

Harmonizing eGovernment Initiatives in the Philippines: A Collaborative Institutional Framework

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ABSTRACT

Given the fluid nature of Philippine ICT structures for leading eGovernance, this paper discusses the current initiative of its government to harmonize e-government projects. The new initiative, called the Medium-term Information Technology Harmonization Initiative (MITHI), prioritizes system interoperability, development of critical registries and alignment with priority development strategies. While technical issues may be at the heart of this initiative, the paper discusses the emerging governance system behind MITHI that is crucial to guiding interoperability through. The paper then provides the example of the health sector as an illustrative case of how interoperability will be navigated in the near future.

Categories and Subject Descriptors

J.1 [Administrative Data Processing]: *Government*

General Terms

Management, Standardization, Legal Aspects

Keywords

Interoperability; Harmonization; ICT Budgeting

1. INTRODUCTION

At the turn of the 21st century the Philippines crafted a Government Information Systems Plan (GISP) with the objective of attaining a vision of a ‘Philippine Government Online.’ National government offices then had automated clerical functions, but many still had limited scope and functionality, and were seldom integrated with related systems. They could not provide timely, and accurate decision-making support. This continues in many agencies today. The GISP also lamented the absence of mission-critical systems fully operating on enterprise wide networks or linked with other information systems of other agencies. Further, the sharing of databases or communication network had not been vigorously explored at that time. Most government agencies were essentially left to themselves to establish or adopt available ICT industry standards.

The GISP already recognized then that having common data application standards in government was essential for system compatibility, for sharing databases, minimizing redundancies and inaccuracies in common and/or integrated applications. Also,

given how individual agencies submit individual ICT budget requests to the Department of Budget and Management (DBM) and congress on a yearly basis, but is evaluated independently of each other, it called for a better ICT budgeting framework.

In other words, the concept of interoperability, and standards were already in the discourse of ICT planning in the Philippines, over a decade ago. But what has happened since? This paper discusses the institutional challenges to achieving government-wide interoperability, and the current plans and strategies to harmonize them. It then provides the example of the health sector as an illustrative case of the challenges and possibilities.

2. Review of Related Literature

[4] describes eGovernment to be the advent of ubiquitous information sharing between and within organizations. It is seen as an evolution towards a post-bureaucratic form of organization, and an empowered network achieved through an integrated information structure. However, its rise has lead to many emerging concerns in public administration, such as the importance of information integration and interoperability in the conception and deployment of e-Government initiatives [3].

The concept of interoperability refers to “the ability to exchange information and mutually use the information which has been exchanged” (CEC 1991 as cited in [3]). Interoperability is crucial to achieving the promise of eGovernment, since it cannot be done without interrelating organizational and technical functions of different units. This requires cooperation between administrations that need to be interoperable and their partners. In terms of cooperation, organizations need to agree on policies about security, access, ownership and control, among others [6].

However, because of the eventual ‘loss of power’ in terms of control over information systems, that resistance to adopting e-Government arise [4]. This means that a major obstacle to harmonizing e-Government ICT systems involve governance issues that reside in the institutional and legal rather than in the technological realm [12]. Throughout the world, a number of initiatives have already been underway by eGovernment agencies with respect to addressing interoperability. There are differences, however, in their enforcement. The differences pertain to the level of enforcement, and whether they are mandatory or recommendatory guidelines [3].

2.1 State of e-Government in the Philippines

But, compared with its neighbors in Asia like Japan, Korea and Singapore, e-government deployment in the Philippines has been on a lesser scale and the potential of e-government services is far from being fully realized [13].

A large part of the problem is institutional. The drop in its e-Government ranking has been attributed to the lack of strong leadership in eGovernment, and poor coordination of efforts among departments and various levels of government. As such it

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ICEGOV2013, October 22-25, 2013, Seoul, Korea

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needs to establish, upgrade and improve government ICT infrastructure, systems and ICT related procedures to allow for integrated government operations. This includes adopting a government interoperability framework, promoting standards, establishing a data center, rationalizing ICT procurement, among others [1].

Interoperability is an important desired goal of most eGovernment plans. In the Philippines, for instance, interoperability was already mentioned as a crucial in the GISP in 2000 and reiterated in the more recent Philippine Digital Strategy (PDS) in 2011. In the PDS interoperability was defined as: “the ability of information systems to operate in conjunction with each other, encompassing communication protocols, hardware, software, application and data compatibility layers” [1] and says that it is the key to the delivery of eGovernment services.

2.2 Philippine ICT Governance

For e-Governance to succeed, guidance is needed to go beyond the technical, and must consider various social and organizational factors [3]. In the Philippines, a stumbling block is the governance structure for e-Government projects which has been fluid and poorly integrated development of initiatives. In the past 13 years, ICT governance has been in constant flux, with its structure constantly changing under every administration.

In the year 2000, then-President Joseph E. Estrada established the Information Technology and E-commerce Council (ITECC) through Executive Order (EO) 264. Subsequently, in January 2004, under the Macapagal-Arroyo administration, a Commission on ICTs (CICT) was created under EO 269. This was meant to be a transitory agency prior to the creation of a Department of Information and Communications Technology (DICT). It was tasked to serve as the primary policy, planning, coordinating, implementing, regulating and administrative entity of the Government with respect to the ICT sector. But, a year into the term of the next president, President Benigno Aquino III issued EO 47 on June 23, 2011, to abolish the CICT and transferred it along with its attached agencies to the Department of Science and Technology (DOST). This effectively abolished the posts of the CICT chairman, and its commissioners, and transferred its functions to a new office under the Department of Science and Technology (DOST) called the Information and Communication Technology Office (ICTO). The ICTO, in turn, was to be headed by an Executive Director with a rank of an Undersecretary. Only recently was the ICTO office reorganization plan finalized, with the undersecretary aided by a Deputy Executive Director for e-Government, along with a corps of Chief Information Officers (CIOs).

3. MITHI

The ICTO has superseded the role previously performed by the National Computer Center (NCC), and later the CICT, in developing e-Government in the Philippines. It is now expected to be the lead in steering e-government initiatives and help reduce system redundancies.

However, governance in the implementation of e-Government plans requires a systematic process for planning, budgeting, implementation, monitoring and evaluation of government-wide ICT projects, which is difficult to do through one agency alone.

This difficulty is also because the task requires a broad, inter-departmental mandate. In particular, it needs the collaboration of the Department of Budget and Management (DBM), the National

Economic Development Authority (NEDA) and the Information and Communications Technology Office (ICTO). This can provide it with a technical perspective, integrated with the overall planning perspective for the whole bureaucracy, and the power of the budget to extract compliance. As such, in a commissioned study of e-government in the Philippines, it was recommended that the role and responsibility of a government agency related to a digital government should be clearly stated in terms of securing a budget, human resources, and establishing a national ICT infrastructure, among others [10].

With this in mind, Joint Memorandum Circular No. 2012-01 created the government-wide Medium-term Information and Communication Technology Harmonization Initiative, or MITHI, for fiscal year 2014-2016. The DBM, ICTO and NEDA were the convening agencies (see Fig. 1). MITHI’s primary objective is “to harmonize all ICT resources, programs and projects of the whole government.” More specific, the objective is to ensure the coherence of ICT programs and projects with each other, while also being consistent with the five Key Result Areas (KRAs) of the current administration.

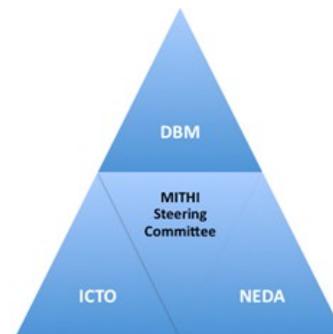


Fig. 1: MITHI Convenor Agencies and National Steering Committee

The rationale for bringing the three together is connected with their respective mandates. The DBM is mandated to promote sound, efficient and effective management and utilization of government resources. The ICTO is mandated to ensure the provision of efficient and effective ICT infrastructure, information systems and resources to support efficient, effective, transparent and accountable governance, and to support the efficient enforcement of rules and the delivery of accessible public services to the people. It is also mandated to formulate the GISP and administer the eGovernment Fund. Lastly, NEDA is responsible for coordinating the formulation of continuing and integrated development plans, policies and programs that are embodied in the Philippine Development Plan (PDP).

In the MITHI model, the mandate of the three convening agencies is operationalized through a steering committee that has the role of coordinating all eGovernment initiatives in the medium term (2014-2016). With full responsibility, this working committee will execute and evaluate national ICT policy to prevent overlapping projects and conduct national informatization initiatives in an efficient and consistent manner.

The subsequent sections on the MITHI process and how it applies with respect to the health sector was based on the author’s direct participation in the technical working group for MITHI, and participation in government workshops and meetings pertaining to eHealth.

3.1 The MITHI Process

This year was the first time the MITHI was implemented for crafting the e-Government budget for 2014. As such, one of the requirements requested of all government agencies was participation in an ICT Resources survey. This was intended to capture the hardware, software and ICT projects each agency is currently implementing. This was meant to determine the state of ICTs and e-Government related projects in the bureaucracy.

The other requirement was the submission of concept plans for ICT projects the agencies wanted to implement for 2014. For this, MITHI crafted a process wherein all agencies submitted their comprehensive proposals, from which a system of prioritization was based. Priorities were ICT projects that (1) were not internal to an agency alone, and hence would require collaboration and interoperability; (2) had components that meant to develop/enhance critical registries (e.g. citizen, land, business, transportation, etc.); (3) involved transactional services; (4) were aligned with the current priorities of the government; and (5) the likely to be completed and operational by 2016.

3.2 Outcomes of Project Requests

In processing the project proposals, the scoring system for prioritizing projects became problematic given that agencies were basically self-reporting its significance with respect to the criteria being prioritize (e.g. were they interoperable, had development impact, etc.). However, what became apparent was that many of the proposals clustered around similar system needs. For instance, many of the state universities and colleges wanted to develop students registration systems, grading systems, etc. Hospitals wanted to develop hospital information system, agencies wanted to create websites/portals, others needed human resource systems, payroll and financial management systems. As such, through a content analysis of the proposals, there were logical clusters and themes that came out.

Some of these clusters were based on applications, e.g. payroll systems, human resource systems, etc. Fortunately, the ICTO and other agencies were already proposing a government-wide system for these, such that all agency requests for a similar system would be foregone as this would be logically subsumed under this broader national system.

Likewise, there were sectoral clusters that were emerging. The most prominent ones were on health, education and justice. Health involved systems for hospitals, health financing, rural health information, etc. Education involved basic as well as tertiary education, while Justice, involved the courts, jail management, and police enforcement.

For the purpose of this paper, the focus will only be on the health sector and how the MITHI process is pursuing it as a model for developing interoperability across other sectors. Part of the reason is also because among all the sectors, the health sector has already been more advanced as far as discussions on interoperability standards are concerned, as will be discussed next.

4. HEALTH I.S. INTEROPERABILITY

Despite current technological developments in ICTs, the absence of health standards hinders the interoperability and sharing of data which in return makes information unavailable for better health care decisions in the Philippines (Marcelo, 2012). As such, it was because of the potential of ICTs, on one hand, and the continued

issues on health information, on the other, that the development of an eHealth Action Plan¹ was pushed [14].

In fact, initiatives have already been ongoing towards the development of an eHealth Action Plan in the Philippines. The use of information technology in all aspects of health care was already emphasized early on in the Health Agenda of the Aquino Administration as presented by DOH Secretary Enrique Ona [8]. In relation to this, an ICT4Health Consultative Group was formed consisting of representatives from private sector organizations; Civil Society Organizations; and government agencies (e.g. the Department of Health (DoH), Philippine Health Insurance Corporation (PHIC), and the ICT Office). The consultative group gave recommendations for advancing eHealth in the Philippines focused on five areas: (1) enhancing DOH enterprise architecture; (2) standards & interoperability; (3) standards-compliance; (4) capacity building; and (5) cross-cutting issues (e.g. interoperability with other government agencies; security; privacy) [5].

In 2012, then PHIC Vice-President Alvin Marcelo reiterated what essentially was mentioned in consultations and output of the technical working group (TWG), and this was: (1) Country-level eHealth governance is unclear; (2) a guiding sector-wide enterprise architecture, acceptable to as many stakeholders, is still not widely accessible; and (3) Subsequent components suffer from the absence of the above (standards, capability building, compliance). This situation is what Klischewski [4] describes as a point that results in an increasing variety of artefacts (guidelines, standards, components, tools) all of which are introduced with the threat of causing major disadvantages of not being used (e.g. additional cost, interoperability gaps, insufficient service performance).

4.1 Health Information Standards

The situation in terms of interoperability in the health sector, is not as bleak as it sounds, especially given that consultations on the issue of health information systems has been extensive, especially in the last couple of years.

Because this has been extensively discussed and consulted, there are many points that have been identified that can already be acted upon, especially with respect to health information standards required for interoperability of health information systems. In fact, there are already a substantial number of health standards that majority of the stakeholders are in agreement on [11]. Among these are the standards on patient, facility and provider identifications, medical classification systems, clinical terminologies and billing codes.

However, even as there is some consensus on health standards, the burden of seeing this policy issued through has not been pursued with more urgency among the institutions concerned. This is consistent with the literature on interoperability, which says that the issue is not solely technical, but also one involving institutional, organizational and governance concerns [12][4]. Hence, a formal agreement on these standards is the first step towards achieving interoperability. As [3] explains, interoperability has two phases: first is to enable interoperability by providing the basic technical standards and policies to enable

¹ An eHealth Action Plan describes the comprehensive set of activities, required resources and strategic phases for implementing the national eHealth vision. It consists of action lines, resources needed to implement the plan, and strategic phases situated in a multi-year timeframe (WHO-ITU, 2012).

the seamless flow of information between different administrations delivering e-services; and second, is to facilitate the alignment of the administrative procedures with the technical systems to allow interoperability at the organizational level between administrations. At present, the Philippine health sector still needs to execute the first phase.

4.2 MITHI Health Cluster

Addressing the problem of collaboration and cooperation among different institutions is one of the things the MITHI process intends to address. Under the MITHI process, each cluster, in this case the health cluster, will have its own steering committee or technical working group. In the interim members of this steering committee were identified to include the DoH, the PHIC, and the DOST-ICTO, along with a full-time health sector Chief Information Office (CIO) designated by the ICTO. In the short-to medium term, MITHI will also allocate funds for a project management office (PMO) that will shepherd the priority projects for the health sector.

The priority projects in the medium term include a health information exchange (HIE) that is meant to help various health systems currently in place to communicate and interoperate with each other. For the HIE to operate, however, the creation of three important databases or registries have to be in place. These are the patient registry, the provider registry, and the terminology registry. During the MITHI discussions for the health sector, it was mentioned that a prerequisite to the budget for 2014 are formal agreements on standards in terms of actually policy issuances, which are crucial to the creation of these registries. These prerequisites being tied to the budget will hopefully provide the incentive to leverage the hastening of agreements on standards that have long been consulted.

By 2014, the MITHI has already committed to funding the HIE, along with the requisite registries on providers, patients and terminologies. Likewise, some systems like the Hospital Management Information System (HOMIS), and Community Health Information Tracking System (CHITS) will be expanded. A little farther down the line, the end goal will be to have a registry of patient records. Subsequently, once the standards have been issued, these can then be the guideline under which future health systems must be compliant with.

5. CONCLUSION

This is the first year in which the MITHI process for harmonizing ICT projects will be implemented. The main players in the process, like ICTO and DBM, with the NEDA are relatively new partners in this undertaking. Hence, there is also no guarantee that in the future, a new ICT governance system will be in place. However, if the health sector is able to achieve and demonstrate a large degree of interoperability before the end of the Aquino administration in 2016, the momentum created first by the standards and then demonstrated through the HIE should be enough to make the change sustainable. Hopefully, it will then lead to a blue print that can be replicated in other sectors of government (e.g. justice; environment, etc.).

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