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REDEFINING ICT GOVERNANCE FOR MALAYSIAN PUBLIC SECTOR

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ABSTRACT

The automation of government services using ICT began in 1997, with the commencement of E-government in Malaysia. The E-government gained it momentum in early 2000 to satisfy the public insatiable appetite for such services. Later, we have reached a threshold where some service provisions failed to live up to public's expectation. Clearly, this illustrates the failure of optimizing existing resources and minimizing risks from which the provisions are expected to deliver value to public. Businesses took serious view on ICT Governance (ICTG) to align their strategies, optimize resources, and minimize risks and, above all, to deliver value. Public sector needs to put effective ICTG into practice. We contented that Malaysian Public Sector (MPS) still elude a proper ICTG definition.

Thus, this research is an effort to formulate a specific ICTG definition that suit MPS but framed within the present and acceptable definition of ICTG for businesses. The Delphi Method was adopted as a qualitative approach for the validation process. Where, the validation and refining process is to obtain experts' consensus for the proposed definition.

In particular, a proposed definition acknowledges the gulf of differences between the functions of public services and businesses. Therefore, indirectly it helps ICTG practitioner in handling ICTG goings-on in their organization, and to be used as a standard reference in strengthening ICTG practices for MPS

Keywords: *ICT Governance, Public Sector, Definition, CSFs, Validation*

1. INTRODUCTION

The automation of government services using ICT began in 1997, with the commencement of E-Government in Malaysia. It gained momentum in early 2000 to satisfy the public insatiable appetite for such services. A rapidly change public demand expecting an effective and efficient ICT solution. ICT becomes a vigorous agenda in the MPS business environment; thus, the pervasive use of ICT required additional investment to provide appropriate ICT resources and support. The proper platform for ICT implementation ensures infrastructure readiness for online services, as an initiative for citizen-centered projects in ensuring the effectiveness and efficiency of public delivery. Later, we have reached a threshold where some service provisions failed to live up to public's expectation. Clearly, this illustrates the failure of optimizing existing resources and minimizing risks from which the provisions are expected to deliver value to public. Optimizing the available resources and managing possible risks that may affect the performance certainly enhance the value of service delivery. Besides that, ICT and business alignment evade higher rate of project failure and misused organizational objectives [4] and to accomplish public demand. Therefore, a good communication between ICT and business generate good values to the business [14], indirectly, this required ICT professional equipped with social skills, as well as business knowledge. This is all about governing

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process that needs to be strengthened for optimum performance and outcomes, furthermore, it is one of important component to consider and incorporate at every stage of ICT implementation. ICTG is corporate governance that being implemented in ICT environment [6], and required organization to empower the creation of business value through ICT.

Thus, before commencing any research towards ICTG, we believe the definition itself should be properly clarified to avoid misinterpretation and easily understood, not solely for academic purposes, however, to whoever engages on the use of ICT in public sector [1]. As a result, we intended to appropriately define ICTG, where it should emphasis the five domains of ICTG and well accepted for MPS. We then adopted a Delphi method to validate and refine the proposed definition, as well as to obtain local experts' view and consensus. The agreeable definition not merely explains the ICTG all about, yet absolutely reflects ICTG and the functions of MPS.

2. BACKGROUND TO THE STUDY

ICTG has been around for a number of decades and manifests itself in several practices such as COBIT, ITIL, ITSM and so forth. Businesses took thoughtful view on ICTG to align to their strategies, optimize resources, minimize risks, and above all, to deliver value. ICTG links several key business elements, such as, cost reduction, innovation, agility, customer satisfaction and compliance [12]. There is a strong correlation between effective ICTG practices and the value return to the organizations [10], [16], [9]. ICT projects development need to be aligned with organization's objectives, where ICT required broad understanding of organization's expectation in order to accomplish targeted outcomes [4]. This clearly shows that MPS needs to put effective ICTG into practice.

Throughout the information gathering to comprehend the ICTG all about, we realized there are various definitions of ICTG stated in the literatures, ICTG can be defined as " the organizational capacity to control the formulation and implementation of IT strategy and guide to proper direction for the purpose of achieving competitive advantages for the corporation" [2]. [17] define ITCG as "specifying the decision rights and accountability framework to encourage desirable behavior using IT". Whilst we strongly agree with the present definitions of ICTG for businesses, we have reservation on the relevancy of such definition and its practices. However, we contented that MPS still elude a proper ICTG definition. In particular, a definition that acknowledges the gulf of differences between the functions of public services and businesses, therefore, this research foresee the importance to justify ICTG definition that acceptable for local environment and specifically reflect its purpose.

Thus, a research question (RQ) has created due to the uncertainties of definition. The RQ is as follow;
"What is ICTG that appropriately reflects the function of MPS?"
Thus, this RQ leads the research to resolve the uncertainties.

3. METHODOLOGY

This research is an effort to formulate a specific ICTG definition that accurately fit MPS but framed within the present and acceptable definitions of ICTG for businesses. Ever since ICTG is a "must have" for every organization [16], there is a need for an ideal definition [1]. *Table 1.0* compiled existing definitions from the literature. Generally these definitions focus on decision right, organizational structure, control, management, leadership and accountability. However, to precisely define the MPS governing process, we believe that additional significant elements should be incorporated in the definition.

Table 1.0 – The Existing Definitions from Literature

Researcher	Definition
Luftman (1996)	Degree to which the authority for making IT decisions is defined and shared among the processes managers in both IT and business organizations apply in setting IT priorities and the allocation of IT resources
Broadbent (2003)	IT Governance is about who is entitled to make major decisions, who has input and who is accountable for implementing those decisions. It is not synonymous with IT management; IT governance is about decision rights, whereas IT management is about making and implementing specific IT decisions.
Van Grembergen and De Haes (2003)	Organizational capacity exercised by the board, executive management, and IT management to control the formulation and implementation of IT strategy and in this way, ensure the

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	fusion of business and IT
Weill and Ross (2004)	Specifying the decision rights and accountability frameworks to encourage desirable behavior in using IT. IT governance reflects broad corporate governance principle, while focusing on the management and use of IT to achieve corporate governance goals.
ITGI (2007)	IT Governance is the responsibility of the Board of Directors and executive management. They further defines IT governance as "an integral part of enterprise governance and consists of the leadership and organizational structures and processes to ensure that the organization sustains and extends it strategy and objectives
Donald J. Carlson (2007)	A structure of relationships and processes to direct and control the enterprise in order to achieve the enterprise's goals by adding value while balancing risk versus return over IT and it processes
Simonsson and Johnson (2008)	IT decision-making: The preparation for making of and implementation of decisions regarding goals, processes, people and technology on tactical and strategic level
ISO 38500 (2008)	The system by which the current and future use of IT is directed and controlled
Grembergen and De Haes, 2009	Enterprise Governance of IT is "an integral part of corporate governance and addresses the definition and implementation of processes, structures and relational mechanisms in the organization that enable both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of business value from IT-enabled business investments".
MPS ICT Strategic Plan (2011)	ICT Governance as management process which ensures delivery of the expected benefits of ICT in a controlled way to enhance the long term services.

As stated in the MPSICTSP, ICTG is defines as "management process which ensures delivery of the expected benefits of ICT in a controlled way to enhance the long term services". However, the definition does not fit in the five widely accepted domains of ICTG introduce by the Information Systems Audit and Control Association (ISACA); Strategic Alignment, Value Delivery, Risk Management, Resource Management and Performance Measurement. The 'controlled way' statement itself should be properly clarified to avoid the misconception of ICTG. Thus, we believe the definition can be further refined to describe the real governing process for MPS.

Referring to our previous work, we have successfully found a set of agreeable influential factors that motivates successful ICTG practice for MPS [13]. *Table 2.0* presented the factors and sub-factors. Based on the influential factors identified, several elements, such as strategic direction, service delivery, managing resources and risks, as well as stakeholders' requirement should be considered in the ICTG definition for MPS. Besides that, in order to describe the overall governing process, these elements must be put together in a complete sentence statement.

Table 2.0 – The Agreeable Factors and Sub-factors for Successful MPS ICTG Practices

Management Contribution	**CSF1 – Enabling Environment**	
	S1- Internal coordination	
	S2- Management and Leadership styles	
	CSF2 – Management Practices	
	S1 – Management support	
	S2 –Management expectation	
	S3 – Managing change	
	S4 –Managing risks	
Operational Excellence	**CSF1 – Optimizing Resources**	
	S1- ICT personnel	
	S2 – ICT infrastructure	
	S3 – ICT processes	
	S4 – Information	
	CSF2 – ICT Project Performance	
	S1 – ICT Strategic Plan	
	S2 – ICT Project management	
	S3 – ICT project governance structure	
	CSF3 – Regulatory	
	S1 – Compliance issues	
	S2 – Conformance issues	
Stakeholders Orientation	**CSF1 – Stakeholders Expectation**	
	S1- Good stakeholder focus	
	S2- Service success rate	
Future Orientation	**CSF1 – Service Improvement**	
	S1- Continuous Human Resources Development	
	S2 – Research	

We analyzed and synthesized the existing definitions before being mapped to the current MPS ICT Strategic Plan (MSPICTSP). We then formulated a proposed definition accordingly. The proposed definition is emphasizing on delivering innovative and efficient services, by leveraging on

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the pervasive use of ICT. The proposed ICTG definition for MPS as follow;

"ICT Governance is a transformation of ICT resources to obtain value from investment, sustain the strategic direction, minimize the risk and maximize the delivery performance to meet public needs. "

The 'controlled way' in the current definition is clarified as balancing the conformance and performance, in the new formulated definition. In other words, governing process is minimizing the risks, and maximizing value delivery. Thus, both ICT and business must be very clear with this organizational strategic direction and optimizing existing resources in order to return value to the organization.

3.1 The Validation Process

The proposed definition need to be verified to confirm its accuracy and appropriateness to reflect MPS local environment. A modified Delphi method was adopted for this validation process to obtain a reliable consensus of opinion with a group of experts. The validation form was constructed to simplify this validation processes.

We then identified consultants, practicing professional and academic experts to assist. Finding an expert is not simply based on their academic and career achievement, or contribution to the organization [11], but we determine some criteria as a guideline, such as knowledge and expertise in particular areas, years of working experience, participation in National ICT projects and willingness to contribute in the whole research process. Finally the high-level expertise selected was based on their knowledge and vast experience in ICTG and their involvement in various MPS National ICT projects to add credibility to the research. We identified ten experts, unfortunately only seven of them committed to contribute in the whole process of this research.

The experts were given the validation form thru email prior to the face-to-face validation session. We explained how the proposed ICTG definition was formulated. They were asked to review the statement, and then stated their agreement or disagreement. Additional comments were also solicited to ensure missing elements are accounted for.

4. ANALYSIS AND OUTPUT

During the first cycle of validation, they argued on how and why we formulated such definition. We explained that ICTG definition stated in MPSICTSP were referred. However, we believe that the definition can be further refined to describe the real governing process for MPS. The 'controlled way' statement itself should be properly clarified to avoid misinterpretation but easily understood. The importance of precise terminology not solely for academic purposes, however, to whoever engage on the use of ICT in public sector [1]. Furthermore, the definition developed should emphasis the five domains of ICTG and well accepted for MPS.

After a minor modification based on their comments, all the experts unanimously agreed with the proposed definition. We then informed the participated experts that all of them strongly agreed with the definition statement. Thus, they confirmed the proposed definition as stated below appropriate for MPS.

" ICT Governance is a systematic transformation of ICT resources to obtain value from investment, sustain and extend the strategic direction, minimize the risk and maximize the delivery performance to meet public needs. "

4. CONCLUSION

Once the experts unanimously agreed with the proposed ITG definition, it can be a standard reference in strengthening ICTG practices as stated in MPSICTSP. Furthermore, the ICTG definition indirectly will helps ICTG practitioners in handling ICTG goings-on in their organization besides, it is important to clearly understand the ICTG definition before commencing any research, or practicing proper ICTG.

The proposed definition has combined a key element of ICTG to reflect the core function of MPS. However, this consensus is obtained from experts' review and comments, yet, they may influence with the elements stated in the definition. Thus it can be improved by formulating a definition through an interview session with selected domain experts, where the main ideas about ICTG is solely from them.

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