Journal of Theoretical and Applied Information Technology
15th July 2016. Vol.89. No.1
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ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

COBIT BENCHMARKING OF SYSTEM DEVELOPMENT GOVERNANCE FOR A GOVERNMENT AGENCY IN MALAYSIA

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ABSTRACT

The lack of initiative of in-house system development governance has resulted to several issues in the working procedures of the Public Service Department of Malaysia (PSD) and mutual understanding among Business and IT People. The understanding of stakeholders, especially Business-IT people, plays an important role and is responsible for carrying out inter-related values for the success of any developed Information Systems (IS) applications. The lack of understanding on the importance to achieve PSD's business goals by IT people and failure to have applications finished on time, may lead to another enhancement or rectification of the application that causes further time and resource consumption. Likewise, the Business people's assumption of IS development also lacks understanding on the technical complexities. The impact of improper management of in-house development process may hinder critical application deadline, systems malfunctioning, unsatisfied users and further damage to PSD's quality reputation. The COBIT benchmarking results of system development governance for a Malaysian government agency is presented in this paper through a survey. The survey was carried out among the staff members of the PSD who are internally involved with the system development process. Three (3) sets of questionnaires were distributed to the targeted group of 10 business personnel, 10 IT management personnel and 10 IT technical personnel. The set of questions were derived from COBIT 4.1 Process Maturity Assessment Tool, which was developed by ISACA. It is a simple diagnostic tool based on the COBIT maturity model as defined in COBIT 4.1. The tool can be used to drive awareness and obtain buy-in with regard to the need to address IT governance. Results obtained from the tool can provide an effective and efficient way to determine IT process improvement opportunities to focus on future prioritisation mechanism based on PSD's business and IT goals, as well as the identification of important input for strategic and tactical action plans. The results indicate the alignment of business goals to IT goals, as determined by the responses obtained from PSD's staff. Additionally, the tool highlights that PSD only involved 25 IT processes out of the overall 34 COBIT IT processes. A spider-web chart illustrates the current maturity assessment result of each IT-related process in PSD. Results will provide a benchmark for PSD to evaluate their current maturity level of IT processes and the necessary strategies that can be taken to improve the maturity level of each IT processes involved in the organisation, based on their strategic goals and organisational needs.

Keywords: *IT Governance (ITG), COBIT 4.1, IT Process Maturity Assessment Tool, In-house System Development, the Government of Malaysia*

1. INTRODUCTION

Since Vision 2020 was first introduced, the Malaysian Government has continuously focused and mobilised efforts to turn the dream of making Malaysia into a developed nation a reality. In order to further boost the nation's economy, as well as enhance the lives of all Malaysians, numerous changes have been introduced and implemented throughout the years. In recent years, one of the most crucial sectors to be developed is the Information and Communications Technology (ICT) sector. ICT has made government services more accessible and efficient, delivering a host of services to the public via online portals that can be accessed anytime and anywhere. One of Malaysia's

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most prominent government agencies to govern the ICT sector is The Malaysian Administrative Modernisation and Management Planning Unit (MAMPU). To date, MAMPU has created a 5-year national ICT blueprint called The Malaysian Public Sector ICT Strategic Plan - Powering Public Sector Digital Transformation starting 2011 to 2015 [1]. This blueprint is intended to accelerate the innovative utilisation and development of ICT, in response to the public sector's ever-evolving service landscape.

The impetuous and varied geopolitical environment of today has given rise to more challenging and complex issues that must be tackled by domestic governance. As the administrative arm of the government, the Public Service Department of Malaysia (PSD) plays a vital role in domestic governance, as well as in easing the nation's progress to becoming a high-income and developed nation by 2020. To meet the requirements of Malaysia's expanding population, various methods of service delivery must be planned and implemented, with an emphasis on ICT. The aim of ICT implementation is to reduce bureaucracy, which has often plagued the public service sector. Though much hope is placed on e-government projects, a survey of developing and transitioning economies has shown that around 85% of these projects turn out to be partial or total failures [2]. As success can be measured in different ways, it is difficult to ascertain just how many of such projects have failed, but it can be said with certainty that only a minority of them become a full-fledged success [2]. These failures are caused by a variety of reasons, but the main causes are the lack of internal ownership, vision and strategy, as well as poor project and IT management [3], in addition to poor technological infrastructure and data interchange issues [4]. The inability to supply e-government systems with enough business cases and administrative reform, as well as the tendency to rely too heavily on technology, are other reasons cited [5]. Furthermore, IT governance values and related frameworks are vital as guidelines to bridge the gap between the responsibilities of business and IT people in the development of a viable information system.

In this study, the adoption of COBIT 4.1 Process Maturity Assessment Tool is used to identify the awareness of IT Governance maturity elements in the as-is in-house system development process of PSD. By evaluating the questions through the survey which has been conducted in PSD, the current assessment for each related IT processes in PSD is evaluated and summarized. The result of the survey will be the key elements in benchmarking the related IT processes in designing a proposed framework as well as identifying the level of maturity for the IT processes in PSD. The elements of CMM-benchmarking in COBIT 4.1 is expected to get the interest of the PSD's top management on adopting the international standard of implementing IT Governance elements to improve the alignment between the business and IT people in PSD towards providing a successful developed IS applications by both strategic parties. Furthermore, the research also intends to reveal that the COBIT 4.1 framework is one of the suitable standard framework to be adopted for PSD.

2. THE NEED FOR IT GOVERNANCE

As far as software projects are concerned, customers are usually left disheartened, as it has become a well-known fact that these projects tend to flout set deadlines and budgets. To remedy this situation, the government has attempted to implement countless improvements, particularly concerning hard skills, processes, tools and techniques, as well as project management methods. However, most projects continue to fail to meet expectations. However, recently, soft skills are viewed as a promising avenue to explore [6] and considered a crucial element in the success of software projects [7]. Numerous companies have successfully incorporated soft skills into their training programmes, including Mastek, Polaris and Sun Microsystems [8]. This includes desirable soft skill characteristics in software project managers. Additionally, emotional intelligence framework has been able to outline the soft skill aspects required to enhance success [6]. By accommodating soft skills, software project management teams will stand a better chance at overcoming the problems in existing management methods.

The Software Engineering Institute (SEI) has developed two models to enhance software processes, namely the concurrent-development process and the Capability Maturity Model (CMM). As an innovation from conventional processes, the concurrent-development process incorporates, among others, Japanese software factories, lean production systems and time-sensitive process management techniques. Shorter cycle times and increased productivity is often the direct result of applying the concurrent-development process to large-scale communications software [9]. This case supports research findings from the private sector, which states that poorly executed big-scale and

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complex projects have a higher probability of failure and are heavily influenced by contextual problems.

It is also evident that in public governance settings, where political and organisational elements take precedence, a project's commission and development often becomes more complex [10]. Among the causes of project failure as highlighted by previous researchers involves significant constraints involving various internal, economic and political factors that impede the implementation of government ICT projects [11]. Researchers have also concluded that clear and strategic IT goals, and efficient integration are key to the success of IT solution deployment in public organisations [12]. Their findings also indicate that it is not the technological issues, but the role of top management that ultimately influences project success or failure.

3. CONTROL OBJECTIVES FOR INFORMATION AND RELATED TECHNOLOGY (COBIT®)

COBIT® is a set of best practices (framework) for information technology (IT) management created by the Information Systems Audit and Control Association (ISACA) and the IT Governance Institute (ITGI) in 1992. First launched in 1996, COBIT® was designed "to research, develop, publicise and promote an authoritative, up-to-date, international set of generally accepted information technology control objectives for day-to-day use by business managers and auditors". Managers, IT users, and auditors can all benefit from COBIT's many applications. For example, COBIT® can assist managers to make IT-related decisions and investments better as COBIT provides a more effective decision-making mechanism by defining a strategic IT plan. This plan will involve the information architecture, acquiring the necessary IT hardware and software, which enables the execution of an IT strategy to ensure continuous service, and monitoring the performance of the IT system.

COBIT also benefits IT users by providing them assurance through defined controls, security, and process governance. Auditors, on the other hand, can use COBIT® to identify IT control issues within a company's IT infrastructure and corroborate their audit findings [9]. At its highest level of IT governance, COBIT® complements practices and standards such as ITIL, ISO 27001 and 27002, and PMBOK. Despite the presence of management and control guidelines in certain IT sectors, such as COSO, ITIL, PMBOK, CMM, ISO 27001 and Six Sigma, the COBIT® framework encompasses all IT-related governance and activities, in addition to enhancing their alignment to business needs [10].

4. THE COBIT® IMPLEMENTATION

The adoption of IT governance would have direct and indirect effects on business processes which determines the overall performance of the firm [11]. In addition, the impact of these mechanisms are enhanced over time, in which as IT governance mechanisms mature, the benefits are more expressive [15]. Therefore, it can be argued that the impact of those mechanisms is not an isolated event, but a continuous phenomenon with the lag effects being greater than the immediate ones. The results suggest that the adoption of IT governance practices is associated to improvements in different financial metrics and maturity of IT governance initiatives can affect the governance performance and, consequently, the organizational performance.

To strengthen the importance of IT Governance through COBIT adoption, Table 1 summarises COBIT® implementation by different sectors.

Table 1: The COBIT® Implementation

Author	COBIT® Product	Sector	Methods
(Pederiva, 2003) [16]	COBIT® Maturity Model	Vendors	Benchmark four (4) possible vendors.
(Salle & Rosenthal, 2005) [17]	COBIT® 4.0	Hewlett-Packard (HP) Information Technology (IT) program	Mapping COBIT® 4.0 to HP IT Service Management (ITSM) processes.
(Ivanyos, 2006) [18]	COBIT® 4.1	Information Technology and Payroll Outsourcing services	Mapping COBIT® 4.1 with COSO.
(Sahibudin et al., 2008) [19]	COBIT® 4.1	All	Combining ITIL®, COBIT® and ISO/IEC 27002.
(Abu Musa, 2009) [20]	COBIT® 4.0	Government & Other	An empirical study.
(Ribeiro & Gomes, 2009) [14]	COBIT® 4.1	Educational Institution	A case study

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Author	COBIT® Product	Sector	Methods
(Feltus, Dubois, & Petit, 2009) [21]	COBIT® 4.1	Companies	A case study of COBIT® framework and illustrated based on the RACI chart.
(Hojaji & Shirazi, 2010) [22]	COBIT® 4.1	Organization	Propose a new AUT SOA governance framework.
(Tambotoh & Latuperissa, 2014) [23]	COBIT® 4.1	Government	An application development to measure the maturity level of IT governance.
(Bartens, Schulte, & Voß, 2014) [24]	COBIT® 5	E-business	A benchmark for their examination, and reveal a need for a modification of the framework to fully cover e-business requirements

In the ever evolving information age, there is a pressing need to govern manage and operate IT in a holistic manner. It is deemed to succeed through an integrated process model that provides end-to-end coverage of the roles, responsibilities and practices required in an organisation. To evaluate an organisation for management and control, an IT Maturity model can be used with a rating of non-existent (0) to optimised (5). In COBIT, a generic definition is provided for the COBIT maturity scale, which is similar to the Capability Maturity Model (CMM), but interpreted and adapted to the nature of COBIT's IT processes. In addition, a specific model is provided from this generic scale for each of COBIT's overall 34 IT processes.

5. RESEARCH METHODOLOGY

This research adopts COBIT 4.1 Process Maturity Assessment Tool developed by ISACA, to assess the current PSD's process maturity. It is a simple diagnostic tool based on the COBIT maturity model, which includes the Implementing and Continually Improving IT Governance tool kit. The tool can be used to drive awareness and obtain buy-in with regard to the need to address IT governance. A survey was carried out among staff members of the PSD who are internally involved with the system development process. Three (3) sets of questionnaires were distributed to the targeted group of 10 business personnel, 10 IT management personnel and 10 IT technical personnel. Although COBIT is often used to measure maturity models, most users are too centred upon "the magical numbers". Hence, to effectively measure IT process maturity, it is imperative to firstly determine the purpose of the measurement namely in ensuring what needs to be measured and what should be done with the measurements obtained. As it is not an end goal, maturity measurement can be used to support other objectives, such as raising awareness, identifying weaknesses, and identifying priority improvements. The best way to choose a measurement method is to select one that best supports the set of identified goals or objectives. The ideal consensus should reflect where an organisation should be, and the results must be reviewed and ratified by the management in order to have improvements planned and implemented. To support this approach, the results can be compared to the results of ISACA's Maturity Survey and plotted into spider-web charts [25].

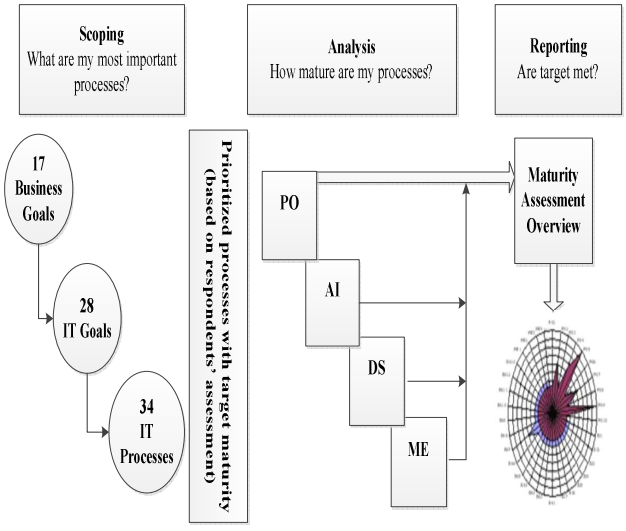

Figure 1: A process flow of using COBIT 4.1 Process Maturity Assessment Tool

Figure 1 indicates a process flow outlining the different phases and use of the different modules from the tool. The modules are Scoping, Analysis and Reporting. These three (3) modules and their usage are elaborated in detail through the following sections.

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5.1. Scoping

In this module, based on the Business-IT Goals cascade that can be found in COBIT 4.1, it helps the organization to focus on classifying the most important processes for a specific organisation. In addition, target maturities can be set for both the short term (within the next three years) and long term (the next five years) processes. The target maturity is set based on PSD's ICT Strategic Plan (ISP), which is being evaluated every 5 years. By using this feature, an organization has the ability to distinguish between processes with different priorities, both in terms of importance to the organisation and timing.

5.2. Analysis

As soon as the assessment scope is set, the current maturity of the selected processes will be able analysed by the user, based on the COBIT maturity models. By calculating the most frequent answers from the questionnaire's response of each related IT processes, the current result of the maturity level is revealed in the results section.

5.3. Reporting

In order to identify the gaps, the maturity of the assessed processes can be compared with the set targets. Feedback is also provided on weighted gaps, based on the relative process importance. The report of the results is presented in a spider-web chart.

6. QUESTIONNAIRE DESIGN

The questionnaire was developed by adopting the features in COBIT 4.1 Maturity Assessment Tool into the flexibility of the PSD's working environment by referring to the current PSD's In-House System Development IT Department Standard Operation Procedure (SOP). Three (3) sets of questionnaires were prepared for this research. The self-assessment questions of the questionnaire was derived from the tool, which suited the PSD's working flow environment. As discussed earlier, COBIT has 34 IT processes, however by using the tool, the result of scoping business-IT goals will reveal only related IT processes to PSD's business based on scoring result of Questionnaire set 1. After the tool automatically cascade the related PSD's business-IT goals, the result of PSD's Current IT Processes Maturity Assessment can be assessed. In conducting the assessment, the respondents were divided to three target groups, which include the businesses process/owner for Questionnaire Set 1, the IT People (Management) for Questionnaire Set 2, and the IT People (Technical) for Questionnaire Set 3. The questionnaire was specifically distributed to the targeted group in ensuring the respondents answered each of the assessment items in the questions based on the exact roles and responsibilities of their current job scope. The questionnaire sets can be briefly described as follows.

6.1. Questionnaire Set 1: Scoping Business-IT Goals

The first section of Questionnaire set 1 aims to achieve scoring from four (4) business domains. The domains are Financial, Customer, Internal and Learning. A total of 17 Business Goals have been developed and used in the tool to get a score for PSD's Business-IT goals scoping. Each of the following business goals were scored on a relative scale from 1 (not important) to 10 (most important). The most important goals are scored 10 and the less important goals are scored 1. Each of the following IT goals is scored based on the Business goals scoring once the score is keyed-in in the scoring sheet. The average of total 28 IT Goals scores are automatically calculated based on the Business Goals scores and filled in by the system.

6.2. Questionnaire Set 2: Process Maturity Assessment (IT Management)

The second set of questionnaire is designed to assess and measure the IT People's (Management) tasks towards related IT processes as a result of the Business Goals scoring. There are two (2) COBIT domains involved in this IT process maturity assessment, which are Plan and Organise (PO) and Monitor and Evaluate (ME). From the Business Goals scoring, only eight (8) out of a total of ten (10) PO processes were involved in this research, which are PO1, PO2, PO3, PO4, PO5, PO7, PO8, and PO10. While only two (2) ME out of a total of four (4) processes were related to the PSD's business goal. The related ME processes are ME1 and ME4.

6.3. Questionnaire Set 3: Process Maturity Assessment (IT Technical)

The second questionnaire is designed to assess and measure the IT People's (Technical) tasks towards related IT processes as a result from the Business Goals scoring. There are two (2) COBIT domains involved in this IT process maturity

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assessment, which are Acquire and Implement (AI) and Deliver and Support (DS). From the Business Goals scoring, all AI processes (A1-AI7) were involved in this research. While only eight (8) of a total of 13 DS processes were related to the PSD's business goal. The related DS processes are DS1, DS2, DS3, DS6, DS7, DS8, DS10, and DS13.

6.4. Respondent's Backgrounds

The three (3) set questionnaires have sections to gather the demographic information of the respondents. Each questionnaire set consists of four (4) questions. The majority of them have multiple-choice responses, except one question is to be answered by writing the years of experience in the present organisation and overall year of services. The questions for the demographic information include respondent position, type of information system involved, current working experience and overall working experience, and CMM-related training information.

All 3 sets of questionnaires were distributed to the targeted group of 10 business personnel, 10 IT management personnel and 10 IT technical personnel. The majority of respondents' position (36.67%) are in Business/Process Owner group. On the other hand, the remaining percentages were distributed to three group involving Module Owner (26.67%), Programmer (33.33%) and Project Manager (3.33%).The highest percentage of the respondents dealt with Human Resources Management System (HRMIS) (46.67%). The second highest percentage is Training System (eSILA) (26.67%) and other generic systems is 23.33%. There are also 3.33% respondent who were involved in all three IS application types. The survey also indicates that 43.33% of respondents have 1-5 years' experience involvement in IS application in PSD, while 36.67% of respondents have 6-10 years in current position. The other 20% of respondents are seniors in the position and already served about 11-15 years in IS environment of PSD. From the results, it can be concluded that most of the respondents have sufficient experience to be part of the questionnaire respondents.

7. RESULTS

Data from the survey were assigned into each related IT processes based on the research findings. A spider-web chart is created to present the results in a few different views, as depicted in Table 2, Figure 2, Figure 3 and Figure 4. Table 2 indicates the current PSD's COBIT IT processes maturity assessment scores and from these scores the spider-web is plotted according to the identified COBIT domains.

Table 2: Current PSD's COBIT IT Processes Maturity Assessment Result

COBIT IT Processes		Assessed?	Target on the…		Assessment
			Short Term	Longer Term	Current
PO1	Define a strategic IT plan	Yes	3	5	3.0607
PO2	Define the information architecture	Yes	3	5	2.9690
PO3	Determine technological direction	Yes	3	5	2.8499
PO4	Define the IT processes, organization and relationships	Yes	3	5	3.0038
PO5	Manage the IT investment	Yes	3	5	2.8721
PO7	Manage IT Human resources	Yes	3	5	2.7002
PO8	Manage quality	Yes	3	5	2.1144
PO10	Manage projects	Yes	3	5	3.0607
AI1	Identify automated solutions	Yes	3	5	3.1032
AI2	Acquire and maintain application software	Yes	3	5	2.9846
AI3	Acquire and maintain technology infrastructure	Yes	3	5	2.8172
AI4	Enable operation and use	Yes	3	5	2.7976
AI5	Procure IT resources	Yes	3	5	2.2997
AI6	Manage changes	Yes	3	5	2.3496
AI7	Install and accredit solutions and changes	Yes	3	5	2.2843
DS1	Define and manage service levels	Yes	3	5	2.1223
DS2	Manage third-party services	Yes	3	5	1.8986
DS3	Manage performance and capacity	Yes	3	5	2.6088
DS6	Identify and allocate costs	Yes	3	5	2.5461
DS7	Educate and train users	Yes	3	5	2.6399
DS8	Manage service desk and incidents	Yes	3	5	1.8471
DS10	Manage problems	Yes	3	5	2.2634

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COBIT IT Processes		Assessed?	Target on the…		Assessment
			Short Term	Longer Term	Current
DS13	Manage operations	Yes	3	5	3.1605
ME1	Monitor and evaluate IT performance	Yes	3	5	2.9019
ME4	Provide IT governance	Yes	3	5	3.0650

The tool calculates the current assessment results to produce a more graphically informative results, by plotting them into a spider-web chart, as shown in the figures below.

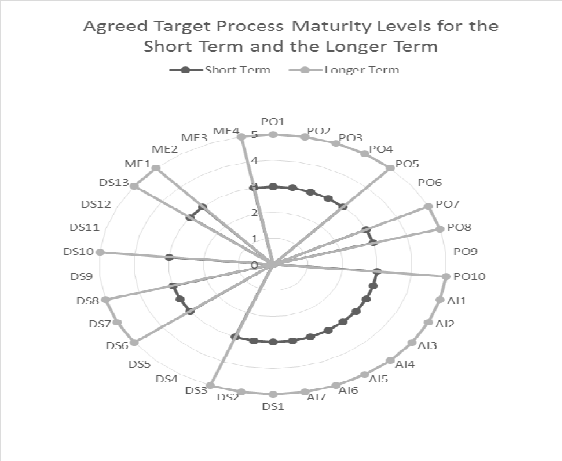

Figure 2: Agreed Target Process Maturity Levels for the Short Term and the Longer Term

Figure 2 highlights findings of the research, which is an agreed target process maturity levels for the short term and longer term of the related 25 IT Processes involved with PSD's current environment.

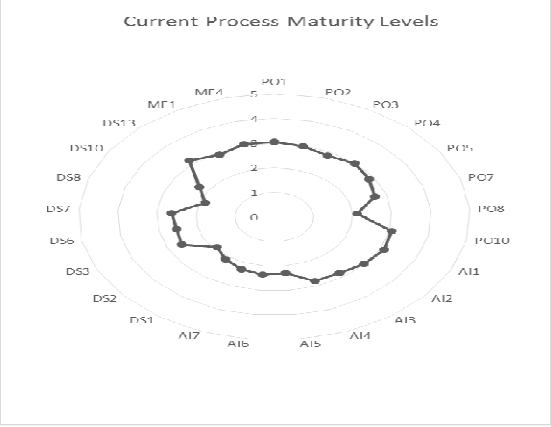

Figure 3: Current Process Maturity Levels of PSD

Figure 3 indicates current process maturity levels of PSD, based on the Business Goals scoring earlier. From the IT People's (Management) perspective for the PO and ME domain, it can be concluded that the average maturity level is 3 for each related IT processes. Meanwhile, from the IT People's (Technical) perspective for AI and DS, the average maturity is 2. From the result, DS13 (Manage operations) seems to give a slightly higher maturity level value, which is 3.1605, as compared to other values. As the lowest maturity value is for DS8 (Manage service desk and incidents), this could indicate a reason for PSD's top management to look into the matter to implement some improvement or identify the root cause of the issues raised by the DS8 processes.

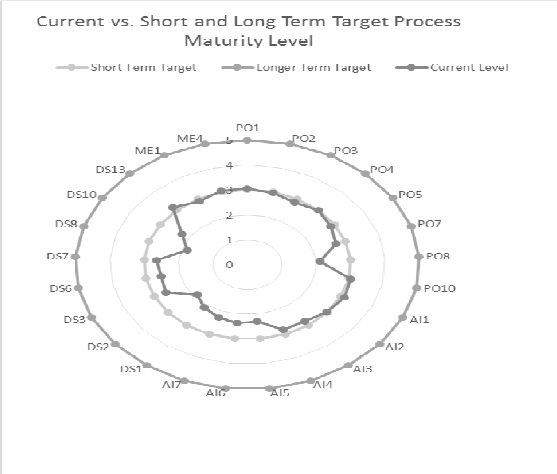

Figure 4: Current vs. Short and Long Term Target Process Maturity Level

In Figure 4, the current vs. short and long term target process maturity level is clearly presented. By having the current value of current PSD's IT processes maturity level, the top management would benefit from having a basic knowledge of Implementing and Continually Improving IT Governance in PSD.

8. DISCUSSION

COBIT 4.1 Control Objectives Management Guidelines Maturity Models Framework has its own process description, control objectives, management guidelines and maturity model definition on a method for evaluating organisations [26]. The evaluation can be rated from a maturity level of non-existent (0) to optimised (5) for all 34 IT processes. For the lowest maturity value findings such as DS8 (Manage service desk and incidents), this indicates the current Maturity Model is still at Level 1. Consistent with the definition of Level 1 (Initial/Ad hoc) by COBIT 4.1, the management of DS8 satisfies the business requirement for IT of

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enabling effective use of IT systems. This is evident through the use of supporting tools and personnel responding to user queries and managing incident resolution through incident analysis. However, there is no standardised process, and only reactive support is provided. Management does not monitor user queries, incidents or trends. There is no escalation process to ensure that problems are resolved.

As for DS8, PSD could improve the management for the process of "Manage service desk and incidents" through effective use of IT systems by ensuring resolution and analysis of end-user queries, questions and incidents are provided by setting up PSD's professional service desk function. These services has to be equipped with fast response, clear escalation procedures, and resolution and trend analysis. The services may also be achieved by installing and operating a service desk, monitoring and reporting trends as well as defining clear escalation criteria and procedures and is measured by amount of PSD's customers' satisfaction. These satisfaction can be further achieved with the existence of first-line support, percentage of incidents resolved within agreed-upon or acceptable period of time and call abandonment rate.

Top PSD officials are continuously asked to consider how well IT is being managed on a daily basis, since the need to provide their services to the public via online portals is crucial. Some of the questions being asked may include:

- What are the IT industry's peers doing, and how are PSD placed in relation to them?
- The acceptable IT governance good practice, and how are PSD placed with regard to these practices?
- Based upon these contrasts, are PSD's IT doing enough?
- Identifying what needs to be done to reach an acceptable level of management and control over PSD IT processes?

It can be difficult for the officials to give satisfying answers in response to these questions. In PSD, IT management is continually looking for benchmarking and self-assessment tools to provide answers to these issues. Hence, utilizing and understanding COBIT's processes would be highly beneficial to PSD's process owners to know:

- Where the organization is now? (A relative measure)
- Where do they want to be? (A manner to efficiently decide)
- How to measure? (A tool for measuring progress against a clear and understanding business goals)

By reviewing each related IT processes from PSD's survey result with COBIT 4.1 Control Objectives Management Guidelines Maturity Models Framework, a higher target Maturity Model level can be achieved by improving current performance based on the suggested guidance from the framework.

9. CONCLUSION

In order for IT to be successfully delivered in support of organisation's strategy, there should be clear ownership and a direction for business requirements by the customer and clear understanding of what needs to be delivered. Furthermore, Business- IT Goals cascade provides a global view of how generic business goals relate to IT goals, IT processes and information criteria. The COBIT assessment tool helps demonstrate the scope of COBIT and the overall business relationship between COBIT and organisation drivers that relates with PSD environment.

In conclusion, in terms of the importance for maintaining effective internal control over the reliability of in-house system development processes among business and IT people, this paper sheds light on the extent to which PSD utilizes the COBIT principles. Findings from this study would be of importance and relevance to the top management of PSD in order to increase the awareness in adopting the relevant IT governance enablers. Future work may include qualitative analysis of interviews conducted to top government officials who are involved with the strategic decisions for systems development in Malaysian Government Agencies. Results of the COBIT benchmarking and interview analysis can be further triangulated with organisational internal process documents to formulate an in-house system development governance framework. This framework may serve as a guideline to all Malaysian Government Agencies adopting IT governance in managing internal systems development processes. Limitation of this study involves the use and adoption of COBIT 4.1

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principles to the context of study. A different approach may be applied should a newer version of COBIT is being adopted.

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ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

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