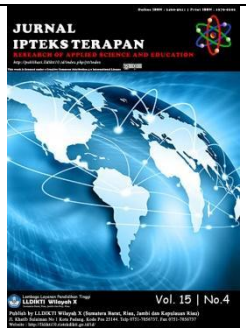

Vol.16 No.4 | Des, 2022

COBIT 5: INFORMATION TECHNOLOGY AUDIT IN RELIGIOUS COURTS

Firdaus[1)], Aggy Pramana Gusman*[2)], Harkamsyah Andrianof[3)]
[123]Universitas Putra Indonesia YPTK Padang
*Corresponding Email: aggusman@gmail.com

Submit:
19/10/2022

Accept:
25/12/2022

Publish:
31/12/2022

Abstract

Information technology in an organization is very important to support organizational assets. An information technology audit needs to be carried out to determine the level of suitability of the current situation with the expected target. This study aims to manage audit findings and produce recommendations for improvement and sustainable management. This study uses the COBIT 5 framework. The chosen domain is DSS (Deliver, Service, and Support). The results of the study show that the average scale is 3.67 with a capability level of 4. The recommendations that appear can be used as a reference for achieving information technology targets at the Padang Class I A Religious Court.

Keywords: Audit, Information Technology, COBIT 5, DSS, Maturity Level

http://publikasi.lldikti10.id/index.php/jit DOI : https://doi.org/10.22216/jit.v15i4 PAGE : 599-606

doi: https://doi.org/10.22216/jit.v15i4 599-606
1979-9292 / 2460-5611 ©2021 © 2022 Lembaga Layanan Pendidikan Tinggi Wilayah X

JIT is Sinta 3 Journal (https://sinta3.kemdikbud.go.id/journals/profile/2143) accredited by Ministry of Research & Technology, Republic Indonesia

ISSN : 1979-9292
JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i4 (599-606) E-ISSN : 2460-5611

INTRODUCTION

The application of information technology in an organization is very important to support organizational assets. The existence of information technology services will certainly make the value of an organization better. If careful planning is carried out in a strategic plan, then the use of information technology within the organization can run optimally. The organizational strategy that has been planned must be in accordance with the organization's business strategy in order to carry out the planned information system strategy. The information strategy will then carry out the designed information technology strategy [31]. To ensure that information technology in an organization has achieved its targets and vision and mission, it is very necessary to carry out an audit of the information technology so that the information technology management mechanism is in accordance with the planning, objectives, and business processes of the organization.

The audit is basically a systematic and objective process of obtaining and evaluating evidence of economic activity, in order to provide assertions/statements and assess how far economic action is in accordance with applicable criteria and communicate the results to related parties [30].

Information Technology Auditing is the process of collecting and evaluating evidence to determine whether computer systems protect assets, maintain data integrity, allow organizational goals to be achieved effectively, and use resources efficiently [25]. To technically be classified as an IT audit, the audit must involve information technology, either as a specific focus of the audit or as a means to complete the assignment. [20].

This auditing activity aims to determine the level of conformity between the statement and the established criteria and to communicate the results to interested parties. [9].

Carrying out the implementation of information technology requires a framework that is able to help an organization improve information technology governance in accordance with IT governance standards [12]. In conducting an information technology audit, a framework guide is also needed to assist and facilitate the audit process. In this study, researchers used the COBIT 5 framework as a reference in conducting audits.

COBIT 5 is one of the business frameworks for enterprise IT governance and management. This evolutionary version incorporates the latest thinking in corporate governance and management techniques and provides globally accepted principles, practices, analytical tools, and models to help increase the trust, and value of information systems [11]. This framework addresses business and IT functional areas in an enterprise and considers the interests related to IT internally and externally to stakeholders. Companies of all sizes, whether commercial, non-profit, or in the public sector, can benefit from COBIT 5 [21]. The advantages of COBIT: (1) Effective and Efficient Deal with information that is relevant and related to business processes, and as best as possible the information is sent in a timely, correct, consistent and useful manner. (2) Confidentiality Protection of sensitive information from irresponsible access .(3) Integrity Related

ISSN : 1979-9292

JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i4 (599-606)

E-ISSN : 2460-5611

to the accuracy and completeness of the information. (4) Availability is related to information available when needed by current and future business processes. (5) Real Compliance Related to the provision of appropriate information for management [29].

The Padang Religious Court Class I A is a first-level Religious Court (PA) government agency with jurisdiction and domiciled in the city of Padang, West Sumatra. The Padang Religious Court has the authority to examine, decide and settle certain cases for Muslims such as inheritance, wills, marriages, endowments, grants, and others related to Islamic law. With the existence of authority, of course, the Religious Courts also have several main tasks and functions such as providing services in the administration section. Currently, the Padang Religious Court in administrative services has made adjustments and developments in the field of information technology in legal services. This is evidenced by the existence of a system implemented to maximize performance and make it easier for judicial applicants to obtain the information needed, such as the official website of the Religious Courts, Case Tracing Information System (SIPP), e-court, Supervision Information System (SIWAS) and so on.

From this explanation, it can be seen how important the role and benefits of information technology are for an organization in order to improve the performance and quality of the organization and the importance of conducting an audit to find out whether the application of information technology in an organization is running according to targets and expectations.

RESEARCH METHODS

The research framework is the sequence of activities carried out in a study. The research framework is a concept or stages carried out in research that links one variable to another. This research framework was created before conducting a study so that the preparations for the research went as expected and could solve existing problems.

After obtaining the required data, data analysis is then carried out according to the standard COBIT 5 framework, as well as analyzing information technology governance at the Padang Religious Court so that questionnaire statements can be designed in accordance with ongoing information technology governance and guided by the COBIT 5 framework using the DSS domain.

After all the data is collected, the calculation process is carried out using the capability level. Furthermore, a report is prepared and information is provided in the form of information technology audit recommendations obtained from research findings which will then be given to the Padang Religious Court Class I A.

RESULTS AND DISCUSSION

his stage is the stage of process domain analysis, maturity level analysis, and gap analysis based on the COBIT 5 framework guidelines so as to produce information technology maturity levels and recommendations for improvement.

To determine the level of maturity in information technology can be seen based on table 1 below :

ISSN : 1979-9292

JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i4 (599-606)

E-ISSN : 2460-5611

Maturity Scale	*Level* Capability	*Value*
0 - 0,49	*Level 0*	*Incomplete*
0,50 - 1,49	*Level 1*	*Performed*
1,50 - 2,49	*Level 2*	*Managed*
2,50 - 3,49	*Level 3*	*Established*
3,50 - 4,49	*Level 4*	*Predictable*
4,50 - 5,00	*Level 5*	*Optimizing*

Table 1 Maturity Scale Level Capability Value

The description of each value is as explained below:

Incomplete: The process or idea has not been implemented to achieve its goals. At this level, there is little or no evidence of the systematic achievement of process objectives.

Maturity Level Measurement Results

This stage is the result of calculating all selected levels in the DSS domain questionnaire to analyze and determine the results of the maturity level of information technology governance at the Padang Religious Court. Analysis can be seen in table 2 as follows :

Proces	Code	Avarege	Level	Skla	Level
DSS01	DSS01-1	2,67	3	3,4	3
	DSS01-2	3,67	4		
	DSS01-2	3	3		
	DSS01-3	3	3		
	DSS01-4	3,67	4		
DSS02	DSS02-1	3,67	4		
	DSS02-2	3,67	4		
	DSS02-3	3,67	4		
	DSS02-4	2,67	3		
DSS03	DSS03-1	4	4	4	4
	DSS03-2	4,33	4		
	DSS03-3	4	4		
	DSS03-4	4	4		
	DSS03-5	3,67	4		
DSS04	DSS04-1	3,67	4	3,75	4
	DSS04-2	4,33	4		
	DSS04-3	4,33	4		
	DSS04-4	3	3		
DSS05	DSS05-1	3,67	4	3,67	4
	DSS05-2	3,67	4		
	DSS05-3	4	4		
	DSS05-4	2,67	3		
	DSS05-5	4,33	4		
	DSS05-6	3	3		
DSS06	DSS06-1	3,33	3	3,25	3

Table 2 Maturity Level Analysis 1

$$\frac{\sum Xi}{n} = \frac{(0*0)+(1*0)+(2*0)+(3*2)+(4*4)+(5*0)}{6}$$

$$= \frac{22}{6} = 3{,}67$$

The recapitulation results in table 3.2 show that the Capability Level in the DSS (Deliver, Service, and Support) domain is on a value scale of 3.67. Based on the maturity level scale in table 3.1, level 4 is chosen as the maturity level with value predictable Process on information technology governance of the Padang Religious Court Class I A.

Gap Analysis (GAP)

Gap analysis (gap) is carried out to find gaps or differences that exist between the current situation and the expected state. Analysis of the gap in the level of IT governance capability at the Padang Religious Court seen from the current COBIT 5 process capability value and the expected process capability value.

ISSN : 1979-9292

JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i4 (599-606)

E-ISSN : 2460-5611

Domain Process	Level currently (as is)	Expected Level(to be)	GAP
DSS01	3	5	2
DSS02	4	5	1
DSS03	4	5	1
DSS04	4	5	1
DSS05	4	5	1
DSS06	3	5	2
	Amount		8
	Gap		1,33

Table 3 GAP analysis

From the table above it can be seen that the DSS-01 and DSS-06 process domains have a gap value of 2, while DSS-02, DSS-03, DSS-04 and DSS-05 have a gap value of 1.

The gap analysis graph can be seen in Figure 2 below:

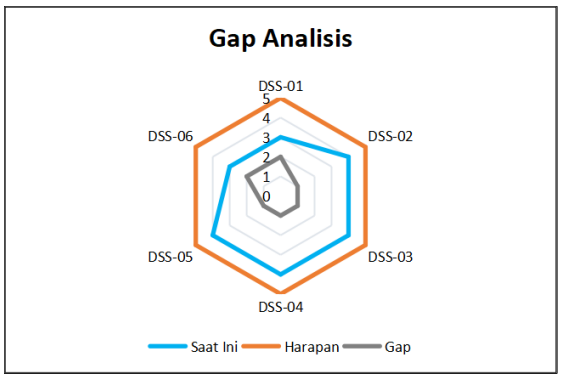

Figure 1. Gap Analysis

Recommendation Results

Recommended process domain DSS01

The recommendations given in the DSS01 process domain to achieve the target level expected by the Padang Religious Court are level 5, which needs to be carried out by the Padang Religious Court as follows:

a) Make improvements in managing operations by making all Standard Operating Procedures (SOP) in IT governance operations.

b) Improve and perform risk management for the maintenance of IT facilities from natural or human-caused disasters.

Recommended process domain DSS06

The recommendations given in the DSS06 process domain to achieve the target level expected by the Padang Religious Court are level 5, which needs to be carried out by the Padang Religious Court as follows:

a) Make a report of every violation or error that occurs in the existing system.

b) Provide direction or training to each element to increase awareness of responsibility in using information systems.

Recommended process domain DSS02

Recommendations given in the DSS02 process domain to achieve the target level expected by the Padang Religious Court, namely level 5, which needs to be carried out by the Padang Religious Court are as follows:

a) Increase monitoring of each increase and occurrence of incidents and carry out handling in accordance with procedures that have been made.

ISSN : 1979-9292

JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i4 (599-606)

E-ISSN : 2460-5611

Recommended process domain DSS03

The recommendations given in the DSS03 process domain to achieve the target level expected by the Padang Religious Court are level 5, which needs to be carried out by the Padang Religious Court as follows:

a) Continue to monitor and monitor previously known and fixed issues.

b) Always report the status of problems that occur so that customers and employees get information about what problems are happening.

Recommended process domain DSS04

The recommendations given in the DSS04 process domain to achieve the target level expected by the Padang Religious Court are level 5, which needs to be carried out by the Padang Religious Court as follows:

a) Generate reports to keep the business running in the event of a disaster or disruption, and determine additional resources needed to continue critical business processes.

Recommended process domain DSS05

The recommendations given in the DSS05 process domain to achieve the target level expected by the Padang Religious Court are level 5, which needs to be carried out by the Padang Religious Court as follows:

a) Use original licensed software to anticipate data and system damage caused by viruses or malware.

a) Improve and reinforce connectivity security policies in order to anticipate unwanted risks.

CONCLUSION

1. COBIT 5 is a framework that can be used as a reference for conducting information technology audits and producing an information technology maturity level in the Padang Class I A Religious Court. The maturity level achieved was 3.67 (Predictable Process) with details of DSS-01 and DSS-06 reaching levels 3 and DSS-02, DSS-03, DSS-04, and DSS-05 reaching level 4.
2. To achieve the expected target level of information technology maturity, it is suggested that the Padang Class I A Religious Court make improvements and enhancements based on recommendations that emerge from the research results.

BIBLIOGRAPHY

[1] Aji, R. P., & Sarmini. (2019). PENILAIAN TATA KELOLA TEKNOLOGI INFORMASI PADA DINAS KESEHATAN KABUPATEN BANYUMAS MENGACU PADA KERANGKA KERJA COBIT 5. Jurnal Pro Bisnis, 12(2), 13–24.

[2] Anderson, R., Kevin, K., & Andry, J. F. (2018). Audit aplikasi inventori menggunakan framework cobit 4.1 pada store nonna. IT Journal Research and Development, 3(1), 1-12.

[3] Andry, J. F., & Christianto, K. (2018). AUDIT MENGGUNAKAN COBIT 4.1 DAN COBIT 5 DENGAN CASE STUDY. Yogyakarta: Teknosain.

ISSN : 1979-9292

JURNAL IPTEKS TERAPAN
Research of Applied Science and Education V16.i4 (599-606) E-ISSN : 2460-5611

[4] Andriani, A., & Purnama, B. E. (2019). Desain Database Dengan ERD dan LRS. Yogyakarta: TEKNOSAIN.

[5] Ardianingsih A. (2018). Audit Laporan Keuangan. Jakarta: Bumi Aksara.

[6] Arief, M. H., Suprapto (2018). Evaluasi Manajemen Risiko Teknologi Informasi Menggunakan Kerangka Kerja COBIT 5 (Studi Kasus Pada Perum Jasa Tirta I Malang). Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer, 2(1), 101-110.

[7] Astuti, M. W., & Suprapto, A. R. P. (2019). Evaluasi Teknologi Informasi menggunakan COBIT 5 Fokus Proses DSS02, DSS03, dan DSS04 (Studi Kasus: PT. Garam (Persero)). Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer e-ISSN, 2548, 964X.

[8] Christianto, K., Davinci, L., Ivgantius, T. Z., Setiawan, Y. P., & Andreas, T. J. (2019). AUDIT APLIKASI DEVELOP INTERNAL DENGAN COBIT 4.1 (STUDI KASUS: PT CENTRAL MEGA KENCANA). JBASE-Journal of Business and Audit Information Systems, 2(2).

[9] Elisabeth, D. M. (2019). Kajian terhadap peranan teknologi informasi dalam perkembangan audit komputerisasi (studi kajian teoritis). METHOMIKA: Jurnal Manajemen Informatika & Komputerisasi Akuntansi, 3(1), 40-53.

[10] Gunawan B., & Pratama F. A (2018). Perancangan Tata Kelola Teknologi Informasi. Yogyakarta : ANDI

[11] Gusman, A. P., Rizaldi, F., & Wahyuni, U. M. (2020). BMKGsoft Quality Measurement Using COBIT Framework 5 Case Study: Teluk Bayur Maritime Meteorological Station. Jurnal KomtekInfo, 7(1), 67-76.

[12] Hardinata, R. S., et al (2019). Audit Tata Kelola Teknologi Informasi menggunakan Cobit 5 (Studi Kasus: Universitas Pembangunan Panca Budi Medan). Jurnal Teknik dan Informatika, 6(1), 42-45.

[13] Hariyono, R. C. S. (2018). Audit Sistem Informasi Menggunakan Framework COBIT 4.1 Pada Website Universitas Peradaban. Smart Comp: Jurnalnya Orang Pintar Komputer, 7(1).

[14] Imami, L. W., Suprapto, & Mursityo, Y. T. (2018). Audit Tata Kelola Teknologi Informasi pada Dinas Komunikasi dan Informatika (DISKOMINFO) Kota Probolinggo Menggunakan Kerangka Kerja COBIT 4.1 Domain Plan and Organise dan Acquire and Implement. Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer e-ISSN, 2548, 964X.

[15] Kusbandono, H., & Ariyadi, D. (2018). Rekomendasi Tata Kelola Aset Ti Berdasarkan Cobit 5. Simetris: Jurnal Teknik Mesin, Elektro dan Ilmu Komputer, 9(2), 1015-1020.

[16] Liandi, O., & Fitria, F. (2019). Evaluasi Tata Kelola Framework COBIT 5 pada Dinas Kependudukan dan Pencatatan Sipil. POSITIF: Jurnal Sistem dan

Teknologi Informasi, 5(2), 111-115.

[17] Marzuki, K., Setyanto, A., & Nasiri, A. (2018, July). Audit Tata Kelola Teknologi Informasi Menggunakan Cobit 4.1 Domain Monitoring Evaluasi Pada Perguruan Tinggi Swasta. In Proceeding Seminar Nasional Sistem Informasi dan Teknologi Informasi (Vol. 1, No. 1, pp. 412-416).

[18] Mubarak, A. (2019). Rancang Bangun Aplikasi Web Sekolah Menggunakan Uml (Unified Modeling Language) Dan Bahasa Pemrograman Php (Php Hypertext Preprocessor) Berorientasi Objek. JIKO (Jurnal Informatika dan Komputer), 2(1), 19-25.

[19] Novinaldi, & Nanda, A. P. (2019). Perancangan Sistem Informasi Pengelolaan Data Penggajian Dosen dan Karyawan Pada STT Payakumbuh. Jurnal Sistem Informasi Dan Manajemen Informatika, 6(2), 84–96.

[20] Nugroho, W. A., Santosa, P. I., & Fauziati, S. (2019). Kualitas Audit Teknologi Informasi dan Faktor-Faktor yang Mempengaruhinya. Edu Komputika Journal, 6(1), 15-24. https://doi.org/10.15294/edukomputika.v6i1.27501

[21] Nur'aini, Utami, E., & Amborowati, A. (2019). Evaluasi Penerapan Sistem Informasi Manajemen Tugas Akhir Di Universitas Amikom Yogyakarta Menggunakan Framework Cobit 5. Jurnal Teknologi Informasi, XIV, 101–107.

[22] Raditya, I. G. L. A., Adnyana, I. W., & Putra, D. (2019). EVALUASI TATA KELOLA SISTEM INFORMASI AKADEMIK STMIK PRIMAKARA MENGGUNAKAN FRAMEWORK COBIT 5. Jurnal Teknologi Informasi Dan Komputer, 5, 40–49.

[23] Rosa A.S., Shalahuddin, M.(2019). Rekayasa Perangkat Lunak Terstruktur dan Berorientasi Objek. Bandung: Informatika Bandung.

[24] Munawar (2018). Analisis Perancangan Sistem Berorientasi Objek dengan UML. Bandung : Informatika Bandung.

[25] Rizal, C., Kartika, S., Supiyandi, S., Zen, M., & Amin, M. (2020). Analisis MinatMahasiswa Terhadap Proses Audit Di Era Teknologi Informasi Dan Pengaruhnya Terhadap Pembelajaran Audit TI. ALGORITMA: JURNAL ILMU KOMPUTER DAN INFORMATIKA, 4(2).

[26] Rusmawan, U. (2019). Teknik Penulisan Tugas Akhir dan Skripsi Pemrograman. Jakarta: PT Elex Media Komputindo.

[27] Simatupang, J., & Sianturi, S. (2019). PERANCANGAN SISTEM INFORMASI PEMESANAN TIKET BUS PADA PO. HANDOYO BERBASIS ONLINE. Jurnal Intra-Tech, 3(2), 11-25.

[28] Sudirman (2021). Hukum Acara Peradilan Agama. Parepare : IAIN Parepare Nusantara Press.

[29] Sumijan., & Purnama P. A. W. (2020). Analisis Dan Evaluasi

Tingkat Kematangan E-Government Pada Information Architecture Menggunakan Framework Cobit 5 (Studi Kasus: Pemerintah Daerah Kota Padang). In Seminar Nasional Teknologi Informasi Komunikasi dan Industri (p. 1).

[30] Suryono, R. R., Darwis, D., & Gunawan, S. I. (2018). Audit Tata Kelola Teknologi Informasi Menggunakan Framework Cobit 5 (Studi Kasus: Balai Besar Perikanan Budidaya Laut Lampung). Jurnal Teknoinfo, 12(1), 16-22.

[31] Turang, D. A. O., Ratnasari, D. Y., & Pasa, I. Y. (2018). Audit Teknologi Informasi Bandung Techno Park Menggunakan Framework COBIT 5 Pada Domain EDM (Evaluate, Direct, And Monitor). INTEK: Jurnal Informatika dan Teknologi Informasi, 1(2), 55-63.

[32] Wijaya, S. S. H., & Aziz, R. Z. A. (2019). AUDIT SISTEM INFORMASI PADA LAMPUNG POST MENGGUNAKAN FRAMEWORK COBIT 5. Jurnal Informatika, 19(2), 116–126.

[33] Wiraniagara, A., & Wijaya, A. F. (2019). ANALISIS TATA KELOLA TEKNOLOGI INFORMASI MENGGUNAKAN FRAMEWORK COBIT 5 DOMAIN DELIVER SUPPORT AND SERVICE (STUDI KASUS: YAYASAN EKA TJIPTA). Sebatik, 23(2), 663-67