi Informasi Terhadap Keterandalan dan Ketepatwaktuan Laporan Keuangan Pemerintah Daerah (Studi Pada Pemerintah Daerah Kab.Pesisir Selatan). *Jurnal Akuntansi Dan Manajemen*, *5*, 69-80.

Badan Pemeriksa Keuangan. (2016). *Laporan Hasil Pemeriksaan BPK Tahun 2016*. Jakarta.

Delima, R. P. (2015). Analisis Faktor-Faktor Yang Mempengaruhi Nilai Informasi Pelaporan Keuangan Pemerintah Daerah (Studi Pada Pemerintah Provinsi Riau). *Jurnal Ekonomi*, *23*(September), 37–54.

Indriasari, D., & Nahartyo, E. (2008). *Pengaruh Kapasitas Sumberdaya Manusia, Pemanfaatan Teknologi Informasi, Dan Pengendalian Intern Akuntansi Terhadap Nilai Informasi Pelaporan Keuangan Pemerintah Daerah (Studi Pada Pemerintah Kota Palembang Dan Kabupaten Ogan Ilir)*. Gajah Mada University.

Pemerintah Provinsi DKI Jakarta. (2016). *Peraturan Gubernur No. 204 Tahun 2016*. Jakarta: Pemprov DKI Jakarta.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, *7*, 14–26.

Johnson, B., & Christensen, L. (2016). *Educational Research* (*6 Edition*). SAGE.

Karmila, K., Rusli Tanjung, A., & Darlis, E. (2014). Pengaruh Kapasitas Sumber Daya Manusia, Pemanfaatan Teknologi Informasi, Dan Pengendalian Intern Terhadap Keterandalan Pelaporan Keuangan Pemerintah Daerah (Studi Pada Pemerintah Provinsi Riau). *SOROT*, 9. https://doi.org/10.31258/sorot.9.1.2331

Kartika, K., & Safitri, H. (2018). Pengaruh Kualitas Sumber Daya Manusia Dan Pemanfaatan Teknologi Informasi Terhadap Keandalan Dan Ketepatwaktuan Pelaporan Keuangan Pemerintah Daerah. *Jurnal Akuntansi Universitas Jember*, 15. https://doi.org/10.19184/jauj.v15i2.8304

Kementerian Keuangan. (2010). *Peraturan Pemerintah Nomor 71 Tahun 2010 tentang Standar Akuntansi Pemerintahan, Pub. L. No. 71 (2010)*. Jakarta: Kementerian Keuangan.

Kieso, D. E., Weygandt, J. J., & Warfield, T. D. (2016). *Intermediate Accounting*. John Wiley & Sons, Inc.

Onaolapo, A. A., & Odetayo, T. A. (2012). Effect of accounting information system on

organisational effectiveness: a case study of selected construction companies in Ibadan, Nigeria. *American Journal of Business and Management*, 1(4), 183–189.

Permana, I. B. G. B., & Wiratmaja, I. D. N. (2016). Pengaruh Sumber Daya Manusia, Komitmen Organisasi, Sistem Informasi Pada Kesiapan Penerapan Laporan Keuangan Pemerintah Daerah Berbasis Akrual. *E-Jurnal Akuntansi Universitas Udayana*, 16(3), 2260–2287.

Reinking, J. (2012). Contingency Theory in Information Systems Research. *Integrated Series in Information Systems*, *28*(Springer), 249.

Romney, M. B., & Steinbart, P. J. (2015). *Accounting Information Systems*.

Soudani, S. N. (2012). The Usefulness of an Accounting Information System for Effective The Usefulness of an Accounting Information System for Effective Organizational Performance. *International Journal of Economics and Finance*, (May). https://doi.org/10.5539/ijef.v4n5p136

Whitten, J. L., & Bentley, L. D. (2007). *Systems Analysis & Design Methods* (Seventh). McGraw-Hill Irwin.

Winidyaningrum, C., & Rahmawati. (2010). Teknologi Informasi Terhadap Keterandalan dan Ketepatwaktuan Pelaporan Keuangan Pemerintah Daerah Dengan Variabel Intervening Pengendalian Intern Akuntansi (Studi Empiris di Pemda Subosukawonosraten). *Simposium Nasional Akuntansi XIII*, *13*. Retrieved from http://pdeb.fe.ui.ac.id/?p=5369