

Audit of Information Technology using ITIL V.3 Domain Service Operation on Communications and Information Technology Agency

Ari Putra Wijaya^[1], Putu Widiadnyana^[2], Ida Bagus Alit Swamardika^[3]

[1][2] Department of Electrical and Computer Engineering, Post Graduate Program, Udayana University,
Email: kherias@gmail.com

[3]Department of Electrical and Computer Engineering, Udayana University

Abstrac— Good governance (good governance) is the most prominent issue in the management of public administration today, the municipal government of Denpasar appointed Office of Communications and Information Technology as a service manager SIPKD. The rapid development of the growing information demands to the use of information technology in the management of IT services that are strategic in getting the information service that is fast, precise and accurate. Hence the need for a standard integrated IT governance while providing best practice guidance in managing IT services framework. ITIL V3 is able to provide a detailed description of some IT practices with emphasis on life cycle management services relating to several areas of work which includes Service Strategy, Service Transition, Service Operation and CSI. Audit V.3 ITIL-based information technology is expected to give a picture of the extent to which the maturity level of the service rendered, resulting in a decision in the form of recommendations to management in Diskominfo Denpasar

Keyword— ITILV3, AUDIT, Domain Service Operation, SIPKD

I. INTRODUCTION

ITIL implementation in companies generally done by evaluating all the components / devices related to IT, especially the IT division of the company. Evaluation was conducted in order to ascertain whether the enterprise IT management in accordance with the provisions and standards that commonly known as auditing. Audit activity that takes place essentially in the form of the discovery of impropriety against the existing process management standards related activities. Activities based on the audit on the ITIL Service Delivery and Service Support. Implementation of both these references as a whole is a form of implementation of the ITIL framework in the company.

Technically audit activities using sheets of paper containing a questionnaire-questionnaire which refers to the relevant framework that should be answered by the management company to determine the level of IT management in the company.

Good governance is the most prominent issue in the management of public administration today. Vociferous demands made by the people to the government for good governance is in line with the increasing level of public knowledge, in addition to the globalization.

Therefore when people crave the realization of public sector reform, the government should immediately implement the transformation process towards e-Government. In connection with these conditions, the Department of Communications and Informatics Denpasar will enhance the development of E-Government in order to smooth the implementation of electronic-based governance it, dlm meningkatkn quality public services that effectively and efficiently. Office of Communications and Information Technology before an Office of Electronic Data Processing and Communications (KPDEKom) Denpasar (2001 s / d 2008), see its existence dlm globalization era of electronic post and telematics the Local Government in 2009 to form the Department of Communications and Information Denpasar with reference to Regulation No: 7 of 2008 on the Organization and Work Procedure of the Regional Office of Denpasar

One of the services managed by the Communications and Information Agency of Denpasar is the Information System of Financial Management that is used as a tool local governments use increases the effectiveness of the implementation of various regulations in financial management areas based on the principles of efficiency, economical, effective, transparent, accountable and auditable

II. RESEARCH METHODOLOGY

A. Survey

Is the process of recording the behaviour patterns of the subject (person), objects (objects), or the occurrence of systematic without question or communication with studied individuals. The author has observed or view directly on the Communications and Information Agency of Denpasar which is the object of research, so writers get a complete and clear view.

B. Interview

The interview is a type of data collection is done by way of question and answer, or by way of direct conversation-cracked against the source data required for a particular purpose. This is done two-way conversation that is the interviewer and the respondent. The purpose of the interviews conducted in this study is to construct about people, events, organizations, feelings, motivations, and concerns, verify, change and expand the information obtained from other people or sources.

C. Literature Study

Methods of data collection is done by studying the journals and books of literature related to the problem ITIL V3 framework

1) *Audit*

The definition according to the terminology audit is a systematic examination of the records involving analysis, evidence and confirmation testing [1]. Meanwhile, according to ISACA, the definition of an audit is a systematic process by an independent team or individual qualified and competent to obtain and evaluate evidence objectively about the state of a process with the aim of showing an opinion and report on the extent to which the statement is to be implemented [2]. The auditing standards published by ISACA in Information System Standards, Guidelines and Procedures for Auditing and Control Professionals can be seen in Table 1.

Table 1 IS Standards, Guidelines and Procedures for Auditing and Control Professionals

S1	<i>Audit Charter</i>
S2	<i>Independence</i>
S3	<i>Professional Ethics and Standards</i>
S4	<i>Professional Competence</i>
S5	<i>Planning</i>
S6	<i>Performance of Audit Work</i>
S7	<i>Reporting</i>
S8	<i>Follow-Up Activities</i>
S9	<i>Irregularities and Illegal Acts</i>
S10	<i>IT Governance</i>
S11	<i>Use of Risk Assessment in Audit Planning</i>

Information Technology Infrastructure Library (ITIL) is a framework containing best practice which can be used to assist organizations in developing the Information Technology

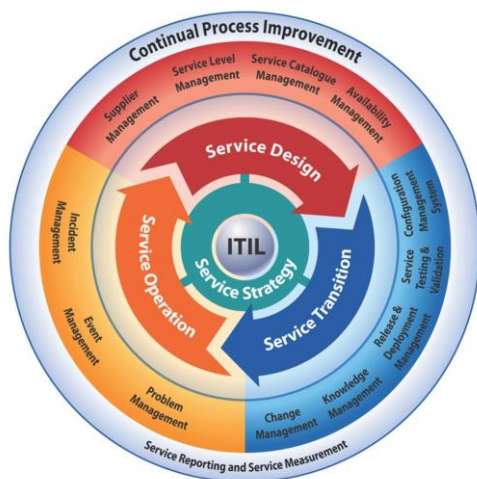


Figure 1 ITIL V3 Service Lifecycle

5) *Life Cycle ITIL*

On June 30, 2007, OGC published the third version of ITIL (ITIL v3), which essentially consists of five sections and more emphasis on the life cycle management of services provided by information technology. The fifth part is the Service Strategy,

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S12	<i>Audit Materiality</i>
S13	<i>Using the Work of Other Experts</i>
S14	<i>Audit Evidence</i>
S15	<i>IT Controls</i>
S16	<i>E-Commerce</i>

Source: ISACA, 2009

2) *Management of Information Technology Services*

Management of IT services or also called Information Technology, Service Management (ITSM) is the utilization of planned and controlled to IT assets, people and processes to support the operational needs of the business as efficiently as possible and to ensure that the organization has the ability to rapidly and effectively to respond to events / situations unwanted and continually evaluate processes and performance in order to identify and implement opportunities for improvement [3].

3) *Information Technology*

ITIL defines information technology as the use of technology for the storage, communication or processing of information. This technology generally includes computers, telecommunications, applications and software. While the information may include business data, voice, image, video and so on. Information technology is often used to support business processes through IT services [4].

4) *ITIL*

Service Management (ITSM) (itSMF 2007). ITIL framework aims to continuously improve IT operational efficiency and customer service quality (Sarno, 2009) Service Design, Service Transition, Service Operation, Continual Service Improvement

6) *Capability Maturity Model*

a. *Level 0: incomplete process*

Organizations at this stage does not implement IT processes that should exist or has not managed to achieve the objectives of the IT process.

b. *Level 1: performed process*

Organizations at this stage has been successfully implementing IT processes and IT process goals are actually achieved.

c. *Level 2: managed process*

Organizations at this stage in implementing IT processes and achieve their goal managed properly implemented. So there are more votes for the implementation and achievements carried out with proper management. Management here means its implementation through the process of planning, evaluation and adjustment in order to better direction again.

d. *Level 3: established process*

Organizations at this stage has the IT processes that have been standardized within the overall organization. This means that the existing standard IT processes that apply across the scope of the organization.

e. *Level 4: predictable process*

Organizations at this stage has been running the right IT processes within the limits of the obvious, such as time limits. This limitation results from measurements that have been done during the previous execution of IT processes.

f. *Level 5: optimizing process*

At this stage, the organization has carried out innovations and continuous improvement to enhance its capabilities.

III. RESULTS

A. *Respondent Questioner*

Questionnaire respondents can be seen in the following table

Table 2 Respondent Questionnaire

Software Field		
1	Head of Software	1
2	Section chief Analysis and Design Software	1
3	Section head of Development and Implementation Software	1
4	Head section Socialization, Training and Maintenance Software	1
5	Staff of the Software	3
Hardware and Network Field		
1	Head of Hardware and Networking	1
2	Head of Analysis and Planning section Hardware and Networking	1
3	Head section Hardware and Network Implementation	1
4	Socialization and Maintenance section chief Hardware and Networking	1
5	Staff of Hardware and Networking	4
Total Respondent		15

B. *Audit Program Design*

The service which is the object previously mapped based audit on the scope of the ITIL Service Operation relevant to produce the draft audit program management of information technology services. The results of the design is the number of the audit program as shown in Table 3.

Table 3 Audit Program Management of Information Technology Services

Audit Program Name	Code
Info Security Management	1.1
Event Management Process	2.1
Incident Management	2.2
Request Management	2.3
Acces Management	2.4
Problem Management	2.5
Application Management	2.6
IT Operation Management	2.7

C. *Calculation Results Maturity Level*

Here is the questionnaire results of the audit process has been done

Table 4 Calculation Results Maturity Level

Code	Domain/Subdomain	Value
1	Service Design	
1.1	Info Security Management	3.800
Average		3.800
2	Service Operation	
2.1	Event Management Process	2.750
2.2	Incident Management	3.680
2.3	Request Management	3.911
2.4	Acces Management	3.100
2.5	Problem Management	2.822
2.6	Application Management	3.133
2.7	IT Operation Management	3.556
Average		3.278
Maturity Level of System Information (3.800+3.278)/2		3.539

Table 5 illustrates the value of maturity level and the gap between the levels of maturity (maturity level) at this time with the expected maturity level.

Table 5 Evaluation Results Table

Co de	Process TI	Maturity Level		
		Recent	Expected	Gaps
1.1	Info Security Management	3.8	5	1.2

2.1	Event Management Process	2.7	5	2.3
2.2	Incident Management	3.6	5	1.4
2.3	Request Management	3.9	5	1.1
2.4	Access Management	3.1	5	1.9
2.5	Problem Management	3.8	5	1.2
2.6	Application Management	3.1	5	1.9
	IT Operation Management	3.5	5	1.5
Average				1.56

Domain can be explained that the mapping has been done there is a distance or gap of 1:56, in the current condition. Due to the gap obtained relatively large, so in this case the need for clarification related recommendations were obtained in each sub-domain. The difference in these conditions, can be seen in the following figure

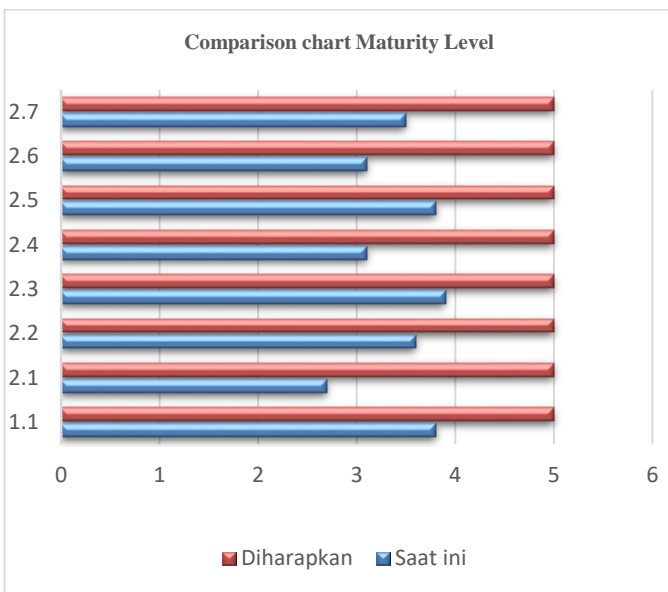


Figure 2 Comparison Chart Maturity Level

Resulting information either in the form of data into a graph cobwebs used to describe the overall maturity value based on the level of maturity at every level sub domains

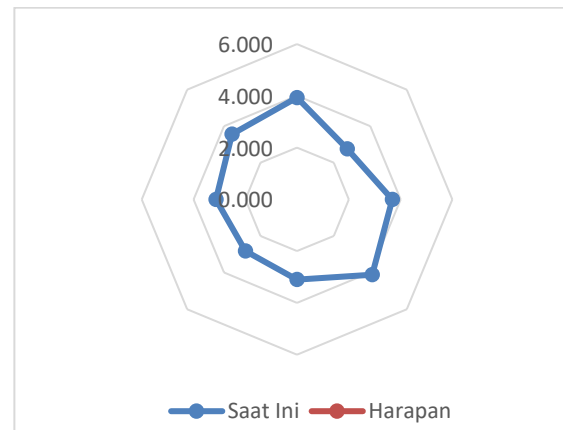


Figure 3 Value Statistics Spider Chart Maturity Level

D. Recommendations

Here are recommendations that need to be considered in efforts to achieve the desired maturity level

- 1) It needs a good full support of the Central Government would also Local Government in the budget allocated for application development IT services and IT network infrastructure.
- 2) 2) Keep the category of event, incident and problem in accordance with the priorities and the resulting impact
- 3) 3) Created SOP determines how long it takes to handle an event, incident and problem in accordance with the categories and priorities have been determined.
- 4) 4) Created a team or operator is responsible for handling incidents of tau problem in accordance with their respective category
- 5) 5) Keep the notification / notifications automatically from the system if there is an event, incident and problem that occurs in the system.

IV. SUMMARY

Values obtained by the maturity level of 3.539 (established process). Diskominfo Denpasar city already has IT processes that have been standardized within the scope of the overall organization, but do not have a definite time standards.

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