

Evaluation of Information Technology Governance Using Cobit 2019 on Domain DSS (Deliver, Service, Support) at PT XYZ

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Abstract

PT. XYZ is an application development company. In business, PT XYZ implements information technology to support its business goals. This governance has the aim of ensuring product results from PT XYZ. This research refers to COBIT® 2019 by using qualitative methods and focusing on the DSS04 Manage Continuity and DSS06 Managed Business Process Controls by carrying out an initial analysis of the company situation and interviews with company employees. Based on the results carried out on the company's products, the maturity level in the domain is between the values of two to four. Cobit results explain that the company's website products are not optimal in their performance.

Keywords

PT.XYZ; cobit2019; governance



I. Introduction

Information technology (IT) is defined as the most important asset that is mandatory for an organization to be seen as being able to support the efficiency and effectiveness of business work. Every company must develop, use and implement IT resources to support performance to maximize business goals. Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). The success of leadership is partly determined by the ability of leaders to develop their organizational culture. (Arif, 2019). A good Information System (IS)/IT Procedures (IT) supports your organization's efforts to achieve its goals, including the organization's vision and mission, because business plans and IS/IT guidelines need to be aligned.

Information technology performance analysis in general can be carried out using the COBIT basis. The COBIT (Information and Communication Technology) Foundation is an IT management and management system developed by ISACA (Information Management and Information Technology Institute) and ITGI (IT Governance Institute).

With technological developments that are in line with the times, ISACA released multiple versions of COBIT. The latest version of COBIT is COBIT 2019, which is a further development of the previous COBIT 5 version. COBIT 2019 has been released and contains the latest developments that can affect information and technology in an organization. At COBIT 2019, support for companies in designing governance systems is provided using a number of design factors.



Figure 1. Cobit2019 Framework

Figure 1 proves the COBIT® 2019 framework, which includes 40 classifications in 5 domains. Namely, evaluation, direct and monitoring (EDM), coordination, planning and organization (APO), construction, acquisition and implementation (BAI), delivery, service and support (DSS) and monitoring, evaluation, evaluation (MEA). The main difference between COBIT® 2019 and COBIT 5 and earlier is the principle. COBIT 5 is based on five principles, while COBIT® 2019 updates principles in two important areas: the system of government and the constitution of government.

Another difference between COBIT® 2019 and translation is in the regulatory system and its components. In the last COBIT, 7 people (7 people) were able to achieve the management goal called IT effectiveness. In COBIT® 2019, these seven interventions are referred to as management components. This section also has four focus areas: Tools, Areas, SMB Risk, and Security. Profit sharing makes COBIT more flexible and efficient as it allows you to tailor COBIT performance to your company's needs (ISACA, 2018a). Based on the benefits of COBIT® 2019, companies can improve their risk management model to make it stronger.

Established IT company, many applications available. The applications and information systems offered also vary, from the cheapest to the most expensive, Yogyakarta-based XYZ is part of a company in the field of application development or specialized software. One of the company's products is an IT education platform website combined with training and education programs. The platform also allows you to improve your technical and non-technical skills through online seminars or workshops. With a vision to become an important educational forum in producing creative, innovative and professional human resources to improve the quality of the Indonesian IT sector.

A structure or performance appraisal is needed as a reference model in ensuring the quality of IT governance when implementing XYZ website products. Without a reference model, the objectives, responsibilities, roles, terminology and, as well as the conceptual framework and application of website governance maturity, are difficult to identify.

Evaluation of governance at PT. XYZ has never done that before. Several previous studies, namely “Information Technology Governance Design Using the 2019 Cobit Framework at PT. XYZ” in 2020. This study was conducted not only for manufacturing companies and company visits, but also for various companies in Indonesia, including quarrying, palm oil production, and the establishment and implementation of IT management. . This helps your business services company organize and use their technology and identify what matters. Process for the company. Business analysis by Cobit 2019 with 11 design elements. This research reveals the main themes: standards 3 and 4 PO06 (budget and cost management), APO09 (contract management), APO12 (risk

management), BAI04 (access and capacity management), and BAI11 (project management).

The next study is "Cobit 2019 Framework for Physical Management Technical Information (Case Study: PTXYZ)". PT. XYZ is a company focused on the food sector whose business focuses on food production, processing and poultry farming. Therefore, IT managers need to understand service quality, operational management, and risk. For companies. Cobit 2019 was used in this study. As a result of examining 11 image components, we found 5 frame functions with scores above 75%: DSS04, DSS02, BAI06, BAI03, BAI02. This is followed by evaluation of samples and results for each critical level of BAI03 Level 1, BAI03 Level 1, BAI02 Level 2, BAI06 Level 1, DSS04 Level 2, and, DSS02 Level 2 including the maturity level and importance of PT. XYZ is 1 and the company can increase the skill level by actions that do not reach the sum of each position.

Through the results of several studies above, it seems that every company needs an IT management review to align its goals with business and information technology and business use. Achieved effectively and completely.

Meanwhile, PT XYZ does not yet know about the evaluation carried out on IT products, because PT XYZ has not conducted any research on evaluating IT governance. In this research, Cobit 2019 was used in research entitled "A Comparative Study of Cobit 5 with Cobit 2019 as an IT Governance Audit Framework" in 2021. In short, Cobit 5 is implemented in many companies. Cobit 5 can't adapt with the passage of time because there are no design factors, so there are no company and domain line references in Cobit 5 anymore saying that process is not aimed at results.

II. Research Method

This research is related to COBIT® 2019 and uses qualitative methods as the basis for evaluating company XYZ. The qualitative approach is the process of understanding social problems based on the methodology of the data collection process and can be done through observation, interviews, and triangulation.

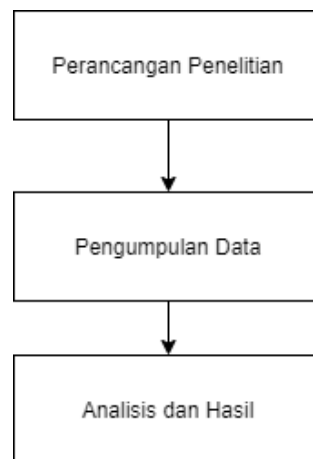


Figure 2. Research Flow

2.1 Research Design

The design carried out includes various activities, the first is identifying the product that will be evaluated for governance at PT XYZ using Cobit 2019. Then after knowing the problem with the product, a domain determination will be made in the Cobit framework 2019 based on company needs.

2.2 Data Collection

The previously collected data was done by designing questions according to the needs of the domain in the Cobit 2019 framework. Data was collected by means of interviews and questionnaires. The questionnaire was used to ask questions according to the guidelines of the COBIT 2019 framework and then combine the competency levels in the Capability Maturity Model Integration (CMMI) standard to provide recommendations based on the actual situation that we wanted to achieve through the questionnaire method.

2.3 Analysis and Results

The final stage to be carried out is the process of analyzing data and results. In this process, calculation of recommendations is made, analysis of gaps and level of capability.

Capability Maturity Model Integration measurement tool *maturity level*. Table 1 describes the *maturity level*. Consists of several sequences of *maturity* that describe the state of a process or a process.

Table 1. Maturity Level CMMI

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Level	Maturity Level	Penjelasan
1	Initiate	Menjalankan aktivitas IT secara adhoc dan reaktif
2	Managed	Menjalankan aktivitas IT tanpa syarat dan belum ada prosedur
3	Defined	Menjalankan aktivitas IT berdasarkan ketentuan, tetapi tidak ada kontrol yang jelas
4	Quantitatively	Menjalankan aktivitas IT secara terstandarisasi, terukur, dan terkontrol
5	Optimizing	Menjalankan aktivitas IT menggunakan dukungan teknologi dengan peningkatan IT yang berkelanjutan

III. Results and Discussion

3.1 Analysis of Corporate Goals, Governance and Management

At the beginning of the observation, the company said the company was moving to follow changes, including developing new products and changing the work and business processes that were already established. The company's customization plan is to evaluate the results of creating a new product that is of value to its customers and easy to sell.

3.2 Analysis of Practical Activity Steps from COBIT® 2019

Based on the results of research on business processes and processes, part of this research is based on DSS04, which is called Manage Continuity and DSS06, as Managed Business Process Controls. This is based on the company's willingness to ensure the sustainability of the products produced by the company by taking into account the control of its business activities and the sustainability of the product. The focus area is used as a reference for subdomains, subdomains and interview questions.

DSS04 Manage Continuity aims to create and maintain plans that enable enterprises and IT organizations to respond to crises and quickly adapt to downtime. This enables the continuous operation of critical and demanding IT services and maintains access to resources, language and information in an acceptable business environment. Adapt quickly, keep business operations active and be able to access resources and information in ways that are acceptable to the organization in the event of a major crisis (such as threats, opportunities, needs). The DSS04 segment includes several subdomains, which are shown in Table 2. There are several action questionnaires for responses in each of these categories to measure the company's willingness to manage the risk of this disease and subdomains.

Table 2. Sub Domain DSS04 Manage Continuity

Sub Domain	Praktik
DSS06.01	Menyelaraskan aktivitas pengendalian yang tertanam dalam proses bisnis dengan tujuan perusahaan.
DSS06.02	Mengontrol pemrosesan informasi.
DSS06.03	Kelola peran, tanggung jawab, hak akses, dan tingkat otoritas.
DSS06.04	Kelola kesalahan dan pengecualian.
DSS06.05	Memastikan ketertelusuran dan akuntabilitas untuk peristiwa informasi.
DSS06.06	Mengamankan aset informasi

Sub Domain	Praktik
DSS04.01	Menetapkan kebijakan, tujuan, dan ruang lingkup kelangsungan bisnis
DSS04.02	Menjaga ketahanan bisnis
DSS04.03	Mengembangkan dan mengimplementasikan respon kelangsungan bisnis.
DSS04.04	Melatih, menguji dan meninjau perencanaan kontinuitas bisnis dan perencanaan tanggap bencana
DSS04.05	Meninjau, mempertahankan dan meningkatkan program kontinuitas
DSS04.06	Mengadakan training perencanaan kontinuitas
DSS04.07	Mengendalikan rencana cadangan
DSS04.08	Melaksanakan peninjauan setelah dimulainya kembali

Business Process Management DSS06 establishes and ensures effective regulation of business operations to ensure that information handled by internal or external businesses meets all relevant data management requirements. Identify relevant information management needs. Coordinate and maintain appropriate accuracy, performance, and regulatory management (regulatory requirements) to ensure data and information systems meet these requirements. In Table 3, there are subdomain activities in the DSS06 domain.

Table 3. Sub-Domain DSS06 Managed Business Process Controls

Sub Domain	Praktik
DSS06.01	Menyelaraskan aktivitas pengendalian yang tertanam dalam proses bisnis dengan tujuan perusahaan.
DSS06.02	Mengontrol pemrosesan informasi.
DSS06.03	Kelola peran, tanggung jawab, hak akses, dan tingkat otoritas.
DSS06.04	Kelola kesalahan dan pengecualian.
DSS06.05	Memastikan ketertelusuran dan akuntabilitas untuk peristiwa informasi.
DSS06.06	Mengamankan aset informasi

Sub Domain	Praktik
DSS04.01	Menetapkan kebijakan, tujuan, dan ruang lingkup kelangsungan bisnis
DSS04.02	Menjaga ketahanan bisnis
DSS04.03	Mengembangkan dan mengimplementasikan respon kelangsungan bisnis.
DSS04.04	Melatih, menguji dan meninjau perencanaan kontinuitas bisnis dan perencanaan tanggap bencana
DSS04.05	Meninjau, mempertahankan dan meningkatkan program kontinuitas
DSS04.06	Mengadakan training perencanaan kontinuitas
DSS04.07	Mengendalikan rencana cadangan
DSS04.08	Melaksanakan peninjauan setelah dimulainya kembali

3.3 Implementation Analysis and Performance Measurement

The results of performance calculations and implementation through the organization's DSS04 and DSS06 domains are shown in Tables 4 and 5.

Table 4. DSS04 Manage Continuity

Sub Domain	Current Maturity Level	Index Expected Maturity Level	DSS04.01
Index	3	4	1
DSS04.02	3	4	1
DSS04.03	2	4	2
DSS04.04	2	4	2
DSS04.05	3	4	1
DSS04.06	4	5	1
DSS04.07	4	5	1
DSS04.08	4	5	1

Table 5. DSS06 Managed Business Process Controls

Sub Domain	Maturity Index Current	Level Expected Maturity Level Index	GAP
DSS06.01	2	4	2
DSS06.02	2	4	2
DSS06.03	3	4	1
DSS06.04	3	4	1
DSS06.05	3	4	1
DSS06.06	3	4	1

From the table above it can be drawn the conclusion that all activities from procurement, maintenance to monitoring are carried out as needed and without careful planning. The imbalance between the maturity level, if the survey is carried out with the expected maturity level, is therefore not large, namely 1. Distance determination is based on needs analysis.

3.4 Recommendations

Based on the data analysis carried out, the recommended results to close the imbalance include: the product or web produced by the company needs to be assessed carefully and the controlled business processes always document the entire information system process. The process of improving and improving the website needs to be continuously pursued, it is a learning process that needs to go through every stage of development. In this study, some of the results regarding the application of controls were too low.

IV. Conclusion

The results of the research company PT XYZ, the following conclusions are drawn:

1. The maturity value in the domain ranges with a value of 2 to 4. The results of this value prove that the company's website product has not maximized its performance.
2. The gap between the recommended level and the average level when this research was carried out proves that the gap is not too large, so that what is expected can be fulfilled and implemented properly by the company.

Based on the findings of the DSS04.06, DSS04.07, DSS04.08 subdomains, the *maturity level* 4 value is that the company uses the company's products and has done very good planning by conducting training to all internal and external parties for customers who will use the company's products. Using COBIT as a framework, new and existing technologies can achieve business and IT goals. When a pandemic occurs and there is a need to adapt to changing conditions, DSS04 Managing Continuity and DSS06 Disaster Recovery and Response can be used to prepare for risk management (i.e. Managed Business Process Control). With the help of COBIT, any company, no matter how large or complex the process or system is, can develop strategies and key steps that work for them. When it comes to creating and maintaining a governance system, COBIT® 2019 changes the components. Correct implementation of COBIT® 2019 components and how they can help businesses overcome adversity and achieve flexible and reliable processes to achieve their business goals.

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