Register : Jurnal Ilmiah Teknologi Sistem Informasi 3 (2) 83-93
ISSN 2502-3357 (*Online*)
ISSN 2503-0477 (*Print*)
Tersedia *online* di www.journal.unipdu.ac.id
Unipdu
Halaman jurnal di www.journal.unipdu.ac.id/index.php/register

Performance measurement of JP soft application using COBIT 5 framework

Riki Wijaya [a], *Johanes Fernandes Andry* [b]

[a,b] *Department of Information Systems, Bunda Mulia University, Jakarta, Indonesia*

email: [a]*nirvashneo7@gmail.com*

ARTICLE INFO

Article history:
Received 30 March 2018
Revised 3 May 2018
Accepted 28 May 2018
Online 31 May 2018

Kata kunci:
Audit SI/TI
COBIT 5
DSS
ISACA
PT XYZ Gold

Keywords:
Audit IS/IT
COBIT 5
DSS
ISACA
PT XYZ Gold

The format cites this article in APA style:
Wijaya, R., & Andry, J. F. (2017). Performance measurement of JP Soft application using COBIT 5 framework. *Register: Jurnal Ilmiah Teknologi Sistem Informasi, 3*(2), 83-93.

ABSTRAK

PT. XYZ Gold merupakan jenis perusahaan yang berfokus pada bidang perdagangan dan importir produk tinta, kertas, serta ribbon printer cartridge dan sudah melakukan implementasi suatu tipe sistem aplikasi yang digunakan untuk kegiatan operasional perusahaan seperti penjualan, marketing, dan inventori perusahaan. Masalah yang pernah terjadi yaitu ketidaksamaan antara data yang satu dengan data yang dihasilkan oleh aplikasi yang digunakan. Dalam artikel penulisan ini, penulis melakukan audit pada aplikasi JP Soft untuk mengetahui prosedur yang berjalan, apakah sudah sesuai dengan proses bisnis dan juga melihat akurasi data pada bagian transaksi dan inventori. Dan masalah yang ada salah satunya yaitu limit order konsumen di sistem aplikasi, di mana para konsumen dibatasi pesanannya karena beberapa faktor yang sebenarnya belum terjadi limit. Pada penelitian ini dilakukan analisis dan memilih untuk menggunakan framework COBIT 5 dalam penelitian ini. Metode yang digunakan penulis dalam proses pengumpulan data yaitu dengan dilakukannya metode wawancara dan observasi langsung di bagian perusahaan yang bersangkutan. Pada penelitian ini, domain yang dipilih yaitu domain Deliver Service and Support (DSS) dengan berfokus pada IT Proses DSS01 dan DSS03. Berdasarkan penelitian ini, penulis menemukan bahwa pada IT Proses DSS01 berada pada nilai 1.8 dan DSS03 nilai rata-ratanya 2.2. Pada penelitian ini dapat ditarik kesimpulan, bahwa dari hasil tingkat capability level ini yaitu PT. XYZ Gold masih harus banyak melakukan perbaikan untuk meningkatkan capability level yang ada, karena masih cukup jauh dari expected level yang diharapkan oleh perusahaan ini.

ABSTRACT

PT. XYZ Gold is a company that focuses on trading and importing ink, paper, and ribbon printer cartridge products and has implemented a type of application system used for company operations such as sales, marketing, and inventory. The problem that ever happened is not matched between one data with data generated by the application used. In this writing article, the authors audit the JP Soft application to find out what procedures are running whether they are in accordance with the business process and also look at the accuracy of the data on the transaction and inventory sections. And the problem is one of them is the consumer's limit order in the application system where consumers are limited orders due to several factors that actually have not happened limit. The author analyzed and chose to use the COBIT 5 framework in this study. The method used by the author in the process of data collection is by interview and direct observation in the company concerned. In this study, the selected domain is Deliver Service and Support (DSS) domain by focusing on IT Processes DSS01 and DSS03. Based on this research, the authors found that in the IT Processes DSS01 is in the value of 1.8 and DSS03 the average value 2.2. The author concludes that from the level of capability level is PT. XYZ Gold still has a lot of improvements to improve the capability of the existing level because it is still quite far from expected levels expected by this company.

ISSN 2502-3357 (*Online*)
R. Wijaya and J. F. Andry /Register 3 (2) 83 - 93 ISSN 2503-0477 (*Print*)

1. Introduction

The development of information technology nowadays has caused a big change in the business sector as well as the industry. Most of organizations have been widely integrated by information technology (Andry, 2016). Where each company wants to maximize the role of IT technology. Also, it will become a vital thing in the work activities and also this information technology has a big impact on the management of an organization business (Lubbad, 2014).

In this global era full of rapid change and communication right now, information has become an important strategic asset for every company that wants to compete and also information technology become an important contributor to the success of the economy (Andry, 2016). The business competition required a targeted strategy to achieve the company's business objectives. The strategy developed helps companies find alternatives and problems and support decision-making processes (Kristanto, 2016). The key to success of an organization depends on how far they can manage and control their IT to ensure that the expected rewards are realized (Andry, 2016).

PT. XYZ Gold engaged in trading ink products, ribbon printer cartridges, and ink refill services. This trading company is aware of the role of a supportive system in driving the company's performance. And they have implemented a system to process transactions, inventory, sales, taxes and the others. The business process starts from the existing order either from sales or direct orders will be forwarded to the division of admin marketing. And then the order will be submitted to the finance department to process the order goods and entered into the accounting system. That will be done control management of goods data based on existing orders. Accounting system applied to this company called JP Soft.

Where this application covers all sorts of existing transactions such as receipt of goods, sales, and including inventory. Based on the results of interviews conducted, JP Soft application has not been audited and measured the success rate in supporting the activities of the company every day. The author sees the existence of an error slot that can occur when an error occurs in data verification and input results that can affect every part of both the value of sales to an inventory of goods in the database. Conditions were when consumers want to order, and the system cannot process such transactions because of limit orders that consumers should still be able to make reservations. So this makes the employee must ask permission from the director to be able to access the transaction. This could happen due to incorrect input, stock errors and double orders.

In this journal, the authors will conduct an analysis using the COBIT 5 framework. COBIT is a set of guidelines that are applicable and applied to support IT performance as well as corporate governance. (Rubino & Vitolla, 2014). This framework can determine the balance of system performance that runs and also optimization system. There are 5 domains of COBIT 5 and split into five domains such as EDM, APO, BAI, DSS, and MEA. Each domain is split into several processes where the total of processes of the five domains is 37 processes. The role of the audit of this company is in measuring the performance of the application of information systems in the company and the identification of problems that arise. With this audit, we can connect the business value of the company with the implementation of the application system used.

The author will focus the research on the Delivery Support and Service (DSS) domain on the process of DSS01 and DSS03 that discusses the company's ability to run the procedural system and also when addressing a problem due to an error that occurred. DSS01 is chosen because in this domain focuses on how this company manages the company's operational activities every day both from the performance of JP soft applications and employee work operations. And DSS03 is chosen because in this domain will be discussed how companies overcome and control the problems that occur in the company. It is expected that with this audit the company gets an idea of how the performance of the application system is already running. And also will be given recommendations and input for this company to be better.

2. *State of the Art*

 https://doi.org/10.26594/register.v3i2.1121

ISSN 2502-3357 (*Online*)
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The COBIT framework is concept-oriented and standards-oriented, focused on existing business objectives and is a managerial and technical tool for IT units issued by an organization called ISACA in 1992 (ISACA, 2013). In 2012, a new COBIT framework has been released. The COBIT 5 framework is the successor reference model of the COBIT 4.1 process model. According to Pasquini and Galiè (2013) COBIT 5 Process Capability Model has six level. Each level has a clear explanation and distinction in determining the level of corporate capability based on the domain used.

The Fig. 1 explains how the criteria for determining a level capability of a domain as well as the level of attribute process that exists. Fig. 1 is described in Table 1.

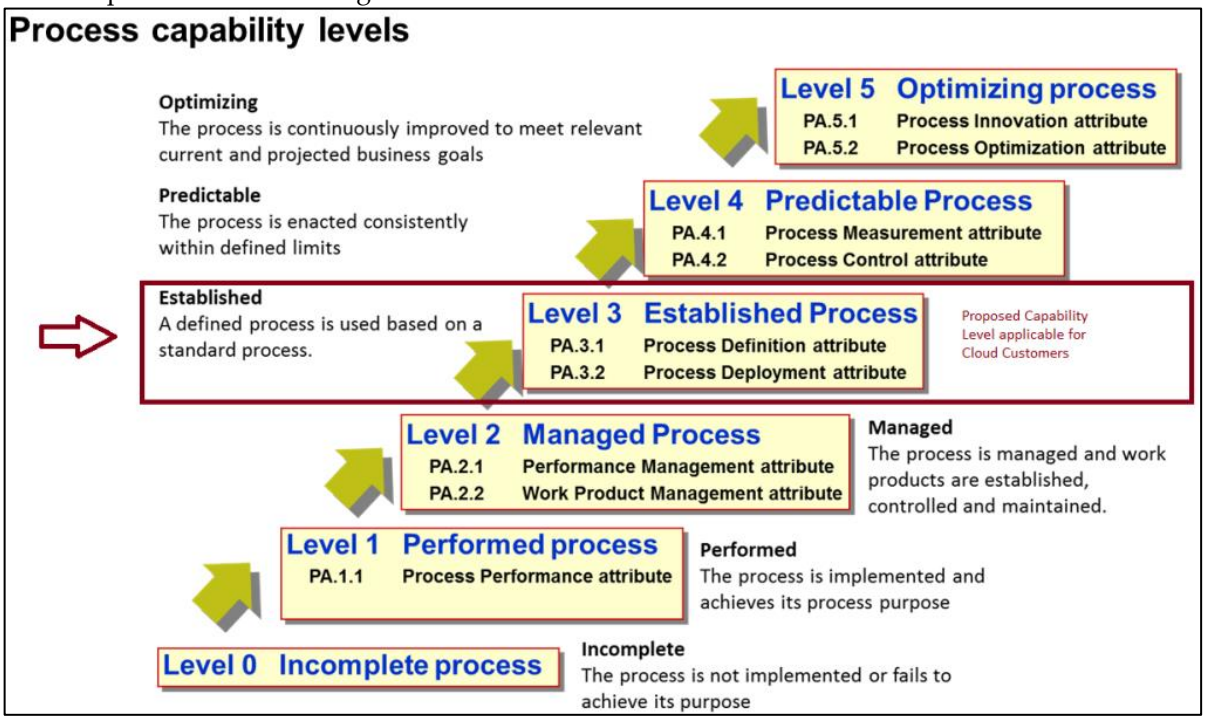

Fig. 1. Process Capability Levels (Braga, 2016)

Table 1. Capability Model of COBIT 5 Process (Andry & Christianto)

Level	Description
Level 0: Incomplete process.	The process cannot reach its objective or is not placed. In this level, the process has no objective to achieve. That is why this level does not have an attribute.
Level 1: Performed process.	The implementation of the process reaches its own purpose. This level has only "Process Performance" as process attribute.
Level 2: Managed process.	The process is implemented following a series of activities such as planning, monitoring and adjusting activities. The outcomes will be established and maintained. Process attributes at this level are "Performance Management" and "Work Product Management" as process attributes.
Level 3: Established process.	The previous level is now implemented and allows the achievement of the process outcomes. Process attributes at this level are "Process Definition" and "Process Deployment".
Level 4: Predictable process.	This level implements processes within a defined boundary that allows the achievement of the processes outcomes. Process attributes at this level are "Process Management" and "Process Control".
Level 5: Optimizing process.	This level implements processes in the way that makes it possible to achieve relevant, current and projected business goals. Process attributes at this level are "Process Innovation" and "Process Optimization".

In each process that is rated has 4 levels of assessment, which are:

a. Not Achieved (N): When the result of the assessment based on the analysis between 0% - 15%.
b. Partially Achieved (P): Conditions are reached when the assessment results are at 15% - 50%.
c. Largely Achieved (L): The condition is achieved if the assessment results reach 50% - 85%.
d. Fully Achieved (F): If the assessment results already reach 85% - 100%.

https://doi.org/10.26594/register.v3i2.1121

ISSN 2502-3357 (*Online*)
R. Wijaya and J. F. Andry /Register 3 (2) 83 - 93 ISSN 2503-0477 (*Print*)

There are several researchers who have conducted the research and also conducted an audit using COBIT 5 framework such as research conducted by Lolong and Purwadaria (2017) at Klabat University to measure the effectiveness of the library system with the COBIT framework 5. Candra, Atastina, and Firdaus (2015) also conducts an information technology audit with a focus on the DSS domain to assess the application of existing systems and perform gap analysis. Subsequent research was done by (Elshadda & Andry, 2018). She conducts audit focused on the inventory using COBIT 5 framework.

Waluyan and Manuputty (2016) audited the Starclick application to see and confirm the appropriateness of the information system with the business process being run so that we can see the existence of non-conformity of activities related to the IS in the company. And the last one Jaya, Widyantara, and Linawati (2017) audited on the application of government financial system applications using PO domain and ITIL to determine the success rate of this application in support of work activities that run.

3. Research Methodology

In this study, the authors make observations and methods of direct interviews to parties directly related to the application of JP Soft application system. Where this is done so that the results of this analysis really become an accurate result of the condition of the system used by employees in this company. This study uses the COBIT 5 framework to provide recommendations for the resulting level capabilities. Methods of data collection to be used here are through interviews and from literature studies. This study focuses on Domain DSS and processes DSS01 and DSS03. DSS01 is used because it aims to optimize and provide advice to improve existing operational work procedures. DSS03 is used because it aims to control the existing problems by providing input and how to overcome them.

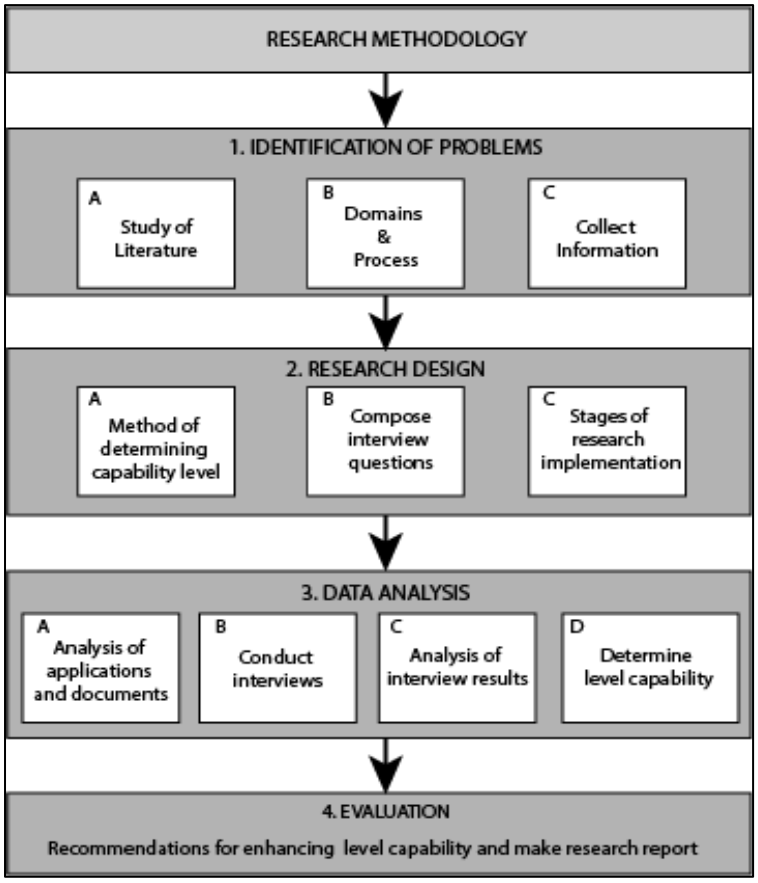

Fig. 2. Research Methodology

In this section the author will explain in connection with the existing research methodology which is divided into 4 parts, the method is illustrated in Fig. 2:

1. Case Study

ISSN 2502-3357 (*Online*)
R. Wijaya and J. F. Andry /Register 3 (2) 83 - 93 ISSN 2503-0477 (*Print*)

a. The first step done by the author is to conduct a study of literature related to the purpose of doing this research.
b. Then the auditor will determine the domain to be used and also the process suitable for use based on existing sources after the next identification process will be done the appropriate domain selection from the existing domain in COBIT 5.
c. The auditor will collect relevant information and will limit the scope of existing research.

2. Research Design
   a. In the second stage is started with a description of the method that will be applied to determine the system level capability.
   b. Make a list of questions to be asked to the resource persons.
   c. Stages to examine the implementation will be used.
3. Data Analysis
   a. Conducting analysis of application system and document adjustment.
   b. After the analysis and the document has been adequate then will be conducted interviews based on the domain that has been determined.
   c. Conduct analysis of calculation of interview result.
   d. Determine the level capability based on the conversion result of interview analysis that has been done.
4. Evaluation
   Provide recommendations to improve existing level capabilities and form a report for the company to provide feedback on the results of research that has been done.

4. Result and Discussion

In this section will be the discussion and explanation of the analysis conducted based on research methodology that has been run. Researchers will discuss the audit results of two domains that have been selected are DSS01 and DSS03. And from those results will be given a recommendation based on the existing gap between the current level and expected level.

4.1. DSS01 manage operations

This domain explains how to execute the operational procedures and company activities that required to deliver internally and outsourced IT services, including organizing standard procedures and the required activities such as monitoring.

4.1.1. DSS01.01 perform operational procedures

In this sub-process discusses operational procedural management based on the existing schedule, ensures that applicable security standards are good also log backups in accordance with established policies and procedures.

This trading company is backing up data every week. However, the existing deficiency is in this application there is no access log of any existing users. The company can only check by calling the central IT to check access logs. When the error occurs, it will rather difficult to know the responsible employees. Attribute process reaches 2.2 that is work product management and is at capability level in level 2 that is managed process.

The recommendation is to add features to view the activity log and access the use of the application system, making it easier to know who is accessing the system. With the feature to view the access log will be much easier in detecting errors that occur.

4.1.2. DSS01.02 manage outsourced IT services

In this sub-process, it discusses how relationship management with service providers relates to the system used. The sub-domain discusses how the relationship between service providers and internal IT management processes includes performance and capacity planning, change management, configuration management, service and internal management, problem management, security management, business continuity and performance monitoring and reporting process.

https://doi.org/10.26594/register.v3i2.1121

ISSN 2502-3357 (*Online*)
R. Wijaya and J. F. Andry /Register 3 (2) 83 - 93 ISSN 2503-0477 (*Print*)

Application system applied in this company is designed by the external company. If there are problems and shortcomings of this application, then the company must call the external IT to fix the error or to upgrade the system. This causes the application in this company is less regularly maintained as it should because there are no IT developers in this company itself and maintenance is done only limited maintenance that can run the company's own internal. Based on the results of data analysis, this subdomain attribute process attribute 2.2 that is work product management and is at capability level in level 2 that is managed process.

Recommendations are provided by adding HR in the IT section and improve maintenance by continuing to update the system used. The reason why the need to add more human resources especially field of IT because this company is minimal with IT personnel. In addition to these reasons, with additional employees in the IT department, the management and control of existing problems related to the system will be directly addressed without external assistance.

4.1.3. DSS01.03 monitor infrastructure

In this sub-process, discuss on identifying the level of information to be recorded based on a consideration of risk and performance, managing infrastructure lists, and establishing procedures for monitoring event logs and conduct regular reviews.

Company-owned infrastructure is documented. Though there is no list of anyone who is monitoring the infrastructure. However, if an event or problem occurs there will be a report. This sub-domain attribute process reaches level 2.2 and the capability level in level 2 that is managed process.

To increase this domain, the company should pay more attention to the control and maintenance of existing infrastructure by appointing several employees to be responsible for this case. The company is less aware of the existing infrastructure documentation in the company. This will lead to some facilities that are not managed properly. Therefore, the director should appoint some employees to manage the existing infrastructure and make the documentation so that the infrastructure monitor will be maximized.

4.1.4. DSS01.04 manage the environment

This sub-process discusses how to manage the environment around the company, which includes the laying out of IT equipment, policies when it wants to access or enter the IT environment, identify possible problems such as human error or natural disasters and how companies manage devices in monitoring and controlling the IT environment.

In relation to the management of the working environment, the company has kept the environment well. The existence of rules when entering the workspace and cleanliness of the work environment is very concerned. The only drawback is that there is no structured facility layout procedure. Attribute process reaches 3.1 that is processed definition and is at capability level in level 2 that is managed process.

Recommendation to maintain and improve capability level of this sub-domain by applying standard procedure in the placement of IT infrastructure considering various aspects. Moreover, they could install disaster detection devices such as fire and others. Since this company has 3 floors, they should install an alarm or something in the event of a disaster.

4.1.5. DSS01.05 manage facilities

Manage facilities, including power and communications equipment, in line with laws and regulations, technical and business requirements, vendor specifications, and safety guidelines.

The company has a generator when the power goes out but recently the generator is broken. Maintenance of the facility in this company is done regularly. But this company has not run the cabling requirements in accordance with applicable rules. Attribute process reaches 2.1 that is performance management and is at capability level in level 1 that is performance process.

Management of facilities in this company somewhat less good. The company generator is now damaged and the company has not replaced it with a new one. Recommendations to improve this

ISSN 2502-3357 (*Online*)
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domain is to pay more attention to the facilities owned by the company because each of these aspects will have a direct impact on the company's performance as well as customer satisfaction.

To obtain a clear picture and understanding, it can be done by mapping the process attributes (PA). This mapping is done to know the achievement of existing information systems based on the results of interviews and analysis in the company. Mapping this attribute process is required to obtain the level of capability of each sub-process on a domain.

Each attribute process must achieve fully achieved or largely achieved to be able to go up to the next level. For each PA which is only at the first level (eg.2.1, 3.1, 4.1 and 5.1), then the level capability obtained is 1 level below PA. So the process with PA 2.1 only has capability level 1. For the 4 levels of assessment in each PA already explain in Fig. 1.

Table 2. Mapping Process Attributes Form (DSS01)

IT Processes	PA 1.1	PA 2.1	PA 2.2	PA 3.1	PA 3.2	PA 4.1	PA 4.2	PA 5.1	PA 5.2
DSS01. 01	F	F	F	N	N	N	N	N	N
DSS01. 02	F	F	F	N	N	N	N	N	N
DSS01. 03	F	F	F	N	N	N	N	N	N
DSS01. 04	F	F	F	F	N	N	N	N	N
DSS01. 05	F	F	N	N	N	N	N	N	N

Based on the results of interviews conducted poured into the Table 2, we can see that in each IT Processes achieve different attribute process. DSS01.01 reaches PA 2.2 (fully achieved) so the level capability is at level 2. While in the sub-process DSS01.04 only reaches PA 3.1 indicating that the capability level did not reach level 3 and only in level 2.

In Table 3 the DSS01 (Manage Operations) results show the overall level capability level in the DSS01 sub-process and the mean result for the DSS01 IT Processes itself.

Table 3. Process Capability Domain DSS01. Manage Operations

Domain	Description	Process Attributes	Capability Level	Expected Level
DSS01. 01	Perform operational procedures	2.2	2	3
DSS01. 02	Manage outsourced IT services	2.2	2	3
DSS01. 03	Monitor IT infrastructure	2.2	2	3
DSS01. 04	Manage the environment	3.1	2	3
DSS01. 05	Manage facilities	2.1	1	3
Average			1.8	3

From the calculation in Table 3 can be seen that the DSS01 process is only reached the level capabilities 1.8. Have a big enough difference with what is expected of the company that is level 3.

4.2. DSS03 Manage problems

This domain discussed to identify and classify problems, root causes and also provide timely resolution and recommendations to prevent recurring incidents and for improvements. Improve service levels, customer convenience and reduce costs by reducing the number of operational problems.

4.2.1. DSS03.01 identify and classify problems

This sub-process define and implement criteria and procedures to report problems, including problem classification, categorization, and prioritization. Define priority levels through consultation with the business of identification and root cause analysis are handled in a timely manner according to the agreed-on SLAs. Base priority levels on business impact and urgency.

https://doi.org/10.26594/register.v3i2.1121

ISSN 2502-3357 (*Online*)
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When there is a problem or constraint in this company there will be reporting to the parties who can handle the problem. The level of this problem is handled based on the difficulty level of the existing problems. It's just that this company has not made a system to accommodate problems or complaints from existing users. Attribute process reaches value 2.2 that is work product management and its capability level is in level 2 that is managed process. The recommendation that can be given that is made with a system to accommodate all kinds of reporting from employees related to incidents or problems. The system will be directly categorized the type of problem that occurs and given a solution immediately if there are information related problems in the database system.

4.2.2. DSS03.02 investigate and diagnose problems

Investigate problems using relevant subject management experts to assess and analyze root causes and diagnose the problems by using related management subjects to detect the root cause of the problem. Problem identification is done by comparing incident data with existing data in the database and do report to communicate progress in solving the problems that occur.

When there is a problem and has been reported to the relevant parties it will be directly conducted an analysis of problems affecting the work activities of the company. The problem will be checked against all the data and related documents and identification of existing problems in order to immediately seek the right solution. Attribute process reaches value 3.2 that is processed deployment and its capability level is in level 3 that is established process. In this process, the company is good enough in identifying the problem. They just need to maintain this and are also improved in a way more responsive to any problems that occur.

4.2.3. DSS03.03 raise known error

As soon the root of the problem is identified, create a known error record and the best solution that can be used. Identify and evaluate process solutions to known errors based on benefit, business impact and urgency.

Problems that have already been dealt with in this company will be kept by the company so that if the same problem occurs there will be an appropriate solution that can be run. It's just a matter of a high degree of urgency that is done a recording. But there has been no solution development to deal with new problems. Attribute process reaches value 2.2 that is work product management and its capability level is in level 2 that is managed process. The recommendation is that the company should pay more attention to the problems that have occurred and carried out the development of solutions. So if there will be a problem, the solution can be applied.

4.2.4. DSS03.04 resolve and close problems

Identify and deliver sustainable solutions to address the root of existing problems by communicating with stakeholders about successes in eliminating the problem, and fixing the problem scheduling. And by ensuring regular reports of progress in resolving problems and errors.

In solving and solving existing problems, the company is always doing the identification and find the best solution. It's just related to schedule here is not good. All is done verbally, there is no written scheduling done. They should pay attention to this by making a written report related to this matter. Attribute process reaches 3.1 that is work product management because it does not reach process attribute 3.2 then reside in capability level 2 that is managed process. What needs to be done here is to make a more structured scheduling in handling a problem with making a schedule of closing problems that exist because a written report on this is necessary to solve the problem more quickly.

4.2.5. DSS03.05 to perform proactive problem management

This sub-process focus on collecting data and analyze operational data (especially incident) to identify the trends that may indicate problems. Log problem records to enable assessment.

ISSN 2502-3357 (*Online*)
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Actions were taken to optimize resources still do not exist. Communication with stakeholders related log problem still not done. It's just that reporting the problem has been done well following the prevailing policies. Attribute process reaches value 2.2 that is work product management and its capability level is in level 2 that is managed process. The recommendation is to identify emerging trends that may indicate problems by improving communication with related parties and also pay attention to the log of existing problems. If there is no need to prepare a record problem that occurs. In Table 4 explains the process mapping attributes of IT Processes DSS03 and the determination of capability values.

Table 4. Mapping Process Attributes Form (DSS03)

IT Processes	PA 1.1	PA 2.1	PA 2.2	PA 3.1	PA 3.2	PA 4.1	PA 4.2	PA 5.1	PA 5.2
DSS03. 01	F	F	F	N	N	N	N	N	N
DSS03. 02	F	F	F	F	F	N	N	N	N
DSS03. 03	F	F	F	N	N	N	N	N	N
DSS03. 04	F	F	F	F	N	N	N	N	N
DSS03. 05	F	F	F	N	N	N	N	N	N

Based on the results of interviews conducted poured into the Table 4, can be seen on IT Processes DSS03.01 and DSS03.05 are on Process Attributes (PA) 2.2. So the capability level for these two processes is at level 2. For IT Processes DSS03.02 reaches PA 3.2 with a level 3 capability value. This is because in this process the system and the company's operations are running well and documented.

Table 5. Process Capability Domain DSS03 Manage Problems

Domain	Description	Process Attributes	Capability Level	Expected Level
DSS03. 01	Identify and Classify Problems	2.2	2	3
DSS03. 02	Investigate and Diagnose Problems	3.2	3	3
DSS03. 03	Raise Known Error	2.2	2	3
DSS03. 04	Resolve and Close Problems	3.1	2	3
DSS03. 05	Perform proactive problem management	2.2	2	3
Average			2.2	3

In Table 5 show the overall level capability level in the DSS03 sub-process and the mean result for the DSS03 IT Processes itself. In the process DSS03 only be able to reach the level of 2.2.

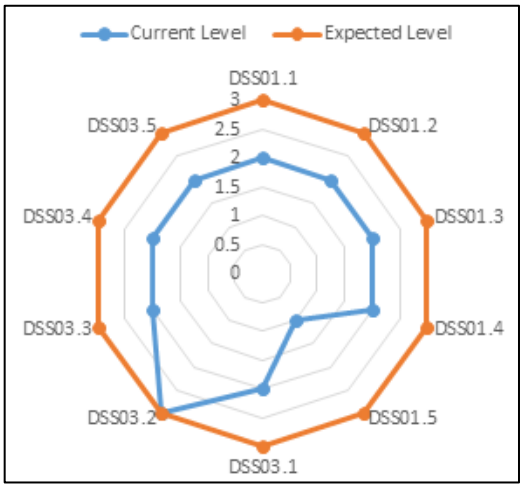

Fig. 3. Recapitulation Result from subdomain DSS01 and DSS03.

From all the calculations in each table, it can be seen that level of level capability which in sub-process in domain DSS01 and DSS03 average in level 2. For more details, can be seen in Fig. 3 which

https://doi.org/10.26594/register.v3i2.1121

ISSN 2502-3357 (*Online*)
R. Wijaya and J. F. Andry /Register 3 (2) 83 - 93 ISSN 2503-0477 (*Print*)

describe a result of recapitulation of DSS01 and DSS03 domain calculation. In the figure to be presented below describes the current level and expected level of the calculation of the domain that has been done.

From Fig. 3, it can be concluded that the company still has to improve the management of the system because the expected value of the company is still quite far away. We can see that the blue line is the current level and the orange line itself is the condition expected by the company. In the average domain DSS01 is still in the level of capability level 2 managed processes. While in the domain DSS03 can be quite good because there are sub-domains that reach the company's expected level of sub-domain DSS03.2 which focuses on investigating and diagnose problems that occur.

5. Conclusion

From the above discussion, it can be concluded that this company has done maintenance and management problems quite well. They know what to do when there are a problem and action to take to overcome the problems that occur. Although for its own operations in this company does not have a well-structured procedure. From DSS01 sub-domains can be seen that this company still needs to make repairs and rearrangement in connection with operational management run. Especially regarding the management of existing company's facility infrastructure. So in this sub-domain, its capability level only reach 1.8.

And in the DSS03 sub-domains related to problem management, they are good at identifying problems and solving existing problems although there are still shortcomings such as the absence of a system that accommodates the problems reported by each employee. And because of the lack of IT personnel cause, there are still some problems that often happen again. But overall this company is good enough in control of the problems that occur. In this sub-domain, its capability level reaches 2.2. The recommendation is given that the company implements the existing improvements based on recommendations from each sub-domains that exist in order to improve company performance in operational activities, manage problems and maintain the application system applied.

The limitations of this study are still lack of discussion on the Domain DSS (Delivery Service and Support) as a whole. The DSS domain in the COBIT 5 framework has 6 IT processes. In this research, the author only uses 2 IT Processes that is DSS01 and DSS03. This is because of the limited time to conduct interviews and in the determination of IT Processes used are adjusted to the condition of the system and the operations of the company being audited. However, these 2 IT Processes are the most appropriate to the audit focus. Suggestions for further research that needs to be done more comprehensive research by connecting COBIT framework with other IT tools such as Balance Scorecard (BSC) or ITIL in order to maximize assessment not only in terms of system implementation but also alignment of business value of an organization / company.

6. References

Andry, J. F. (2016). Audit of IT Governance Based on COBIT 5 Assessments: A Case Study. *TEKNOSI, 2*(2), 27-34.

Andry, J. F. (2016). Performance measurement of information technology governance: A case study. *Jurnal Sistem Informasi (Journal of Information System), 12*(2), 56-62.

Andry, J. F. (2016). Process capability model based on COBIT 5 assessments (case study). *Jatisi, 3*(1), 23-33.

Andry, J. F., & Christianto, K. (n.d.). Audit Menggunakan COBIT 4.1 dan COBIT 5 Dengan Case Study. *Teknosain*.

Braga, G. (2016). How COBIT 5 Improves the Work Process Capability of Auditors, Assurance Professionals and Assessors. *ISACA Journal, 1*, 1-4.

Candra, R. K., Atastina, I., & Firdaus, Y. (2015). *Audit teknologi informasi menggunakan framework COBIT 5 pada domain DSS (Deliver, Service, and Support) (Studi kasus: IGRACIAS Telkom University).* Bandung: Telkom University.

Elshadda, S. B., & Andry, J. F. (2018). Audit sistem informasi inventory menggunakan kerangka kerja COBIT 5 di PT. Everlight. *IKRAITH-INFORMATIKA, 2*(1), 26-33.

ISSN 2502-3357 (*Online*)
R. Wijaya and J. F. Andry /Register 3 (2) 83 - 93 ISSN 2503-0477 (*Print*)

ISACA. (2013). *ISACA - 2013 Annual Report.* Rolling Meadows: ISACA.

Jaya, P. A., Widyantara, I. M., & Linawati, L. (2017). Audit Penerapan Aplikasi Sistem Keuangan Pemerintah Daerah Kabupaten Klungkung Menggunakan COBIT Domain PO dan ITIL. *Teknologi Elektro, 16*(1), 53-60.

Kristanto, T. (2016). Enterprise architecture planning untuk proses pengelolaan manajemen aset dengan Zachman framework. *Register: Jurnal Ilmiah Teknologi Sistem Informasi, 2*(2), 98-104.

Lolong, S., & Purwadaria, D. D. (2017). Analisis efektivitas sistem informasi perpustakaan menggunakan COBIT 5.0 di Universitas Klabat. *COGITO SMART JOURNAL, 3*(2), 185-195.

Lubbad, R. R. (2014). *Towards An Abbreviated Model of IT governance for Palestinian government sector According to COBIT 5 framework.* Gaza: The Islamic University of Gaza.

Pasquini, A., & Galiè, E. (2013). COBIT 5 and the Process Capability Model. Improvements Provided for IT Governance Process. *Proceedings of FIKUSZ '13 Symposium for Young Researchers* (pp. 67-76). Budapest: Óbuda University.

Rubino, M., & Vitolla, F. (2014). Internal control over financial reporting: opportunities using the COBIT framework. *Managerial Auditing Journal, 29*(8), 736-771.

Waluyan, G., & Manuputty, A. D. (2016). Evaluasi kinerja tata kelola TI terhadap penerapan sistem informasi Starclick framework COBIT 5 (Studi kasus: PT. Telekomunikasi Indonesia, Tbk Semarang). *Teknosi, 2*(3), 157-166.

 https://doi.org/10.26594/register.v3i2.1121