



# The Requirement for Information Governance Policy Framework in Malaysian Public Sector

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## Abstract

The Information Governance (IG) Policy Framework sets out the standard to be applied for managing information including the principle, standard, procedure and guideline. This study seeks to identify the significant and appropriate factors underlying the IG policy in common. The identified factors are then verified for their appropriateness to be practiced in the public sector in Malaysia. The literature suggests that control, quality, compliance, transparency, value, accessibility, security, sharing, accountability, and privacy are the core factors essential for the IG policy framework. A survey method, using qualitative approach with interview, observation, and document content analysis are used as the data collection techniques. The sample is determined by purposive sampling and snowball and the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) was chosen as a case study. Findings show that there is as yet no appropriate IG policy framework which can be referred to by the public sector in executing information governance initiative. The proposed framework is of help especially to MAMPU in getting a guide for the execution the IG initiative in the Malaysian public sector.

**Keywords:** Information Governance (IG), Policy, Framework, Records and Information Management (RIM), Public Sector in Malaysia, Edutechgrp

## 1. Introduction

The Internet era has transformed the traditional physical records into digital information such as email, database and electronic document. This has later triggered a phenomenon known as explosion of information resulting in multi voluminous amounts of information being created 1. The tremendous volume of information will likely jeopardize organization if no proper measure is taken to put information related matters in its place which makes information a liability instead of an asset capable of giving many untold advantages 2. However, management solely is seen as insufficient.

In the present environment where information can be easily created, it is insufficient for an organization to just embark on information management (IM) approach in managing its information. Instead, organizations should be of information governance (IG) since it covers wider area involving, policy, technology and regulation in addition to management. IG is a multi-faceted function which includes records management (RM), content management, information technology (IT) governance, information security, data privacy, risk management, litigation readiness, legal, the digital materials maintenance and business intelligence 3. RM is paramount as it uses the information life cycle to handle information i.e. from the creation through disposal/preservation.

In light of this, RM has been the catalyst in shifting IM to IG which is more acceptable for managing information in multi-format in large scale 3. Such an approach is advocated by Hulme (2012) who insists that IG is a holistic approach to managing information 4.

However, IG has not been extensively researched especially in the Malaysia public sector. To date, there is only one related study

pertaining to Malaysia carried out by Amri (2018) 5. However the study was specifically addressing the framework for the governance of information security. There is no IG framework in general which can fit all organization since the framework was created just to meet the specific requirement of the organization.

This study intends to explore the requirement for a framework for IG policy for the Malaysian public sector. Therefore, this study seeks to identify and verify the factors essential for establishment of framework for IG policy in the country. The findings could be of help to Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) in materialising the IG initiative in the Malaysian public sector.

## 2. Literature Review

Information Governance (IG) is defined as a strategic framework that contains standards, processes, roles and matrices containing the controls and responsibilities for creating, organizing, storing, maintaining, utilizing, and deletion of information in line with the organizational goal<sup>5</sup>. IG assures effective and efficient use of information to help the organization achieve its goals.

The earliest IG initiative was executed by the National Health Service (NHS) in the United Kingdom<sup>10</sup> as there was requirement to protect the confidentiality of the patient personal information. Following that, IG began to penetrate other sectors such as the public sector<sup>11-13</sup>, the banking sector<sup>12</sup>, manufacturing defence tool<sup>13</sup>, environment <sup>16</sup> and ICT<sup>1, 17-20</sup>.

Research in IG in the ICT focuses on mobile equipment<sup>17</sup>, Web 2.0<sup>19</sup>, social media<sup>20</sup> and data<sup>18</sup>. However, these studies only produce limited frameworks, what more framework in the graphical format <sup>10, 14, 15, 19, 21, 30</sup>.

Prior to the development of the framework, it is a prerequisite to identify both the dimensions and factors which serve as the

backbone to the framework as suggested by Faria et al. (2013)<sup>14</sup>. Dimension is the primary layer and it may be formed from a set of interconnected factors whilst factors residing in the next layer. These factors indicate the issues to be addressed in the implementation of IG strategy and are implemented by policies, practices and actions. These factors should be closely linked to the maturity and the organizational characteristics<sup>14</sup>. In addition, the factors should take into account the improvements needed to resolve the organizational issues.

Factors for implementing IGs varies from control and incentive, proposing governance structures based on controls and incentives to address employee behaviour towards information within the organization <sup>22</sup>. In addition, ethical factors can protect the right to information, privacy and access to the public personal information<sup>23-25</sup>. Besides viewing the factors as individually, there are studies that classifies factors based on similar themes.

This study views the classification of these factors from a rather different angle e.g. Lajara and Macada (2013) states that the dimension of compliance consists of information security and privacy factors<sup>15</sup>. An organization groups the information

security and privacy as a component within the framework<sup>21</sup>. Bennett (2017) mentioned privacy and data protection as a factor in their framework <sup>30</sup>.

Schonberger (2010) evaluates privacy and copyright factors as an IG strategy <sup>26</sup> while Hulme (2012) and Faria et al. (2013) has reviewed the security factor separately as an individual factor <sup>5, 14</sup>. The selected and priorities factors by the study are such as quality<sup>5, 14-15</sup>, convergence<sup>5, 14-15, 21, 30</sup>, values<sup>14-15</sup>, safety<sup>5, 14-15, 21, 31</sup>, transparency<sup>14, 21</sup>, accessibility<sup>14-15</sup>, sharing<sup>14-15</sup>, lifecycle<sup>5,14,21</sup>, information rights<sup>31</sup>, formal structure<sup>14</sup>, user satisfaction, perfection, accuracy, timely<sup>13</sup>, integrity<sup>21</sup> and protection<sup>31</sup>. Table 1 shows a summary of factors affecting IG by previous researchers.

The literature has evidenced that there were studies on IG framework across geographical boundaries such as Australia and Vietnam<sup>19</sup> and Brazil, Hong Kong, and the United States of America. But, no such an attempt was carried out in Malaysia particularly the establishment of framework for IG with the appropriate factors.

**Table 1:** Factors affecting Information Governance

Factor/Item	Author
Controls	Zhao and Johnson (2008); EDRM (2012)
Incentives	Zhao and Johnson (2008)
Ethics	McManus (2004a) (2004b) and White et al. (2007)
Quality	Hulme (2012); Lajara and Maçada (2013); Faria et.al (2013)
Compliance	Hulme (2012); EDRM (2012); Lajara and Maçada (2013); Faria et al. (2013); Bennet (2017)
Value	Lajara and Maçada (2013); Faria et al. (2013),
Security	Hulme (2012); EDRM (2012); Lajara and Maçada (2013); Faria et al. (2013)
Accountability	EDRM (2012); Faria et al. (2013)
Privacy	Hulme (2012); EDRM (2012); Lajara and Macada (2013); Faria et al (2013); Bennet (2017)
Retention	EDRM(2012); Faria et al. (2013);
Transparency	EDRM(2012); Faria et al. (2013);
Accessibility	Lajara and Maçada (2013); Faria et al. (2013)
Sharing	Lajara and Maçada (2013); Faria et al. (2013)
Lifecycle	Hulme (2012); EDRM (2012); Nguyen et al.(2014)
Information Rights	Surrey Heath (2011)
Integrity	EDRM (2012)
User satisfaction	Lajara and Macada (2013)
Perfection	Lajara and Macada (2013)
Accuracy	Lajara and Macada (2013)
Punctuality	Lajara and Macada (2013)
Communication	Faria et al. (2013)
Formal structure	Faria et al. (2013)
Monitoring	Faria et al. (2013)
Standardisation	Faria et al. (2013)
Protection	Bennet (2017)

### 3. Methodology

Exploratory study with qualitative research design seems to be the most appropriate approach to be undertaken in any under-researched area<sup>6</sup>. Case study involving MAMPU as a central agency responsible in drawing policy for the public sector is preferred as the strategy for this study. Interview, observation and document content analysis then become the techniques to obtain the required data as suggested by Neuman (2010)<sup>7</sup>. Such a combination of various techniques for obtaining data known as triangulation is suggested by Robson (2010) and is deemed appropriate for any exploratory study <sup>8</sup>.

The Records and Information Management (RIM) approach has been chosen as the basis for the development of the IG framework. In line with this, PSICT 2016-2020 Public Sector documents, RAKKSSA, deed, directives and circulars were analysed.

A series of semi-structured interviews were also conducted to supplement the other techniques of data collection. The number of respondents/informants was determined using purposive sampling techniques or criterion-based techniques.

### 4. Framework for Information Governance Policy

The development of the conceptual framework for the IG in this study constitutes of several dimensions which are human, policy, process, and technology.

The policy dimension was adapted from Nguyen et al. (2014) which includes principles, procedures, standards and guidelines<sup>19</sup>. The principle dimension has sub-factors or items which is in line with a study from IBM Knowledge Center that highlights the policy of IG includes a sub-policy to be able to describe the policy in overall<sup>27</sup>. The sub-factors for sub-policy has been chosen based

on the frequently studied factors such as quality, control, compliance, transparency, security values, accessibility, sharing, accountability and privacy. The technology factor consists of usability, mobility and system 14. On the other hand, the process dimension consists of factors for information lifecycle following the definition of IG by1, 28.

The selected factors have to be assessed and validated to ensure their applicability in the implementation of the IG framework as shown in Figure 1.

Why does the public sector in Malaysia requires a distinct framework for preparing an IG policy? It is evident from both the literature and practice that a framework is required in order to implement IG initiative. However, previous studies have produced frameworks with limited coverage which confined to only information accessibility<sup>11</sup>, metadata and semantics<sup>12</sup> and the importance of implementing IG<sup>13</sup>. Furthermore, the framework has also focused on other sectors such as health <sup>10</sup>; banking <sup>14</sup>; and manufacturing of defense products<sup>15</sup>. Nonetheless, these frameworks are not suitable for the public sector. This has been asserted by Faria et al. (2013) and Tallon et al. (2013) that there is no framework ready to be adopted by other organizations since every organization has different objectives and needs<sup>1, 14</sup>. Also, previous researches have focused on different factors to construct the framework for IG policy resulting in each framework is only suitable for a particular organization.

In the Malaysian context, although MAMPU has provided an IT governance framework for the public sector, but it did not contain informational factor. The framework only bears the digital services, data, sharing services, cybersecurity, governance, and human capital factors. Such a framework cannot be articulated since every organization produces its own information which is unique.

The absence of informational factor within the framework could affect the public sector information governance. IG must be developed since the IT governance framework is insufficient and far from appropriate for solving the problems aroused by information<sup>29</sup>.

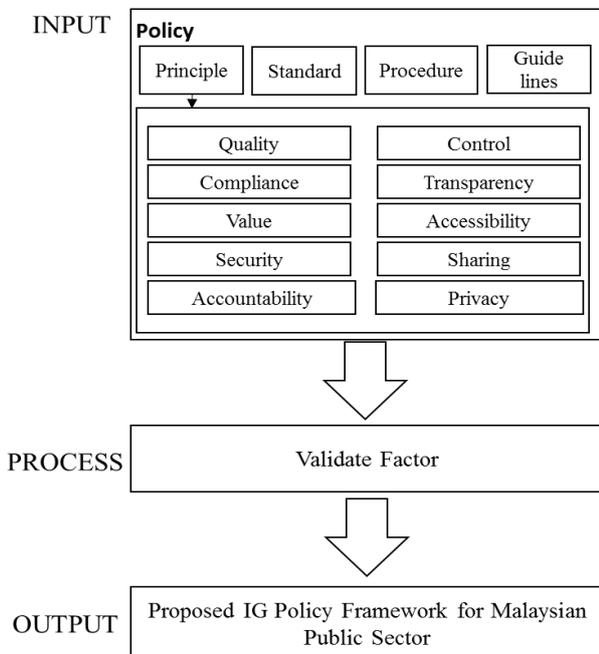


Fig 1: The IG conceptual framework for public sector

### 5. Findings and Discussion

In order to meet the requirement of IG policy in the Malaysian public sector, there are four essential factors to be considered (principles, standards, procedures and guidelines). The principle

factor is critical for the policy factor. The respondents from the interviewed have suggested that the ten items should be included in the framework since they are appropriate to the Malaysian public sector.

Informants have also agreed that principles are fundamental to policy. Basic IGs need to be built based on the principles agreed by the organization. The ten items which are quality, compliance, value, security, accountability, control, transparency, accessibility, sharing, and privacy are important.

#### Quality

The quality of information is an item that has been agreed on by all informants to be included for IG policy in Malaysian public sector. The quality of information refers to the appropriate information for use by individuals/agencies. The information generated should be from a valid source, accurate and relevant to ensure it has an acceptable standard.

#### Value

All informants agree that information is an organization's assets. Hence, the value principle needs to be asserted in the IG policy. A key informant stated,

"Value of information is higher than money. Information is useful for planning and has strategic value. Most organizations do not know the value of digital information."

#### Security

All informants support security as an important principle in IG. Security items ensure that information is kept, protected and secured from any internal or external threats of the organization. Information security requirements cover aspects of management, users and the physical information itself.

#### Accountability

Accountability refers to individuals or organizations responsible for the use and management of information. The individual or organization is also responsible for the information it delivers by asserting the information is true. In the context of the Malaysian government, the public sector is the responsible party in managing people's information.

#### Controls

All informants agree that control is required as a basic principle of IG. Uncontrolled information may lead to leakage and abuse. Each user determines the level of access to information based on different needs and responsibilities.

#### Transparency

Transparency is a storing organizational information with legitimacy and transparency. Such information shall be available, accessible and understandable. But not all government information should be accessed by the public. The principle of transparency in administering information creates trust and confidence to embrace the integrity of an organization.

#### Compliance

Compliance of information is the adherence to regulations. Non-compliance will lead to misconduct in managing information. This conformation applies to the procedure of how information is stored and retrieved. An informant said,

"Compliance is important for audit purposes. Without compliance, it is difficult to measure the implementation of a policy."

#### Accessibility

Government information needs to be readily available and accessible. There is a need for the information to be always available both within the organization and outside the organization. Information that is difficult to access will cause the user to be less interested and causing data abandoning.

#### Sharing

Information needs to be shared among government agencies to benefit value. However, every sharing activities must comply accordingly with the principle of control. Sharing information between government agencies will improve service to the people.

#### Privacy

Privacy refers to the assurance that the organizational information is protected. According to an informant,

“Some government organizations as an example of the EPF protect the personal information of contributors from outsourced access. The principle of privacy is important to safeguard individual rights and should be principled in the governance policy of information.” The implementation of the IG policy involves four phases; planning, implementation, review and improvement phase. Each phase is implemented through identified

activities. All these factors, items, phases and activities are drawn up in the proposed IG Policy Framework in the Malaysian Public Sector. The suitability of this framework has been assessed by the experts as detailed in Table 2. The IG policy framework is illustrated in Figure 2.

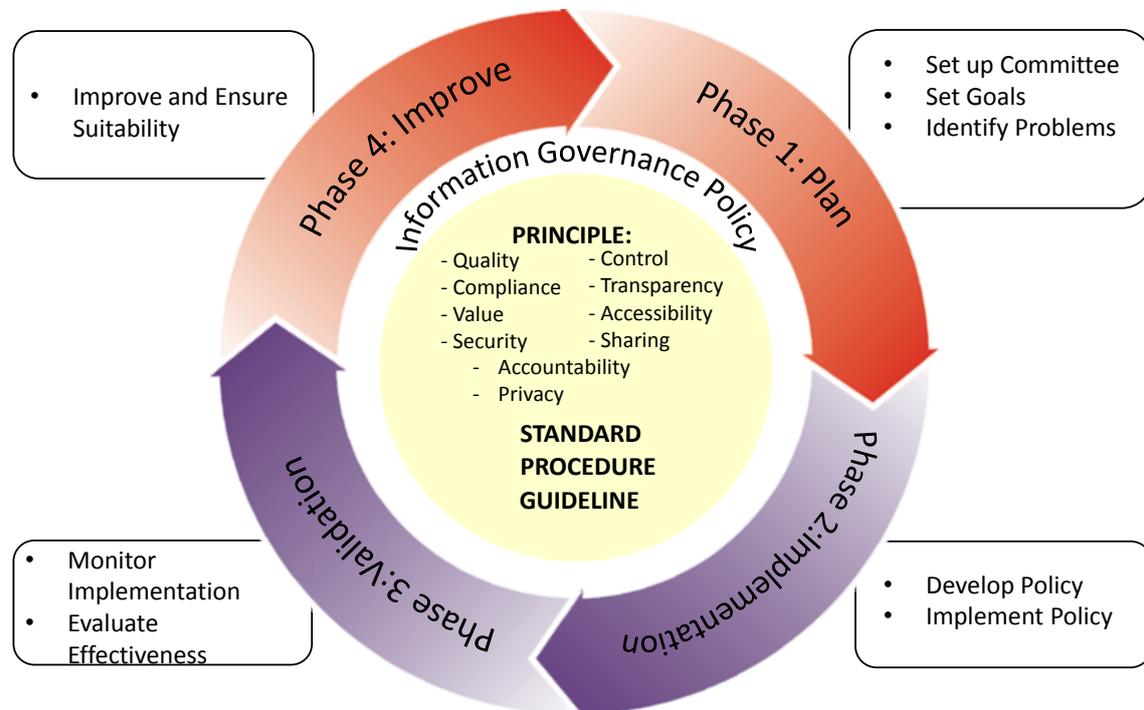


Fig. 2: The IG Policy Framework for Malaysian Public Sector

## 6. Conclusion

The framework for IG Policy Framework for the Malaysian Public Sector should consider four main factors which are the principles, standards, procedures and guidelines with principle becomes the most important one. Such a factor contains ten sub-factors or items. The implementation of the IG policy involves four phases; planning, implementation, review and improvement. Each phase is implemented through identified activities. All these factors, items, phases and activities are integrated and illustrated graphically in Figure 2. The framework has been assessed and validated by experts to ensure its appropriateness in the context of the Malaysian public sector.

## 7. Future Work

Future work recommends extensive study that summarize all dimensions affecting IG, namely policy, human, process and technology for comprehensive insights and the production of a complete IG framework. Current work covers specifically for the policy dimension. The author also proposed future work that looks into investigating the relationship between the dimensions and the factors affecting the IG through quantitative methods so that this study can be presented statistically.

The sample size for IG can be studied in different domains to compare between domains in the public sector in Malaysia such as education, welfare, and military. The comparison can be used to evaluate the effectiveness of the framework ranging from different domains in the public sector.

Besides developing an IG framework, future research recommends a specific IG policy for Malaysian Public Sector that can be used as a guide by the Government of Malaysia.

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