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RESEARCH ARTICLE

ICT PROJECT MANAGEMENT FRAMEWORK USING BUSINESS PROSES MANAGEMENT APPROACH IN PUBLIC SECTOR MALAYSIA

***Kamaliyah Sarjo Hj Ahmad and YazrinaYahya**

Faculty of Information Science and Technology, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia

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ABSTRACT

ICT project management (ICT PM) has been the mechanism to delivering the projects. The developments of ICT projects have increased in many organizations to ensure that overall needs of customers in business requirements are fulfilled. However, many ICT projects failed and the due to the ICT project failure and its impact to the organization, researchers and practitioners are asked to specifically look at the history of how the project is carried out to find an effective approach and comprehensive to overcome this issue. However, there are limited numbers of studies which BPM approach in ICT PM. Therefore, the purpose of this study was to develop ICT project management framework using business proses management (BPM) approach in public sector that fit into Malaysia government scenario, in particular with respect to stakeholder management. To meet the purpose, ten responded of ICT management, ICT project managers, project committee members and a team of expert consultants in project management at public sector Malaysia were interviewed. Data for the study was collected using interview and analyzed documentation. The paper found out that three elements identified need to add in the initial framework were develop previously.

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INTRODUCTION

Today's business environment is complex and requires faster decisions, better allocation of scarce resources, and a clearer focus. Adherence to time, scope and cost requirements in projects may provide a company with increased income and value for the near future. However, to complement this view, the project management needs to introduces doing the right projects, creating a link from the projects to the organization's strategy and, simultaneously, adopting a long-term view. However, many ICT projects failed to take off such as a series studies (Ashraf 2010, Bukhary 2013;Gartner Report, 2011; Gita *et al*., 2014; Jong *et al* 2014; Liu, Wu & Meng, 2012; Sergey & Bushuyey 2014; Stoica & Brouse, 2012, 2013) produced. Despite of having a lot of standard on project management methodologies in ICT, however up to most ICT project have yet to show a good track record of success (Marchewka 2010; Standish Group Report, 2009). Business Process Management (BPM) is a holistic management approach (vomBrocke & Rosemann, 2010) focuses on all aspects of the organization in line with clients' needs. It promotes business effectiveness and efficiency while striving for innovation, flexibility, and integration with technology. BPM will improve processes continuously. It can be described as a "process optimization". BPM enables organizations to be more efficient, more effective and capable of transforming from a function focused traditional hierarchical management approach. Research done by (Kohlbacher, 2009) suggests that BPM helps organizations to gain higher customer satisfaction, product quality, speed of delivery and speed of the current market.

According to Moller *et al*. (2009), BPM is the practice-oriented concepts without basic education and no academic approve the conceptual framework. BPM is evolving paradigm and mix paradigm and methodology of organization theory, computer science, mathematics, philosophy and linguistics (Reijers *et al*., 2010). Research on business processes and their management in the current IT is limited, although it is getting studied now (Ravi, 2012). Practitioners, who work in this field is ad hoc and proprietary, are generally not available in the literature. At this time the areas of information systems has changed attention to the BPM and begin to incorporate these concepts in information systems model curriculum, research

****Corresponding author: Kamaliyah Sarjo Hj Ahmad,***
Faculty of Information Science and Technology, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia.

and practice (Chircu *et al*., 2009; vomBrocke & Rosemann, 2010). Many organization using BPM approach in high organization level not in departmental level such as ICT project management. Many previous studies on project management was done as early as the 1950s as to date studies are still being conducted (CHAOS, 2009, 2001, 1995; Chan & Scott, 2004; Gilbert *et al*., 2014; Noor Habibah, 2003; Nor'ashikin, 2013; Keil, 1998; Liu *et al*., 2012; Morris, 2010, 2001, 1994). However most of these studies had focused on organizations (Al-Ahmad *et al*. 2009; Bukhary 2013; Celine A. N. 2012; Maidin & Arshad 2010; Mohd-Yusof 2005), people (Chanrt al. 2009; Lian 2007; Mark *et al*., 2013), procurement, technology (Al-Ahmad *et al*., 2009; Kiet T. T. 2012; Song *et al*., 2013), quality (Kaali R. D. 2011), philosophy, governance (Abdelsalam, ElKadi, & Gamal 2010; Wright 2010), value (Nor'ashikin 2013), communication (Qian *et al*., 2010; Rosencrance 2007), performance management (Edithe, 2010), knowledge management (Dedrick, 2010; Itay Moshe V. E. 2012) and project management office (Dong *et al*., 2013; John & Elizabeth 2013). Despite the focus given to various factors involved in project management, the still exists project failure (Stoica & Brouse, 2013). Based on the literature review, research conducted has not focused on the strengths and weaknesses of ICT project management. Therefore research needs to be done to get the appropriate method to identify the strengths and weaknesses of the existing ICT project management.

However merely studying or researching on the strengths and weaknesses of ICT project management is not enough as there is need to look into further details of what has been focused in ICT project management. Liu (2010) has stated that ICT projects are unique, which are characterized by emergency, uniqueness, one shot, short term and uncertainty. To implement an IT project successfully, problems in the IT project management must be found, analyzed and solved and there must be successful project management and management innovation as well it has been argued (Liu, 2010; Pollack & Adler 2015). Dong, Feng & Wang (2013) and Przemyslaw Lech (2014) also has added facing more complex and much more information than that of the project management, project managers should control all projects at different places in real time and cooperatively and judge a big deal of changeable and uncertain information and make decision rapidly. Thus, ICT project management require new management method which is more coordination of persons, capital, objects, rapid information transfer, real time information, strong flexibility, make decision rapidly and process of project implementation quickly. BPM have this capability to do all of the requirements. BPM usually combines management methods with information technology (VomBrocke *et al*., 2014; Steve, 2011). From observations and interviews with ICT project management consultant team at Malaysian Administrative Modernization and Management Planning Unit (MAMPU), they also confirmed that there is no BPM in ICT project management methodology at public sector (Nor'ini, 2013). Hai Xie & Aying Zhang (2013) has listed a number of approaches and processes for project management but the ones listed have not included BPM in project management process. Therefore, this study will be adopt BPM because based on the preliminary analysis conducted it was discovered that no studies on BPM used in project management had been conducted. The reason being is because BPM is used in organization level and a management model that allows the organization to manage their processes as any other assets and improve and manage them over the period of time. Therefore this research will focus on BPM approach in the ICT project management. This study showed that BPM approach can be treated in ICT project management because of their very similar nature.

The purpose of this paper is to develop ICT project management framework using business proses management approach in public sector Malaysia, the objectives of this research are: To identify BPM element be included in ICT project management standard methodologies in public sector; To propose a framework for ICT project management using BPM approach in public sector; and To evaluate the acceptability of ICT project management framework using BPM approach in public sector. This study was used qualitative methods which is interviewed the participant from public sector members. Next section will explained how the study was done.

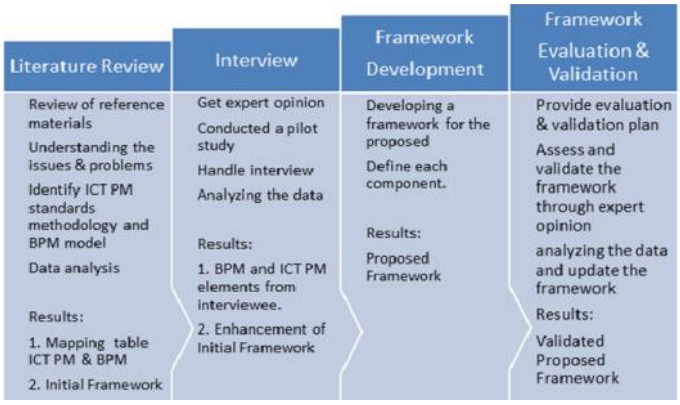


Figure 1. Overview of research methodology

Research Methodology and Design

The methodology used was adapted from Nor'ashikin (2013). The study went through four phases (Figure 1 explained the research methodology); this study adopted a qualitative approach to achieve its objectives. A qualitative approach selected for their suitability to obtain information relating to the matter under study (Yin, 1994). In this study, two qualitative data collection methods used analysis of documents and interviews. This approach allows the use of various methods used for the collection, analysis and validation of the data (Creswell, 2009), as well as to enhance understanding and accuracy of the data (Cohen & Manion, 1994). The first step involves the compilation and review of a comprehensive literature search on standard ICT project management methodologies used in the public sector and the relationship with BPM. And then, Literature review on all research and documentation on existing success factor, failure factor and critical success factor in project management and BPM, the project management within each project methodology, BPM theory, identify potential solutions to develop the mapping table as a guideline; analyze the proposed solutions to develop the proposed initial framework which could help ICT

management, project manager, owners and project team to overcome ICT project management.

The literature review and document analysis will be carried out by the ICT project information in MAMPU, which is they monitor all ICT projects in the public sector Malaysia. The results of this study is to help and improve the perception and realistic view of research on BPM approach in ICT project management as well as gain an understanding of the practice of the present ICT project management in the public sector. To collect the data required for the study, the researcher used interview to collect data, where open ended questions were used. The qualitative approach using interviews used for the development and validation for ICT project management framework using BPM approach.

The questions were designed and pre-tested for staff that involved in project management at public sector under study. The researcher personally administered questions because it allowed an opportunity to explain key areas to the interviewee. After that, the researcher plan and organize the interview session, ten interviewee from ICT management, ICT project managers, project committee members Universiti Teknologi Mara (UiTM) and six, a team of expert consultants in project management recognized by The Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) in public sector Malaysia were interviewed. Results from the analyzing the data used to enhancement of initial framework. Three elements identified need to add in the initial framework were develop previously. Next phases are framework development, which is developing the proposed framework by defined each component at the framework. In framework evaluation and validation phases, access and validate the framework through expert opinion, a team of expert consultants in project management recognized by MAMPU in public sector Malaysia were interviewed. Finally, the results of this study presented in the framework of the ICT project management BPM approach.

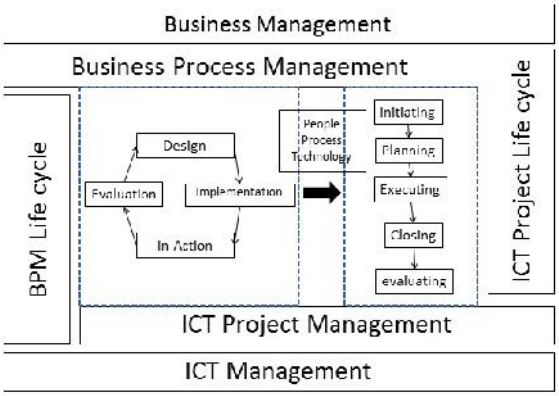


Figure 2. ICT PM-BPM Framework

RESULTS AND DISCUSSION

As a result of the evaluation, three new components were added to the proposed framework, which leads to the establishment of a guideline. The guideline can be used by the ICT project manager to manage ICT projects in the public sector or private sector by making changes in the workflow processes and mapping according to related business processes. The framework and the guidelines established will be useful for ICT project manager and ICT project management in public sector Malaysia. The study found out the BPM approach can contribute and are affected enhancement in successful of ICT project management. The findings as shown in Figure 2 revealed that interviewee indicated that the guideline as in Table 1 and workflow process in Figure 3 can be used to manage ICT projects in public sector by making changes in the workflow processes and mapping according to related business processes.

Application BPM approach to the CEFNet Project at Info structure Office

Table 1 is the ICT PM-BPM Framework guideline in managing IT Project at Infostructure Office. As listed in Table 1, in Initiating phase, the Project Manager should be involved in this process, but in this project, the Project Manager only got involved after the project kick off meeting. The Project Manager should also be involved in the feasibility studies (business case), working paper and preparing the specification/tender document. The procurement for this project should be done through open tender. However, this was a direct negotiation project and thus do not have the approval letter from KPT and MAMPU, including there is no tender document. After the Kick off meeting, a Steering Committee and a Technical Team created. The Organizational Project Chart that should have been done in the planning phase which should include the project plan document is not available because these projects do not have the planning phase. Consequently, in the executing phase, this project faced problems with the duration of project delivery which was delayed from the schedule. Project kick off was in Jun 2006, but the hardware delivery for this project only occurred in Mac 2007. Back to the Integration Module, during the installation and configuration, many issues cropped up such the changes of staff members from the Vendor site, new staff member that do not have the correct skill set from Vendor, which effected the schedule. The system development can only start one month after the hardware has been delivered. During that period, project teams collected the user requirement specification, contract document, attended workshops, project team meetings, training, collect integration requirement specification, get verification from user about the integration requirement and attend project steering committee meeting. The Integration module needed to wait until the CMS development is completed (at least up to UAT) because the entire integration requirement is between CMS and the existing systems in the main campus UiTM. During the integration development process, the project team prepared all the documentation involved in the project such as SRS, UAT, technical document, handover document, training manual, change request form, complaints/problems form and etc. Testing, deployment and handover project was done in October 2007 but because of some issues and problems that need to be solved (backup solution problem), the project schedule was affected such that the project was only completed at the end of year 2011. The last UAT is the BPEL update patches on 6 September 2011.

Table 1. ICT PM-BPM Framework guideline in managing ICT Project at Infostructure Office

PM Life cycle / BPM Life cycle	Initiating	Planning	Executing	Closed	Evaluating
Design	People: Project Manager Process: Prepare for feasibility study, Business Case and Paper Work. Tools: MS Word/ based on project.	People: Project Manager. Process: Prepare Project Charter and Project Plan Tools: MS Word/ Excel/Project/Visio/email	People: Project Manager, project Team and process owner Process: Procurement, User Requirement Tools: MS Visio/MS Word/ MS Project /email/Quickr	People: Project Manager Process: Prepare handover documentation Tools: MS Word	People: PMO and process owner Process: Receive problem/ complain Tools: email
Implementation	People: Project Manager and PMO. Process: Sent application to JPPIT and Present to JITE/ KPT/ MAMPU Tools: MS Power point/ email/ hardcopy /system KPT	People: Project Manager Process: Present to JKE Infostructure Office Tools: MS Power point	People: Project Manager and project Team Process: Development, Testing, Controlling and Monitoring. Tools: MS Excel/ email/ Based on project/ Quickr	People: Project Manager Process: handover Tools:	People: PMO Process: Arrange Meeting Tools: email
In action	People:JPPIT/ JITE/ KPT/ MAMPU Committee Process: Approval Letter from JPPIT and Evaluation, Revise and Approval Letter from JITE/ KPT/ MAMPU Tools: email/ hardcopy/ Quickr	People: JKE Infostructure Office Process: Evaluation and Approval Letter Tools: email/hardcopy/Quickr	People: Project Manager, project Team and process owner Process: UAT, FAT, IS/software/ hardware/ services Tools: email	People: Project Manager Process: Final Project Report and Presentation Tools: Hands-on training	People: PMO, process owner and user Process: Project Evaluations and lesson learned Tools: email
Evaluation	People: PMO Process: Meeting Tools: Report	People: PMO Process: Meeting Tools: Report	People: PMO Process: Problem/ Complain Tools: email/Meeting	People: PMO Process: Problem/ Complain Tools: email	People: PMO and process owner Process: Prepare Report/ Response Tools: email

Formally, the project finished in October 2011. In the executing phase, this project lack of control and monitor on a minor item has affected the time that the project should finish. In the CEFNet Project, the Project Steering Committee did not monitor and control the project delivery milestone. Many Vendors involvement in one project made it difficult for the Project Steering Committee to manage all the project managers from different company. The Project Steering Committee did not monitor the project deliverables report and project progress report properly. Some measurements needed to be set for payment schedule that needed the supporting document before releasing it.

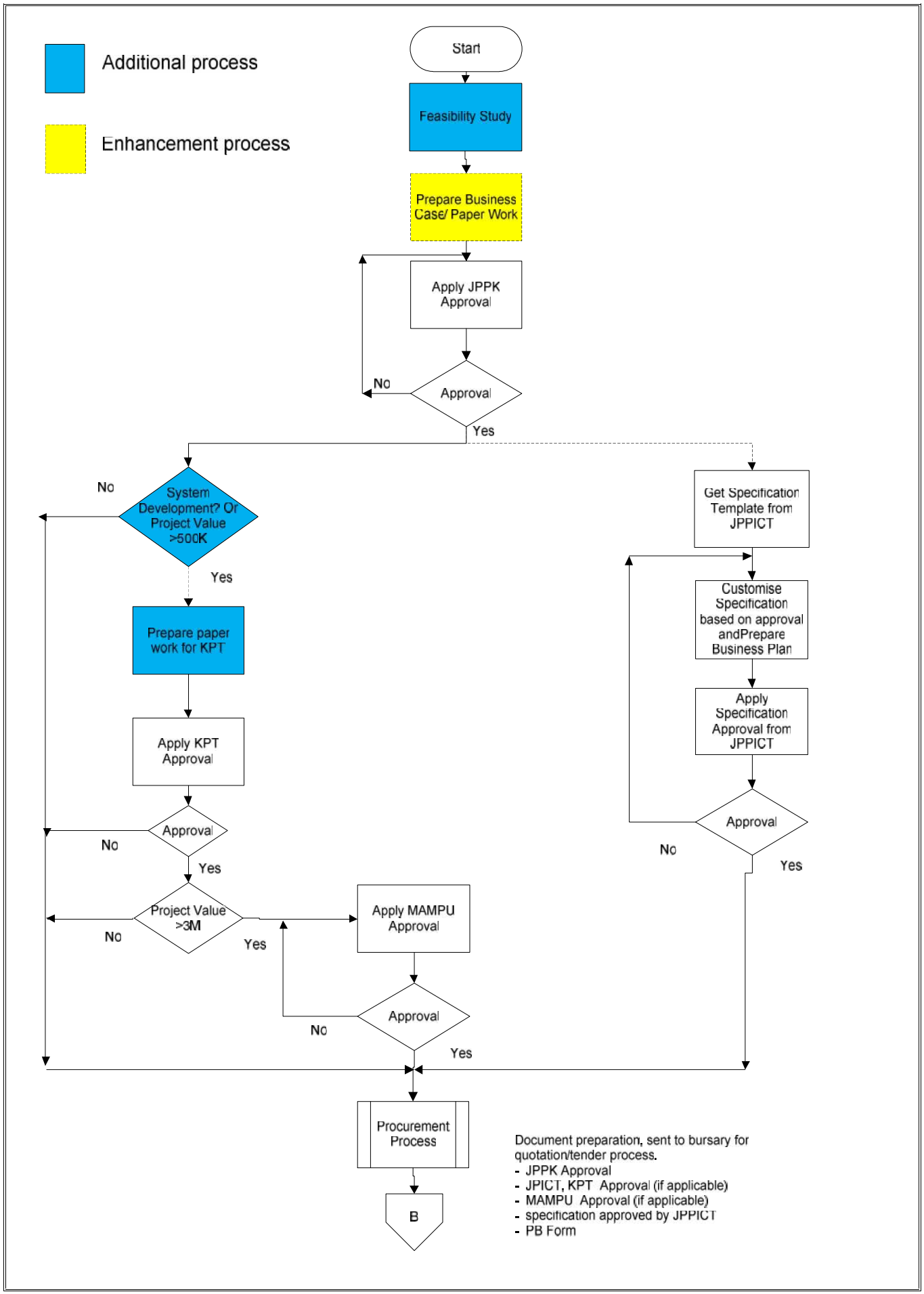
Refer to Table 1, the CEFNet Project did not have the evaluation stage at each phase of the project management process. Weaknesses in the initiating phase were not taken as Lessons learnt for the next phase. Using that table, we can analyze the step or process that was the root cause of the problems. After we have recognized it, we can improve or eliminate the problem for project improvement at the next phase.

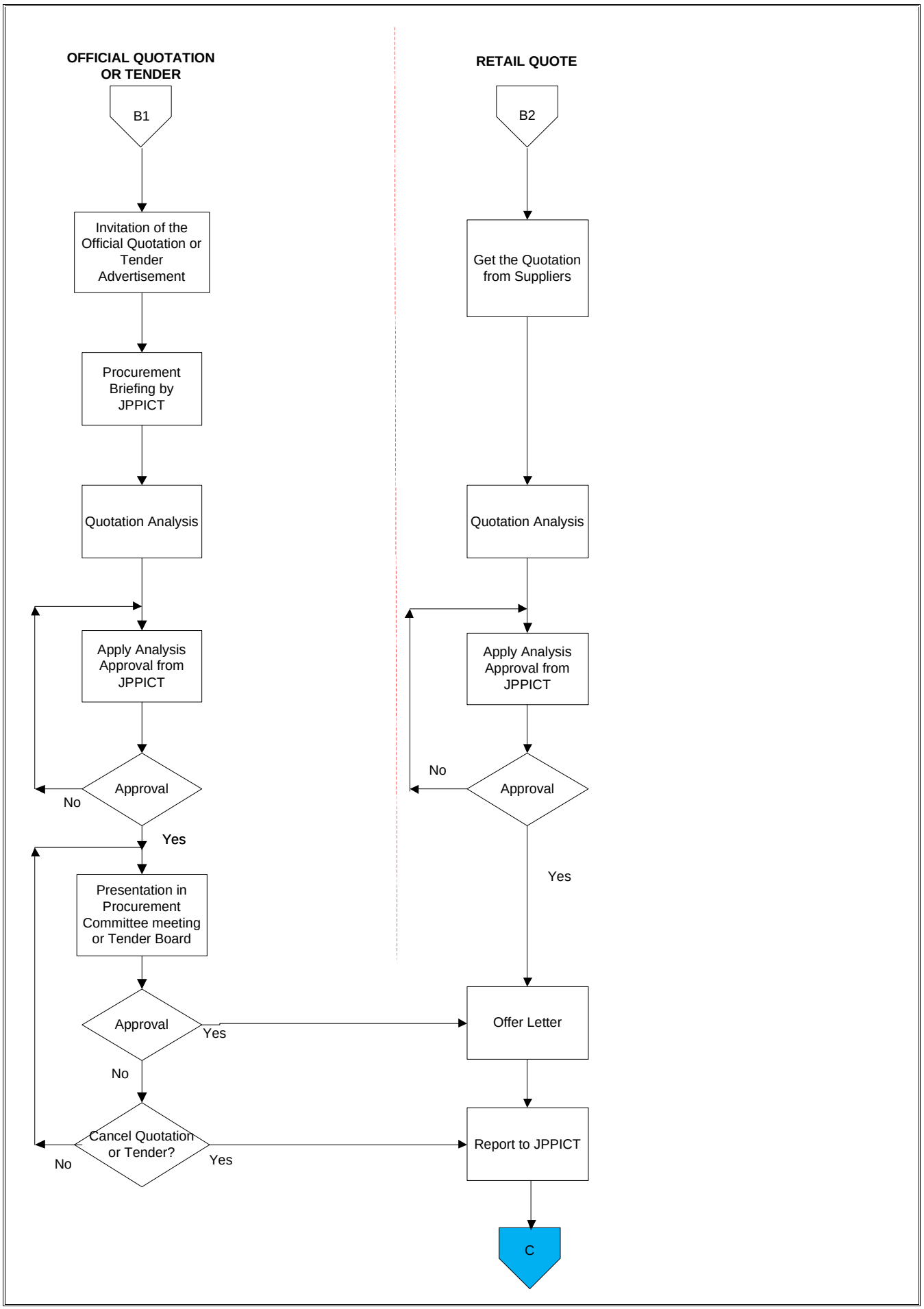
Implementation of ICT PM-BPM approach in ICT project Management at Infostructure Office

After the analysis and interpretation from above case studies and some of document review from ICT project information, we will propose that Infostructure Office change its ICT project management process through using this ICT PM-BPM Framework. It is impossible to consider making changes in information technology without considering the costs if changes to the organization occur when a new system is introduced or an existing system is modified. The ability to successfully introduce change to individuals and organizational units is critical to successfully implement a new system. Infostructure Office needs to discuss ways to manage the human factor as well as the technical issues that arise in IT systems adoption and implementation by having a specific guideline of enterprise project management process flow. The processes of implementation ICT PM-BPM Framework at Infostructure Office are as in Table 1: ICT PM-BPM Framework guideline in managing ICT project at Infostructure Office. Before using this ICT PM-BPM frameworks, Infostructure Office needs to identify and select the best one of the BPM software as its design tool to create the ICT project management process flow. Then, finalize the ICT project management process flow. Figure 3 is the Process Flow for ICT project Management being proposed. Blue colour in box is the additional process and the yellow colour is the enhancement process. The latest BPM software is BPM + BI bundle, whatever the level of BPM software tools, when dealing with vendors, it is critical to identify products that are closely aligned with current organizational operations, technologies and underlying business events and activities. The following paragraphs are the process the ICT PM-BPM Framework at Infostructure Office:

i. Initiating Phase

Infostructure Office needs to work closely with a BPM vendor on proof of concept that involves use-case scenarios and workflow maps that would be needed to implement the tool.


Additional process
Enhancement process
Start
Feasibility Study
Prepare Business Case/ Paper Work
Apply JPPK Approval
Approval
No
Yes
System Development? Or Project Value >500K
No
Yes
Prepare paper work for KPT
Apply KPT Approval
Approval
No
Yes
Project Value >3M
No
Yes
Apply MAMPU Approval
Approval
No
Yes
Get Specification Template from JPPICT
Customise Specification based on approval andPrepare Business Plan
Apply Specification Approval from JPPICT
Approval
No
Yes
Procurement Process
B
Document preparation, sent to bursary for quotation/tender process.
- JPPK Approval
- JPICT, KPT Approval (if applicable)
- MAMPU Approval (if applicable)
- specification approved by JPPICT
- PB Form


OFFICIAL QUOTATION OR TENDER
RETAIL QUOTE
B1
B2
Invitation of the Official Quotation or Tender Advertisement
Get the Quotation from Suppliers
Procurement Briefing by JPPICT
Quotation Analysis
Quotation Analysis
Apply Analysis Approval from JPPICT
Apply Analysis Approval from JPPICT
Approval
No
Approval
No
Yes
Yes
Presentation in Procurement Committee meeting or Tender Board
Approval
Yes
Offer Letter
No
Cancel Quotation or Tender?
No
Yes
Report to JPPICT
C

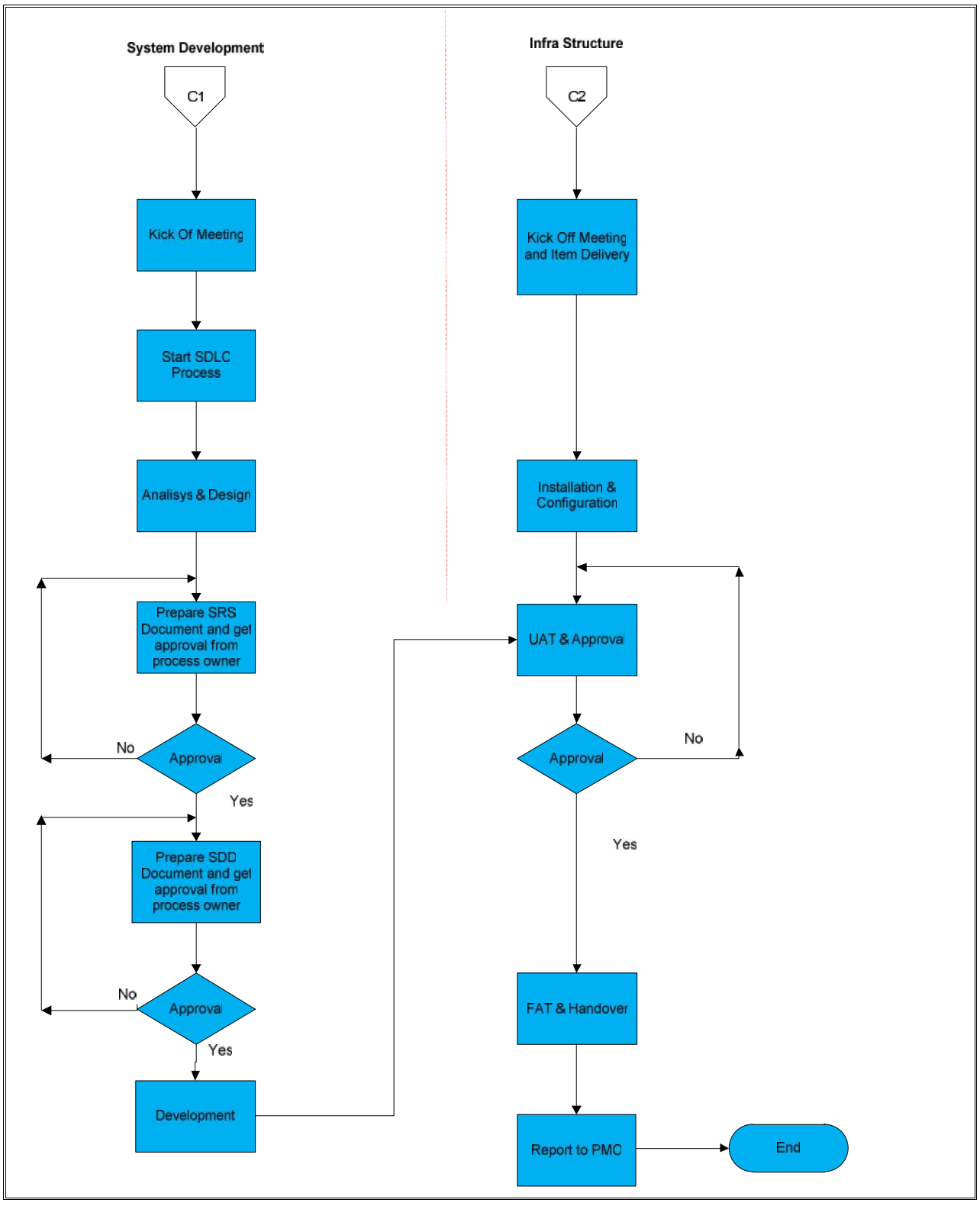


Figure 3. Process Flow for ICT project Management being proposed

This process gives Infostructure Office the opportunity to see firsthand how the tool could be used and to evaluate its ease of maintenance. Infostructure Office can also implement this in other business processes, but there need to be a close alignment between BPM and the business rules. Infostructure Office needs to define its business models and business architecture that will encourage future BPM efforts. Just gaining a better understanding of the current state of Infostructure Office processes is valuable in itself. However, eliminating non-value added processes or outsourcing non-core processes can have major positive effects on performance. Infostructure Office also can refer the checklist template

during ICT project implementation. All the date can notify in BPM software and all the document template can attach.

ii. Planning Phase

In order for BPM to work, top management in Infostructure Office and UiTM need to commit to it and support the business process management approach it requires. Top management commitment to BPM is critical to overcome resistance. Top management should not embark on BPM simply because it is fashionable or as a show to the board of directors that business improvement programs are been implemented. They have to take an active role and commit to BPM. Without top management commitment, BPM will likely disappear because of internal organization's resistance. The best way to implement BPM is to align it with the strategic goals of Infostructure Office and UiTM. Once the organizational goals are promulgated, it becomes possible to determine the business processes that are essential to accomplish the organizational goals. Once these processes have been identified, BPM would be the enabler to manage these processes. The employees who are performing the business processes have the most knowledge about it, thus making them natural agents for effecting the changes. However, the process owner has the responsibility for the final process design.

iii. Executing Phase

At Infostructure Office, through BPM approach in managing ICT project, the role of the process owner is vital and process owners are assigned to these processes. A process owner is responsible for the performance of the process assigned. The process owner designs, deploys and improves the process. The process owner should be a senior member of the organization who has the clout to influence other senior managers. External consultants should probably be used because, as the BPR founders contended, it is unlikely that innovative designs will come from inside the organization. The challenge is how to retain internal employees' pride of ownership of the final designs. That is one key criterion in choosing the right external consultants.

Design

The BPM technology has matured to the point where real-time process management is possible. BPMS represents a breakthrough in the use and implementation of information systems. Process designs could be performed and simulations conducted in the BPMS. This capability will helps with the design work and speeds up design to prototyping process. Process owners or business analysts allowed to be directly involved in designing the IT solution. The business process designer, offered by BPMS, is a Visio-like tool that allows the business process owners to design the business processes in minute detail. The business process designers or business analyst can automatically generate code that sometimes can be deployed without IT development help. The analyst can specify roles, tasks performed by the various roles, and the sequence the process should follow. The roles could be for people or systems. In cases where development is needed, the BPMS already contains the process meanings and solution definitions. Once the process owner finalize the processes design, IT developers can use the same processes designed by the business people and embed logic to them using the designer. This can be done using a scripting language that comes packaged with the process designer or development toolkit in a widely used programming language. The hands-off from the business people to the IT people is more seamless than before. They are working from the same design using the same tool. This dramatically reduces the communication gap between IT and the business. During the creation of the process flow in design tools; the current process should be documented. We can included the document involved in the project through attachments in each task such as working paper, business case, project charter, project plan, contract, URS, SRS, SDD, UAT, FAT, meeting minutes, monthly report, final project report, technical document, training manual and etc. We can convert this process flow into documents such as MS Word, PDF, MS Visio, image, XPDL and attributes. We can import process flow into MS Visio, XPDL or attributes. The workflows created in the modeler can automatically turn into running applications in BPM suite and published in the web, sharepoint or wiki.

Implementation

Once implemented, it allows process owners to measure, monitor, control, and analyze processes real time. Process should be standardized across the organization and procedures put in place to monitor and manage the process. The next step is to repeat the process improvement cycle by going back to the evaluation project report to decide which process to improve next. This does not have to be the case. The process owners could decide when and how to improve the processes they manage. There are many methodologies for continuous improvement.

In Action Phase

The methodology illustrated here is by no means the best one. It serves as an example of how process improvement might be implemented. Using BPMS, Infostructure Office can identify internal inefficiencies in ICT project management and can improve the way it manages external processes including the application for approval process at KPT and MAMPU. Infostructure Office can manage ICT project documents and create a nearly paperless environment. Infostructure Office can do the integration between internal and external system; internal system ICT project management with EIS or UePMO system for analytical report and reporting requirement for project management or external system with KPT and MAMPU ICT project management. This ICT project management process also can integrate with any isolated system in UiTM and the existing portal. It is also able to track down bottlenecks in the processing life cycle and in the long run, reduce overall operational costs and improve overall efficiency.

iv. Evaluation Phase

BPMS serves as the control over people, enterprise applications, and data. As the control center, BPMS receives

real time data from all tasks that are performed in the processes it controls. Monitoring of processes is possible with the real time process information. BPMS could note variations in the processes. Once a variation has been detected, BPMS has the ability to resolve the variation. For instance, if a process were overwhelmed because of strong customer demand, the Infostructure Office would know through monitoring the project management process that is it potentially in disarray. With the ability to control project management process, Infostructure Office has the mechanism to respond to the problem. This mechanism might involve adding more resources (people, machine, etc), shutting down the process if the situation is dire, or activating an alternative process for some of the demand to flow through. Measuring the project management process provides process data that can be analyzed. The analysis of process data is an essential step to identifying what process needs improvement and improvements to which areas are most likely to yield the most value. BPMS provides Infostructure Office with a powerful tool in its process design-implement-analyze-improve cycle and an essential tool for success. Because BPMS oversees all the steps, whether manual or automated, in the project management process, it can provide valuable process information. It is possible to assign cost figures to the time involved to complete each task in the process and the opportunity costs to the wait time while a process task is waiting in queue to be processed. These costs figures could be applied to the live process and real time cost figures could be obtained. The monitoring capability could allow business managers or PMO to be notified of out of the ordinary events.

Advanced BPM servers come equipped with data mining capability. Through data mining, process variations can be discovered and the causes eradicated. BPMS contains rich statistics regarding process performance, simulation, process modeling functionalities, establishing baselines for continuous improvement and analytical tools available for data analysis. BPMS gives Infostructure Office the ability to implement real time process improvement without the extensive process conversion effort. The original business processes already exist in the business process designer. This eliminates the need to gather current process information. When process bottlenecks have been determined, business process owners or analysts could incorporate improvements to the process using the business process designer. After the improved business process solution is implemented, BPMS allows any work that started on the original process to finish using the original process and any new work to be performed using the improved process. In essence, the system allows both the original and the improved processes to exist until all work from the original process is finished. Using BPMS process improvement could be made without disruption to process output. This is an important benefit to continuous process improvement.

This section has been discussed and elaborated in details the application in managing ICT project using ICT PM-BPM Framework at Infostructure Office. With supportive research through a case study and expert review to the result, this study proves that the process proposed in the application in managing ICT project using ICT PM-BPM Framework can be implemented, developed, and then be able to give the best results that required and satisfied both Infostructure Office and the process owner. With the unique ICT PM-BPM Framework, it can be suited to any environment of the organization or industry and it gives more effectiveness to the management who is aware of and understands the importance of people, process and technology in ICT project management process improvement in the organization. In order to achieve the desired goals, people in the organization itself and supported by top management will play a vital role to shape the process improvement.

Conclusion and Recommendation

It not easy to adapt to something new especially if those things will change the organization internally as well as externally. To achieve the objective of getting customers' satisfaction, a proper and best plan should be found before implementing ICT project management. The ICT PM-BPM framework development used in this study point out four major component that consists of Business management, ICT management, Business process management and ICT project management. All the components are enhanced into three categories and they are people, process, and technology. People, process, and technology are still the three keys to successful ICT project management. The result of this study indicated that quality and enhancing proper action plan are positively related to organization's ICT project management. The ICT PM-BPM framework used is suitable to be adopted in any organization or industry, either private or public sector. The study has led towards the process owner's involvement and employees, process improvement and the technology used, that is, the BPMS software. In the context of an organization, the management which is primarily concentrated on customers, where more attention is given to the aspects of people, BPM can be a boost and led the organization in innovation and creativity. Hopefully this ICT PM-BPM framework using BPM approach in public sector Malaysia can be as a guide to any organization and a basis for strategic management approach to realize the success of managing ICT project and continuous improvement in project management, in line with the government needs for ICT transformation. Furthermore, in finding the best practices, we should not just peruse the readymade practices, but use it as the basis in finding the best action plan. Take it, compare it, discuss it and lastly, improve it.

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