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Assessment of Capability Level and IT Governance Improvement Based on COBIT and ITIL Framework at Communication Center Ministry of Foreign Affairs

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Abstract—Communication Center (Puskom) as a management of information and communication systems of the Ministry of Foreign Affairs and the Indonesia Representative, places *Information and Communications Technology (ICT)* as the most strategic sector to support the implementation of Indonesia foreign policy. Many problems faced by the Ministry of Foreign Affairs relates to IT governance such as, reliability, availability and lack of IT infrastructure management which causes problem such as hackers, natural disasters, and others. This research aims to implement IT service for improving the quality of service in Puskom Ministry of Foreign Affairs. ITIL and COBIT are applied with qualitative approach and case study method. The results of this research includes the result of analyses condition of 26 process in fifth Services Lifecycle in the ITIL and level capability assessment of 18 IT Process in COBIT in relation with IT services. The gap analysis and prioritization of IT process in COBIT are used as a recommendation to give the Key Performance Indicator (KPI) for Puskom.

Keywords— *IT Governance, COBIT, , ITIL, ministry of foreign affairs, IT services.*

I. INTRODUCTION

As stated in the regulation of the Minister of Foreign Affairs 07 of 2011 on the Organization and Working Procedures of the Ministry of Foreign Affairs, the Communication Center (Puskom) performs the tasks in the implementation, guidance and security of news and information and communication systems management of the Ministry of Foreign Affairs and the Indonesia Representative. In an effort to carry out the task, Puskom placed Information and Communication Technology (ICT) as the most strategic sector to support the implementation of Indonesian foreign policy.

Many of the problems faced by the Ministry of Foreign Affairs related to IT governance, among them is the reliability of IT infrastructure that is less good against various attacks such as hackers, natural disasters, and others that cause the portal down and can not be accessed by the user. Many informatics facilities and infrastructure are less well managed and on the other hand human resources working in the field of IT has a lot of educational background of IT, but its deployment many less appropriate with the needs in the organization, so that human resources are placed into not maximize its utilization.

In general there are some fundamental issues that make IT governance less influential on the performance of IT organizations. First, it is a matter of inadequate management and management of IT infrastructure. Many events such as the lack of smooth video conference connection between the Headquarter and the Indonesia Representative office abroad and the absence of monitoring mechanisms of all existing infrastructure equipment, resulting in the level of availability of IT services is not adequate. This will affect the quality of services Puskom to its stakeholders. Although every year internet bandwitdh in Ministry always experience improvement, but still the existing internet service is still considered slow by the users, this happened because of lack of bandwidth management and has not implemented IT policy management in Kemenlu.

Fig 1. Achievement of Strategic Target of Puskom Year 2011-2015
(Source: Performance Report of Puskom 2015)

Based on the performance calculation of the implementation of the predetermined activity plan, an average

achievement rate of 95.01% is calculated using the Manual document. This achievement shows the success rate of the Communication Center in achieving strategic objectives, with various obstacles and obstacles that emerged in 2015. The achievement of 2015 targets increased by 12.92 points from the previous year's achievement, from 82.09% (2014) to 95 , 01% (2015). However, if seen achievements during the last 5 years can also be seen indication of performance degradation in 2012, 2013 and 2014 [1].

Every year, officials in the Ministry make Key Performance Indicator (KPI) or Main Performance Indicator (IKU) for one year ahead. Later this KPI will be used by employees to determine the performance of each field in providing IT services. Currently, KPI is still referring to the previous year's KPI as the basis for its reference although KPI is sometimes not appropriate with the demands of the organization. The weakness of the KPI is the lack of attention to service strategies and employee input in improving the quality of IT services.

In order to improve the performance of the Puskom it is necessary to evaluate thoroughly and periodically the products and services provided to the user and the lack of control over the procedures, policies, processes and changes made in relation to the service to the user. To find out how far the level of IT management processes in the organization is required measurement capability level. By setting capability level target and doing gap analysis got prioritization of process improvement and activities that must be done for improvement.

This research has several limitations, the methodology applied in this research using ITIL and COBIT (this study uses ITIL version 3 and COBIT version 5) framework and the author limits the discussion on the evaluation of IT services at the Puskom Ministry of Foreign Affairs, assessment of capability level of IT processes in COBIT gap analysis between present conditions and future conditions, prioritizing IT processes in COBIT 5 in improving IT services, and determining KPIs in future improvements to IT services.

II. RELATED WORK

A. ITIL

ITIL (Information Technology Infrastructure Library) is a common framework that describes best practice for IT Service Management (ITSM). ITIL provides guidance for service providers to support the provision of quality IT services and the processes, functions and other capabilities required. ITIL has been used by hundreds of organizations worldwide and offers best practice guidelines that are generally accepted for all organizations providing services. ITIL is not a standard to follow, but a guide that must be read and understood and used to create value for service providers and also their customers [2]. ITIL also provides "wrapping" services and focuses on continuous measurement and improvement of the quality of IT services provided, from both a business perspective and a customer perspective [2].

The ITIL framework provides a structure that describes IT services in the form of a lifecycle. The making of structure in the form of life cycle is to facilitate undestanding stage of IT process and function that exist in ITIL. ITIL divides services in 5 (five) service lifecycle ie Service Strategy, Service Design,

formulation specified in the Key Performance Indicator Service Transition, Service Operation and Continual Service Improvement. The five stages of the service lifecycle, as shown in Figure 3, use a 'hub-and-spoke' design where Service Strategy is a 'hub' and Service Design, Service Transition. And Service Operation as the ongoing service lifecycle stages or 'spokes'. While Continual Service Improvement surrounds and supports all stages of service lifecycle [2].

Integration of the service lifecycle stages with some key connecting, input and output paths of each stage look like Figure 4. Service portfolio becomes the backbone ('the spine') of all service lifecycle. Service lifecycle starts from the existence of business needs (business requirements). Business needs are identified and agreed upon at the Service Strategy stage. The next stage is Service Design where the service solution is created together in the Service Design Package which contains the things that will be used in the next stage.

ITIL is a set of good practice structured as multiple processes communicating with each other. Each has its own role so that, at the end, both can respond to the two issues which are: the continuous improvement and customer satisfaction. ITIL is not a standard because it does not provide criteria or a requiremen set defined internationally and certifying the organizations. ITIL is not a methodology or method. It provides and uses methods to better explore the good practice [3].

B. COBIT

COBIT (Control Objective for Information and Related Technology) is an IT governance framework that is a generally accepted set of measurements for IT management processes issued by the ISACA Information Systems Audit and Control Association) - an international professional organization in governance Manage IT. Capability of each process is expressed in process level 0 (Incomplete) up to 5 (Optimizing) as shown in Table 1 Each level of process capability is aligned with the process situation in the organization. Processes with level capability 0 do not have attributes.

Table 1. Process Capability Level (source

Process Level	Capability
0 (incomplete)	The process is implemented or fails to achieve its process purpose. At this level, there is little or no evidence of any systematic achievement of the process purpose
1 (performed)	The implemented process achieves its process purposes
2 (Managed)	The performed process is now implemented in a managed fashion (planned, monitored and adjusted) and its work products are appropriately established, controlled and maintained
3(established)	The managed process is now implemented using a defined process that is capable of achieving its process outcomes
4 (predictable)	The established process now operates within defined limits to achieve its process outcomes
5 (optimizing)	The predictable process is continuously improved to meet relevant current and project business goals.

Capability level 0 reflects the process not being

implemented or the process has failed at least to achieve some of the expected result. COBIT helps managers, auditors and IT users to bridge the gap between control requirements, technical issues and business risks and help in developing IT governance. In general it can be stated that COBIT focuses more on control over an IT management [4].

C.   ITIL Related to COBIT

The strength within ITIL is the way processes are described with different activities and flowcharts to use for target implementation. Cost/Benefit and implementation issues are also described. There are also guidelines for reviews and Critical Success Factors, but these issues are better described in COBIT. First of all COBIT is defined by the IT-audit community as a framework highly suitable for authority. COBIT is also stronger when it comes to management issues where "Management Guidelines" provides the implementer with a reference where Critical Success Factors are described together with Key Goal Indicators, Key Performance Indicators and Capability Maturity Models (CMM) [5].

COBIT is better structured to address issues related to IT auditing, being widely used and appropriate for this purpose. With striking features when it comes to issues related to management, COBIT references the Critical Success Factors along with Performance Indicators and maturity models of capacity. COBIT will support the strategic interest of IT in organization and also COBIT will recognized to have better governance structures [6].

D.   Relationship between ITIL V3 2011 Framework with COBIT 5

When the ITIL V3 2011 framework compared to COBIT 5, found the fact that they correspond to each other at high levels. Although different words are used, but they cover the same issues, COBIT focuses on what to do to ensure good governance of all related IT processes, including the process of managing information services. COBIT provides guidance, structure and tools to achieve the desired levels of conformance and performance for IT processes needed to meet business needs while ITIL provides best practices that explain how to plan, design and implement effective service management capabilities.

COBIT helps to guide what to do, and ITIL provides guidance on how to achieve improvements supported by the control objectives and practices of COBIT. The relationship between ITIL V3 2011 and COBIT 5 is very close and complementary to each other, the IT Governance Institute (ITGI) as the organization that sets standards for COBIT makes a mapping between ITIL V3 2011 and COBIT 5. COBIT 5 coverage with the ITIL V3 framework 2011 and ISO / EIC 20000 standards are on the part of the DSS, BAI, and APO domains. The relationship between ITIL V3 2011 and COBIT 5 can be explained in Figure 3.
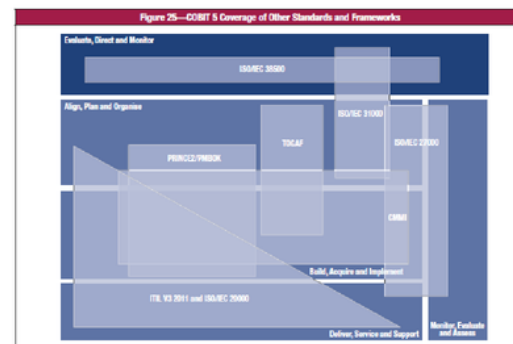

Fig 3. Relationship between ITIL V3 2011 and other framework [7]

II. ANALYSIS RESULT

A. Analysis of Service Lifecycle Service Conditions in ITIL V3 2011 Framework in Puskom Kemenlu

The ITIL V3 2011 framework was selected in this study as a guide to create an activity guide that should be available in Kemenlu. The Service Lifecycle required for this analysis is Service Strategy, Service Design, Service Transition, Service Operation and Continual Service Improvement.

A.1   Service Strategy

Table 2. Analysis of Process Condition Strategy Management For IT Services

After getting guidance on ITIL V3 2011 input, activities, output, and objectives, then the steps taken are analyzed by comparing the ITIL V3 2011 framework guidance with actual condition that happened in Kemenlu. Actual data retrieval process is done by interview in Puskom. The result of the

analysis process is suggestion of improvement that need to be done by Puskom with reference to ITIL V3 2011. Based on ITIL V3 2011, example lifecycle anlaysis framework for Puskom can be seen in Table 2 which is The results of a comparison analysis between the conditions governed by ITIL V3 2011 with the actual conditions.

A.2 Service Design

Cabinet Office divides the processes included in Service Design on ITIL V3 2011 consisting of Design Coordination, Service Catalog Management, Service Level Management, Availability Management, Capacity Management, IT Service Continuity Management, Information Security Management and Supplier Management, example lifecycle anlaysis framework for Puskom can be seen in Table 3 which is The results of a comparison analysis between the conditions governed by ITIL V3 2011 with the actual conditions.

Table 3. Analysis of Process Condition Service Portfolio Management

Service Lifecycle
Service Design
Process: Design Coordination
Description
Purpose
To explain the objectives and objectivity of service design stages achieved by providing and maintaining a point of coordination and control of all activities and processes with stages in service lifecycle.
Process, Activity, Methods and Technical :
Defining and maintaining policies and methods, designing resource plans and capabilities, coordinating design activities, managing risks and design issues, and improving service design
Input :
Service charters, demand changes from several stages of service lifecycle, change documents and change authorization, business information from IT strategy and organization business, business impact analysis, service portfolio, IT strategy, governance needs, organization policy needs, laws and regulations, And project schedules, change schedules, configuration management systems, feedback from all processes, information technology architectures, management systems, metrics measurement and methods, and design processes.
Output :
A comprehensive and consistent set of Service Designs, revisions to information technology architecture, system management revisions, revisions of metrics and metrics methods, process revisions, service portfolio updates, updates to change documents.
Analysis :
At present all relevant documents concerning service design are in the Term of Reference (TOR) and the Terms of Reference which cover all resource design and capabilities. For the IT service, there are several competent human resources in their respective fields namely Infrastructure, Information Systems, Diplomatic Communication and Information Security System. Currently ferr the design of services such as the internet and applications are made based on the request from the Satker through the official note. There is often a change in network topology due to changes in service structure of the ISP but Puskom does not have complete network topology documentation so that when troubleshooting occurs it is difficult to troubleshoot. This is what explains the design coordination in Puskom does not exist yet.

A.3 Service Transition

Cabinet Office divides the processes included in Service Transition on ITIL V3 2011 comprising Transition Planning and Support, Change Management, Service Asset and Configuration Management, Release and Deployment Management, Service Validation and Testing, Change Evaluation, and Knowledge Management. Example lifecycle anlaysis framework for Puskom can be seen in Table 4 which is The results of a comparison analysis between the conditions governed by ITIL V3 2011 with the actual conditions.

Table 4. Analysis of Process Condition Transition Planning and Support

Service Lifecycle
Service Transition
Process : Transition Planning and Support
Description
Aim:
To provide overall planning for the service transition and to coordinate the resources they need.
Process, Activity, Methods and Technical :
Transition strategy, service transition lifecycle stages, preparation for service transition, planning and coordination of service transition, and provision of transitional process support.
Input :
Proposal perubahan; otorisasi perubahan; dan Service Design Package berupa Release package definition and design specification, Test plans, Deployment plans, dan Service acceptance criteria (SAC)
Output :
Transition strategy and budget, as well as integration of service transition plan
Analisa Kondisi :
During this process of transition planning and support either for new services or service changes in Puskom has never been managed properly. As part of the planning and support for service transition, the implementation of this process will minimize the impact and failure of the service transition. From the data history during this big problems arise at the time of service transition occurs when there is a change from the old system to a new system such as the transition of email kemlu, portal kemlu, and many problems that occur that many officials and employees who can not access old email due to migration process not perfect. Therefore, Puskom in the future can apply the service transition well for planning and support his resources either.

A.4 Service Operation

Cabinet Office divides the processes included in Service Operation in ITIL V3 2011 consisting of incident management, event management, request fulfillment, problem management, and access management, example lifecycle anlaysis framework for Puskom can be seen in Table 5 which is The results of a comparison analysis between the conditions governed by ITIL V3 2011 with the actual conditions.

Table 5. Analysis of Process Condition Event Management

Service Lifecycle
Service Operation
Process : Event Management
Description
Aim :
To manage events that occur in the lifecycle
Process, Activity, Methods and Technical :
Events, notifications, detection, and Event logs; First-level event correlations and filtering, significant events, second-level event correlations, subsequent action needs, response selection, review of action, and event closure.
Input :
Operational and service level requirements relating to events and actions; Alarms, warnings and thresholds to recognize events; Event correlation tables, rules, event codes and automated response solutions that will support event management events; Roles and responsibilities for recognizing events and communicating them to people who must address them; And operational procedures for recognition, logging, escalating and communicating events.
Output :
Events that have been communicated and escalated to the responsible party for follow-up; Event logs describe events occurring and some escalation and communication activities performed to support other forensic, diagnostic, and CSI actions; Events that indicate an incident has occurred; Events that indicate potential branch of SLA or OLA objectively; Events and warnings indicating the completion of the status of deployment, operational and support activities; And SKMS populations with information and event history.
Analysis :
Currently the event management process has been applied to some infrastructure components to monitor events that occur. The standard used is SNMP message. The Infrastructure sub-sector has implemented SNMP messages across all IT infrastructures to monitor events happening. Currently an integrated information system is being developed to record all events that occur. The goal is to be able to clearly measure how many event exceptions occur in a month, so that steps can be improved if necessary. Currently under construction of NOC and SOC for event and log monitoring of all existing IT infrastructure devices.

A.5 Continual Service Improvement

The Cabinet Office divides the processes included in the Continual Service Improvement in ITIL V3 2011 just one process namely The Seven Step Improvement Process. The

creation of each process framework in the Continual Service Improvement uses the same method as the framework created in the previous chapter. Continual Service Improvement framework for Puskom can be seen in Table 6 which is the result of comparison analysis between the conditions governed by ITIL V3 2011 with the actual conditions.

B. Selection of IT Processes COBIT 5

Based on mapping on Table 1, next is grouping the IT processes in COBIT 5 to eliminate duplicate data. This grouping is done to all Service Management Process in the lifecycle of Service Strategy, Service Design, Service Transition, Service Operation and Continual Service Improvement. The result of grouping which is IT Process mapping in COBIT 5 with the five Service Lifecycle at ITIL V3 2011, can be seen in Table 7 below.

Service Lifecycle
Continual Service Improvement
Process : The Seven Step Improvement
Deskripsi
Aim : To define and manage the steps needed to identify, definition, gather, process, analyze, present, and implement improvements.
Process, Activity, Methods and Technical : Identify improvement strategies, define what is measured, data collection, data processing, information and data analysis, presentation and use of information, and improvement implementation.
Input : Service catalog; SLR; Review of service meetings; Vision and mission statement; Objectives and objectivity of companies, divisions and departments; Legislative needs, governance needs; Budget cycle; customer satisfaction survey; Overall IT strategy, market expectations; Encouragement of new technology; And flexible commercial models.
Analysis : Currently the process of continual service improvement refers to the ITMP document and roadmap on the strategic plan 2016-2020, but should always be done review on the achievement of ITMP and the roadmap is how far its achievement and do the adjustment in ITMP document for the process of improvement in the future. For example, in 2016, the construction of the first stage command center and supporting infrastructure in which the infrastructure development process based on the previous ITMP should have been completed but due to no review of the implementation of ITMP so that the planning and development process in the future is less than optimal.

Table 6. Analysis of Process Seven Step Improvement

Table 7. Grouping IT Processes in COBIT 5 With ITIL V3 2011

No.	Process COBIT 5	ITIL V3 2011
1	APO01 Manage the IT management framework	CSI 4.1 The Seven-step Improvement Process
2	APO02 Manage strategy	SS 4.1 Strategy Management for IT Services
3	APO06 Manage budget and costs	SS 4.3 Financial Management for IT Services
4	APO08 Manage relationships	SS 4.5 Business Relationship Management
5	APO09 manage service agreements	SS 4.2 Service Portofolio management
		SS 4.4 Demand Management
		SD 4.2 service catalogue Management
		SD 4.3 service level management
6	BAI01 manage programmes and projects	SD 4.1 design coordination
7	BAI04 manage availability and capacity	SD 4.4 availability management
		SD 4.5 capacity management
8	BAI06 manage changes	ST 4.2 change management
9	BAI07 manage changes acceptance and transitioning	SD 4.1 design coordination
		ST 4.1 transition planning and support
		ST 4.4 release and deployment management
		ST 4.5 service validation and testing
		ST 4.6 change evaluation
10	BAI08 manage knowledge	ST 4.7 knowledge management
11	BAI09 manage assets	ST 4.3 service assets and configuration management
12	BAI10 manage configuration	ST 4.3 service assets and configuration management
13	DSS01 manage operations	SO 4.1 event management
		SO 6.2.1.3 IT operation management
14	DSS02 manage service requests and incidents	SO 4.2 incident management
		SO 4.3 request fulfillment
15	DSS03 manage problems	SO 4.4 problem management
16	DSS04 manage continuity	SD 4.6 IT service continuity management
17	DSS05 manage security services	SD 4.7 information security management
18	DSS06 manage business process controls	SO 4.5 access management

The result of grouping in Table 7 has produced 18 (eighteen) IT processes in COBIT 5 that have been mapped into the five Service Lifecycle.

C. Rating of IT Processes Capability Level in COBIT 5

One of the objectives in this research is the development of IT service evaluation framework for Kemenlu. The above mapping results in 18 (eighteen) IT processes in COBIT 5 to be used in the process of determining capability level on the nine attributes. The creation of a framework relating to the application of these nine attributes begins with an explanation of the conditions of each attribute obtained from COBIT 5.

This explanation is useful to provide understanding for Puskom about the IT processes in COBIT 5. After getting an explanation of each attribute then the step is to analyze by comparing the attributes COBIT 5 with the actual conditions that occurred in Kemenlu. Actual data retrieval process conducted discussion with interviews and questionnaires to leaders or officials associated with the management of ICT in Puskom. The summary of the results of the current process capability level rating to 18 COBIT 5 processes can be seen in Table 8.

Table 8. Results Assessment Capability Level Process "Current Conditions"

No.	Proses COBIT 5	0	1	2	3	4	5	Tingkat Kapabilitas
1	APO01 Manage the IT management framework		*					Performed
2	APO02 Manage strategy		*					Performed
3	APO06 Manage budget and costs		*					Performed
4	APO08 Manage relationship		*					Performed
5	APO09 manage service agreements		*					Performed
6	BAI01 manage programmes and projects		*					Performed
7	BAI04 manage availability and capacity	*						Incompleted
8	BAI06 manage changes		*					Performed
9	BAI07 manage changes acceptance and transitioning		*					Performed
10	BAI08 manage knowledge		*					Performed
11	BAI09 manage assets		*					Performed
12	BAI10 manage configuration	*						Incompleted
13	DSS01 manage operations		*					Performed
14	DSS02 manage service requests and incidents		*					Performed
15	DSS03 manage problems		*					Performed
16	DSS04 manage continuity		*					Performed
17	DSS05 manage security services		*					Performed
18	DSS06 manage business process controls		*					Performed

.The next process is to set a target or a measure that the organization wants to achieve within a certain period of time. Targeting methods can be done in several ways but in this study the target is determined by questionnaire technique based on the expectations of officials or leaders related to IT governance. The summary of the results of the target process capability level rating to 18 COBIT 5 processes can be seen in Table 9.

Table 9. Results Assessment Capability Level Process "Target"

No.	Proses COBIT 5	0	1	2	3	4	5	Tingkat Kapabilitas
1	APO01 Manage the IT management framework			*				Managed
2	APO02 Manage strategy			*				Managed
3	APO06 Manage budget and costs				*			Established
4	APO08 Manage relationships			*				Managed
5	APO09 manage service agreements			*				Managed
6	BAI01 manage programmes and projects			*				Managed
7	BAI04 manage availability and capacity		*					Performed
8	BAI06 manage changes			*				Managed
9	BAI07 manage changes acceptance and transitioning			*				Managed
10	BAI08 manage knowledge			*				Managed
11	BAI09 manage assets			*				Managed
12	BAI10 manage configuration		*					Performed
13	DSS01 manage operations			*				Managed
14	DSS02 manage service requests and incidents			*				Managed
15	DSS03 manage problems			*				Managed
16	DSS04 manage continuity			*				Managed
17	DSS05 manage security services			*				Managed
18	DSS06 manage business process controls			*				Managed

D. Gap Analysis IT Processes COBIT 5 at Puskom

Gap Analysis (Gap Analysis) is conducted to find out the extent of the gap between the current condition with the expected conditions and what efforts can be done to minimize the gap. The gap (Gap) is obtained through the comparison between the level of governance capability in Puskom, Kemenlu on the current condition with the level of target capability to be achieved. With the help of a spider chart or radar chart like Figure 4, clearly visible gaps in every process.
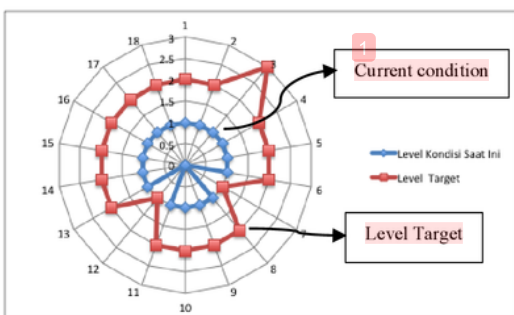

Fig 8. Radar Chart Gap Analysis Capability Level

Fig.4 Radar Chart Gap Analysis Capability level

Priority of IT Processes COBIT 5 at Puskom

Here are the strategies that are of concern in determining the achievement of capabilities:

1. The improvement is done gradually in accordance with the priority scale where attributes with lower capability value, get higher priority for improvement.
2. Referring to the first grain above, the process area with the current level of capabiility is "0" (incomplete), gets the main priority to be done remedial steps to reach the level of capability "1" (performed) first. Some of the process areas in question are BAI04 and BAI10, respectively.
3. Conditions where the balance level capability is reached then all process areas are at the current level "1". Simultaneously with the process area that has reached the level of capability of "1" that is APO01, APO06, APO08, APO09, BAI01, BAI06, BAI07, BAI08, BAI09, DSS01, DSS02, DSS03, DSS04, DSS05, DSS06 will be done remedial step towards condition level capability Target, ie level 2 capability.

Recommendations for achieving level 1 capabilities are given in the form of specific activities in each process according to indicators PA.1.1 Process Performance (Process Performance). To achieve level 2 capability in general must implement indicators of process capability as follows:

1. PA 2.1 Performance Management (Performance Management) :
   A. Identify and define performance goals for the process;
   B. Plan and monitor process performance;
   C. Adjust and align process performance to meet predetermined plans;
   D. Define, define, and communicate responsibilities and authority to carry out the process;
   E. Identify, provide, allocate, and utilize the resources and information necessary to carry out the process;
   F. Manage the means by which the parties are involved, to ensure effective communication and clarity of delegation of responsibilities.
2. PA 2.2 Work Management Management (Work Product Management) :
   A. Define the need for the work of the process;
   B. Define the need for documentation and control of the work of the process;
   C. Identify, document and control the work well;
   D. Review the work according to plan and align the work to meet the needs.

IV. CONCLUSION

All ITIL V3 2011 processes mapped to the COBIT 5 framework have measured level capability on 18 (eighteen) IT processes in COBIT 5 whose average level capability is at "0" and "1" levels. The next step is to analyze the level capability of TI COBIT processes between the "as-is" condition and the "to-be" condition which is majority in level 2 and the rest at level 3. After that, the prioritization of IT processes in COBIT 5 with The way all IT processes on the "0" level are prioritized to increase its capability level to level "1" and then "1" level can be upgraded to "2" level.

KPI (Key Performance Indicator) as an indicator of the success of the process obtained from the document COBIT 5 which then made the selection of KPI relevant to the problems at the Puskom. The relevant KPI selection process resulted in 52 KPIs from 66 KPI obtained from the COBIT

V. REFERENCES

[1] Kementerian Luar Negeri. (2016). *Laporan Kinerja Pusat Komunikasi Kementerian Luar Negeri 2015*. Jakarta: Kementerian Luar Negeri.
[2] Cabinet Office. (2011). *ITIL Service Design*. Norwich, UK: The Stationery Office Limited.
[3] Bahsani, S., Himi, A., Moubtakir, H., & Semma, A. (2011). Towards a pooling of ITIL V3 and COBIT. *International Journal of Computer Science Issues, SoftwareFirst, Mahebourg*, 185-191.
[4] S. De Haes, W. Van Grembergen, and R. S. Debreceny, "COBIT 5 and enterprise governance of information technology: Building blocks and research opportunities," *J. Inf. Syst.*, vol. 27, no. 1, pp. 307–324, 2013.
[5] Sahibudin, S., Sharifi, M., & Ayat, M. (2008, May). Combining ITIL, COBIT and ISO/IEC 27002 in order to design a comprehensive IT framework in organizations. In *Modeling & Simulation, 2008. AICMS 08. Second Asia International Conference on* (pp. 749-753). IEEE.
[6] Gehrmann, M. (2012). Combining ITIL, COBIT and ISO/IEC 27002 for structuring comprehensive

information technology for management in organizations. *Navus-Revista de Gestão e Tecnologia*, 2(2), 66-77.

[7] ISACA. (2012). *COBIT 5 Enabling Process*. Illinois: ISACA.

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