

# Case Studies Series



## e-Government and interoperability initiatives in the Philippines: new directions, challenges and opportunities



### 1. Introduction

Achieving interoperability is widely recognized as one of the major goals of any e-government effort. With shrinking budgets and the high cost of new technologies, government IT managers are optimizing the use of existing resources and leveraging the opportunities brought about by new technologies. Generally defined as the ability of information systems, devices and organizations to access and process data, interoperability relies on a secure platform to ensure the integrity of transactions. For governments, interoperability requires access to services and information across agencies, while reducing costs as well as improving productivity. As a tool to improve governance, it is also as a set of practices intended to promote transparency, ensure the efficient delivery of services, and foster accountability. Furthermore, interoperability can be a tool for inclusion and growth. It can encourage innovation and collaboration among public agencies, private sector and citizens by eliminating organizational (transactional) silos, and inspire openness. On the technical side, interoperability is a complex endeavor that involves people, information, communication and technology usually driven by a sense of achieving the public good. It includes the development of standards, the building of capacities and the appropriate organizational culture.

For developing countries, the interoperability agenda is one that is usually aligned with its development goals. National commitments towards achieving the Sustainable Development Goals (SDG) by 2030 underscore the need for governments to efficiently monitor its performance and further improve the delivery of basic services.

In the Philippines, the Department of Information and Communications Technology (DICT) adopted the Philippine Digital Transformation Strategy (PDTs) 2022. The PDTs 2022 aims to harmonize and integrate the existing plans and activities related to infrastructure and application development as well as provide new mechanisms for improved efficiency, greater transparency and participation in governance. Likewise, interoperability projects that were pursued were envisioned to lessen operational cost and shorten transaction turnaround thus improving the delivery of public services to citizens. Aside from its efficiency- centric nature, e-Government was generally seen as a vital component of an emerging Philippine digital society. Furthermore, e-Government and ICTs were viewed as ingredients for socioeconomic development. This is evident in the national development plans pursued by the various political administrations.

At present, President Rodrigo Duterte has expressed his desire to improve government services by decreasing transaction time and cost. Expressed through his various public pronouncements, perhaps the strongest expression of this commitment is the enactment into law of Republic Act (RA) 11032 which promotes the ease of doing business

in the Philippines. Another law, RA 11055, or known as the National ID law, mandates the issuance of a national ID to all Filipino citizens that can be used to transact with the government. This new ID is seen as a citizen's access card for online public services and promotes the idea of seamless integration of services among government frontline agencies and local governments. Furthermore, the Duterte administration has committed to the improvement of the country's internet services by encouraging the entry of new players in the local telecommunications industry.

However, e-Government initiatives in the Philippines continue to suffer from inadequate resources and changing political priorities. Interoperability efforts continue to experience challenges in its implementation caused by the existence of a "siloed" organizational culture across public agencies, the capture of specific ICT suppliers, and the lack of awareness of the benefits of e-Government interoperability.

This case shows the various interoperability initiatives related to e-Government in the Philippines. The discussions in the paper will focus on two levels, namely: e-Government policies and programs adopted since 2011 to the present. Earlier ICT policies will be cited to give the reader the needed historical context. In addition, the paper will also discuss the concept of interoperability and the various views that shape it. Finally, the case will also present the challenges and opportunities and how the current government intends to address these concerns.

## **II. Overview of Prevailing Literature**

Today, digital societies have placed new demands and inspired new practices related to government transparency, civic engagement and the delivery of public services. For instance, open government initiatives around the world have resulted in increased accountability, improved decision making and adoption of innovative practices. Moreover, emerging digital transformation practices are challenging governance and business models. With these trends leading to the evolving concept of e-Government and the indispensable need for interoperability, it can be argued that indeed, the advent of new ICTs combined with the changing citizen expectations make interoperability more compelling.

At this point of the paper, the following questions will be put forward: What are the various views on interoperability? What are its components? The ensuing discussion will present the Philippine e- Government and interoperability initiatives.

### **Views on interoperability**

Concerned with harnessing information resources across service organizations, the idea of interoperability is seen as a complex endeavor. Often related to e-Government models, interoperability in both theory and practice must be viewed beyond its technical and infrastructure aspects. Seen as a purposeful process aimed at improving the delivery of public services, interoperability thus requires the examination of business processes and the development of common standards that will facilitate integration (Scholl and Klischewski, 2007). Moreover, government interoperability and the development of related standards can result in several benefits to governance such as the improved data administration. This results in better decisions and greater support for public services (Dos Santos and Reinhard, 2009).

To further highlight the idea of complexity, the works of Lisboa and Soares (2014), Jimenez et al (2014) and Gottschalk (2009) emphasize the complex nature of interoperability and that the mobilization of information across organizations requires the adoption of a common set of standards, vocabulary, policies, and practices that can guide these initiatives.

Furthermore, the existence of transactional silos is also identified as a major issue that hampers interoperability. This issue can be further unpacked as having the following aspects (Scholl and Klischewski, 2007):

- o **Legal** - this aspect touches on laws, institutional mandates and jurisdiction;
- o **Organizational** - refers to the business processes, resources, cost and the policies needed to adopt interoperability;
- o **Managerial capacities and performance** - this factor refers to the current capacities of government officials to manage and ensure optimum benefits of interoperability;
- o **Informational constraints** - this issue pertains to the quality of information and the demand for stewardship

More recent views on interoperability underscore the importance of tapping data that is usually held by an organization and treated as an exclusive resource. Ordiyasa et al (2015) sees this as one of the primary problems of interoperability and this must be addressed in order to push for the integration of e- government systems. The authors also note the need to create a data ecosystem to aid interoperability initiatives. Meanwhile, the work of El Benany and El Beqqali (2018) alludes to e-government interoperability as a choreographed effort that should be based on service models with the intent of solving problems in public service delivery.

In addition, earlier works stress the importance of creating holistic frameworks and standards that can facilitate interoperability. For instance, Lallana (2008) underscores the need to develop and adopt a government interoperability framework (GIF) that will define the basic technical standards for public agencies participating in e- government initiatives to subscribe. The GIF is part of a national e- government strategy and can be further supported by an enterprise architecture for government (Lallana, 2008) (Paul and Paul, 2012).

Overall, these works present e-government interoperability as a complex endeavor that is often characterized by multifaceted concerns. Deviating from the technology-centric view, these emerging ideas view interoperability as a “whole of government” effort with legal, organizational, governance and technology aspects. Furthermore, e- government interoperability requires a problem-solving and value-adding paradigm that will enable the creation of innovative services, streamline business processes and encourage good governance.

### **The interoperability challenge: Utilizing data across public agencies**

The Philippines is faced with numerous challenges in achieving its development goals. Adopting the SDG targets as part of the Philippine Development Plan (2016-2022), the National Economic Development Authority (NEDA), the principal socioeconomic planning agency of the Philippine government, emphasizes that the country needs “quality data” to be able to monitor its progress in attaining the SDGs. With 17 SDGs and 169 targets, the agency proposes the following: a) greater utilization of administrative data across concerned government agencies; b) the use of registries and c) promoting big data (NEDA, 2017).

Regarding the issue of building quality data sets, the SDG targets related to maternal health and children’s welfare are considered utmost importance. In a 2017 report on children’s welfare, the UNICEF shows the dire predicament of children and maternal health in the Philippines. It states that in 2015, 31.4% of Filipino children were living below the basic needs poverty line. For maternal mortality, the report notes that there are 114 deaths per 100,000 live births. This rate has decreased over the last decade but is still high considering the SDG target (i.e. 70) and the fact that the regional average for East Asia and the Pacific is 62. These problems are further compounded by low immunization rates among children aged 5 years old and below, increasing HIV rates and the rising teen pregnancies cases (Ibid). The UNICEF report attributes these challenges partly to the inability of the government to collect and

use health-related data due to its volume, overlapping mandates among public agencies and the siloed nature of public agencies. Furthermore, aggregation of data from the rural health units to the municipal, provincial and regional level up to the national office usually takes a year or more to complete (DOH). These weaknesses result to the difficulty in developing intervention programs that can address these challenges thus resulting in inherent policy gaps. (UNICEF, 2017). Considering the issue of data collection in rural areas, Huntington et al (2012) attributes these difficulties to the large volume of data that are being produced and stored by rural health centers and the inability of health workers to organize and use these data. Similarly, the works of Ching and Ona (2014) and Ona et al (2013) point to the inadequate capacity of rural health units to aggregate health data. This is due to its large volume as well as its data capture done through physical (paper) forms and its arbitrary storage. These practices result in the inaccuracy of and delay in the aggregation of health data.

Another SDG target area is concerned with climate change and disaster risk mitigation. Although the Philippines is globally recognized as the country which adopts one of the best practices in community-based disaster management, recent reports by the Commission on Audit (CoA) (2014) and the Department of the Interior and Local Government (DILG) indicate gaps in the knowledge management and dissemination of disaster-related information. In particular, the CoA report cites the inability of civil defense agencies to collect, compile, and disseminate information on vulnerabilities, risks and hazards. It further notes the absence of capacities to create and maintain databases and monitor zoning practices, and the inability to track foreign donations. Similarly, the DILG report on local disaster risk reduction and management practices cites the weak knowledge management. The report further points to the need to aggregate data from the different line agencies and local governments in order to increase the efficacy of disaster risk reduction (DRR) programs (SEPO, 2017). These findings reiterate the need to develop appropriate ICT interventions that can consolidate DRR data to promote participation of communities, local governments, and civil defense agencies. In addition, capacities of frontline actors must be developed through disaster informatics and digital literacy interventions (Lallana et al, 2019).

Clearly, the examples cited in the discussion point to a serious need to harness data/information resources through ICT. In both instances, relevant data needed for health care and disaster management were described as voluminous, dispersed and unorganized. Most of these are in physical (paper) form, some even anecdotal. These documents are stored in vacant areas or physical cabinets. Data sharing and aggregation is limited and usually takes time. This situation presents a compelling reason for the Philippine government to embark on e-government and interoperability. It also highlights the need to adopt a comprehensive data governance approach that will address the gaps in collection and storage as well as encourage innovation in the use of these data.

### **III. Interoperability and e-Government: The case of the Philippines**

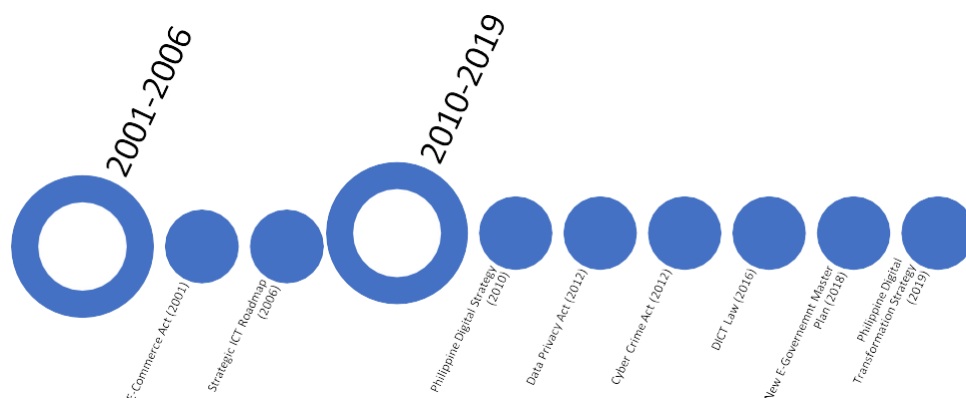
Today, the Philippines is mainly seen as an emerging (or maturing) country in terms of achieving its digital transformation goals. With estimated 79 million Filipinos spending an average of 10.2 hours a day on the internet (Abadilla, 2019), the country has exhibited improvement in ICT-related indices thus holding much promise in the future. The 2018 UN E-Governance Development Index is foremost, where the Philippines was placed the 75th out of 193 member states. Although the rank slipped from its 71st position in 2016, the Philippines's e-government development index indicated an increase from 0.5766 to 0.6512 in 2018 (UN, 2018). In addition, the country's e-participation index (EPI) rank increased from the 67th position in 2016 to the 19th position in 2018. Similarly, the Philippines has been posting improved ratings in the areas of open data (i.e. 22nd among 115 countries, according to the Open Data Barometer-2017) and cybersecurity (i.e. 39th out of 193 countries according to the Global Cybersecurity Index-2017).

These developments can be traced to the various policies and programs that were pursued by the national ICT agencies to support the various medium-term development plans. The succeeding discussion will illustrate the specific e-government and interoperability initiatives that were pursued by the Philippine government.

### Reinforcing e-Government in the Philippines: An ingredient for national development

Since 2000, the Philippine government has embarked on numerous e-government initiatives that are designed to support the national development efforts. Figure 1 presents the significant ICT-related laws and plans adopted from 2001-2019.

**Figure 1: Overview of ICT related Philippine laws and policies (2001-2019)**



The E-commerce act of 2001 (RA 8792) mandates the adoption of ICT in government. The law further recognizes the importance of electronic transactions and mandates the online presence of government services. The law is also intended to support the e-Philippines vision: a digitally enabled society which aims to improve the quality of life using ICT. It also presents Philippine e-government as having interconnected government agencies capable of providing online public services (Ona, et al, 2011). The succeeding administration further built on the e-Philippines vision by adopting the National Strategic ICT Roadmap (2006). The roadmap presents a vision of the Philippines as an emerging information society where ICT is regarded as an important ingredient when it comes to socioeconomic growth. Moreover, the roadmap envisions the development of the Philippine Cyber Corridor (PCC) intended to link small and medium scale enterprises as well as start-up companies engaged in the creation of digital content and products. The then booming business process outsourcing industry is also envisioned to benefit from the PCC (Ona et al, 2011).

Recognizing the need to support the government's social agenda, the Philippine Digital Strategy (PDS) was adopted in 2010. The PDS uses the concept of digital inclusion by pushing access to digital technologies to rural communities. The PDS also identifies e-government as a sub-theme and stresses the need for interoperability through its medium-term ICT harmonization initiative (MITHI) and the development of the integrated Government Philippine (iGovPhil) applications for government agencies.

### Major e-Government and interoperability initiatives from 2011-2016: Policies, plans and institutions

The policy-related initiatives started in 2011, which were aimed at developing e-government services, adopting open government data practices and laying the groundwork for interoperability. The initial version of the e-Government Master Plan (EGMP 1.0) was intended to provide a framework on how to address the siloed nature of government

agencies as well as create shared services across public institutions. It was also seen as a roadmap for e-government projects through highlighting the need for interoperability and identifying the common transaction and back end systems. Furthermore, the EGMP reiterated the need to build stronger institutions by echoing the call to enact the law creating the Department of Information and Communications Technology (DICT) as well as laws on data privacy and cybercrime prevention. In addition to the EGMP 1.0, the joint memorandum circular (JMC) no. 2012-01 dated November 2012 formalized the conduct of the government-wide Medium-term Information Technology Harmonization Initiative (MITHI) for FY 2014-2016. This initiative endeavored to address the following challenges (Moya, 2013):

- o The existence of different information systems in government and the restricted access to agency databases;
- o Changing the prevailing government culture and addressing the siloed nature of organizational units; and
- o The lack of understanding and appreciation of the concept of interoperability

Aimed primarily at harmonizing government resources, ICT programs and projects for the whole government, MITHI identified service clusters for the development of e-government applications and designated the clusters as priority areas for interoperability. These clusters are the following: a) citizen frontline service delivery; b) transportation and land use; c) development of the iGovPhil and its related infrastructure; d) public health; e) basic and higher education; f) justice, peace and order; g) personnel and financial management, and h) open data initiative (Ibid).

In addition, MITHI also both integrated and updated the Government Information System plans of various agencies with the EGMP as well as the Philippine Development Plan (2011-2016). To further institutionalize MITHI, the JMC also identified the National Economic Development Agency (NEDA), the Department of Budget and Management (DBM) and the Department of Science and Technology (DOST) through the ICT Office as lead convener agencies. Table 1 provides a summary of the main points of the EGMP and MITHI.

**Table 1: Summary of EGMP 1.0 and MITHI**

| E-Government Master Plan (EGMP 1.0) (2011-2012)                                                                                                                                                                                                                                                                                  | Medium-term IT Harmonization Initiative (MITHI) (2014-2016)                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>o Served as a roadmap for the development of e-government projects</li> <li>o Emphasis was placed on interoperability through common transactions (front and back end)</li> <li>o Highlighted the need for identified shared services and a common e-government infrastructure</li> </ul> | <ul style="list-style-type: none"> <li>o Designed and implemented MITHI projects for FY 2014- 2016</li> <li>o Consolidated existing e-government plans and projects</li> <li>o Aligned MITHI with the current national development plans of the Philippines as stated in executive order 47 (2011)</li> <li>o Multi-agency endeavor led by NEDA, DBM and DOST-ICTO</li> </ul> |

The pursuit of interoperability aspirations through MITHI also resulted in the creation of the Philippine e-Government Framework (PeGIF) in 2015. The PeGIF was envisioned to provide interoperability standard for the technical, information and business process. In addition, administrative order number 39 (2013) tasked the DOST-ICTO to develop the government web hosting service. This service provided a common platform for national agencies, government-controlled corporations and local governments to house their websites. This service was also envisioned as the future venue for shared services related to e-government (DOST-ICTO, 2013).



Another notable example is the National E-Health initiative (NEI). Guided by the EGMP and the MITHI, the Department of Health (DOH) launched the NEI in response to disparities in health services especially in the rural areas. Aside from infrastructure and challenges in geography, these disparities also came in the form of inadequate or delayed information due to the following: a) stand-alone systems using different data formats; b) poor recording and transfer of patient data to the different levels of the public health bureaucracy; and c) concerns on data reliability and accuracy due to unreliable collection and storage (DOH-DOST, 2014). These occurrences greatly impaired the decision-making ability of public health officials thus resulting in policy gaps and program oversights.

To address these challenges, the DOH issued the joint DOH-DOST department memorandum no. 2013- 2000 creating the Joint National Governance on e-Health. This paved the way for the formation of the MITHI Health cluster. This cluster identified the critical interoperability projects related to e-health. For this reason, the Philippine Health Information Exchange (PHIE) was developed. PHIE is a platform that can enable the sharing of health information across public and private health facilities. It also intends to integrate information from other agencies concerned with public health such as local health units, research institutes and health regulatory agencies. Box 1 shows the goals of the PHIE.

The PHIE is also envisioned to have 6 major components. These are the following (DOH-DOST, 2014):

- a) **Client and Provider Registry**- refers to an electronic database/repository for citizens availing themselves of health services and healthcare professionals
- b) **Health Facility Registry**- This serves as a registry of all health facilities in the Philippines;
- c) **Standard Terminology Service**- This component refers to a set of interoperability standards for health transactions. This is also concerned with data sets and formats;
- d) **Shared Health Record**- This refers to the shared client records with information to be exchanged;
- e) **Interoperability Layer**- This layer is concerned with data communication and an exchange of standards that can be used for information sharing and interoperability;
- f) **Point of Service applications**- Lastly, this component refers to the development of transaction systems like the Integrated Clinic Management System (iClinicSys) and enterprise system such as DOH Integrated Hospital Operations and Management Information System (iHOMIS) for public hospitals and RHUs.

On the matter of laws, the enactment of the data privacy act (RA 10173) and the cybercrime prevention act (RA 10175) conveyed the government's intent to protect data privacy rights and provide law enforcement agencies with statutes to prosecute cybercrimes. Furthermore, these new laws were intended to maintain the Philippines' current status of being one of the leading business processing outsourcing (BPO) hubs in the world. Perhaps the most important policy development during this period was the creation of the Department of Information and Communication Technology (DICT) in 2016. Aside from its regulatory responsibilities, the DICT was now given the mandate to implement the EGMP and its related interoperability activities.

#### BOX 1: GOALS OF THE PHIE

- a. Achieve the unification and integration of health data and processes across different health facilities employing disparate electronic medical record systems;
- b. Promote interoperability by providing means for communication and coordination of electronic health data among the various health domains (i.e. disparate clinic information systems and applications) without loss of semantics;
- c. Increase accountability for the proper management of health information;
- d. Harmonize and optimize eHealth processes and workflows;
- e. Serve as reference in the development of integrated information systems
- f. Promote the implementation and use of interoperability standards.

Source: (DOH-DOST, 2014)

#### BOX 2: TENETS OF TECHNICAL INTEROPERABILITY

- A) Openness and citizen engagement. The PEGIF facilitates transparency in government and enables citizen participation in governance.
- B) Collaboration. The PEGIF allows national government agencies to work together to deliver better, more efficient public services.
- C) Alignment with existing standards. The PEGIF draws from established international, regional, and national standards and notes opportunities from current industry developments.
- D) Preference for open standards. The PEGIF is based on open standards. All PEGIF standards and guidelines must conform with open standard definitions, unless there are specific and compelling reasons against it.

Source: PEGIF

#### Major e-government initiatives 2011-2016: Shared government applications through iGovPhil

As part of the efforts to fully leverage ICT in government, the iGOVPhil initiative aimed to interconnect government offices with the intent of improving the delivery of public services. Launched in June 28, 2012, iGovPhil also envisioned a government that could fully utilize information resources and achieve interoperability by streamlining processes as well as fostering sharing and collaboration. Furthermore, this program intended to define common technical, information and business process standards that were essential in achieving interoperability. Through the development and implementation of the Philippine e-Government Interoperability Framework (PeGIF), the DICT endeavored to pursue seamless integration of essential functions. According to the 2017 iGovPhil report, the project already accomplished several programs like Public Key Infrastructure, email system, cloud computing, web hosting, interoperability framework, Agency Records Inventory System, Online Payment System, Project Management Application, and forms generation application. Defined below are the major accomplishment of iGovPhil (DICT & DOST, 2017):

**Infrastructure** - essential to interoperability is the development of a viable ICT infrastructure for the facility information exchange and access to critical applications. Originally seen as the building of data centers and cloud-based services, the DICT has pursued the expansion of the Government Network (GovNet) initially connecting 160 agencies in Metro Manila and 15 in Metro Cebu. Future expansion is seen in major population centers like Iloilo City, Baguio City, Tuguegarao, Cagayan Valley, Legazpi, Albay and Butuan City.

**Platforms** - this feature of iGovPhil refers mainly to the creation of common public registries through the Government Common Platform (GCP). These registries can be accessed through the National Government Portal (NGP). The NGP was launched in June 23, 2017. It currently hosts 157 government e-services and sites. As part of the ongoing migration of open data sets, NGP is also projected to serve as the access and repository of these data sets.

**Shared Applications** - this part of the project envisions the creation of shared software applications that can be used by various government agencies. At present, the Forms generator and the Archives and Records Management Information System (ARMIS) are being deployed and used in selected agencies. The forms generator enables an office to create their agency-specific online forms for faster processing of transactions, while the ARMIS allows public agencies to create, monitor, use and store documents. Application related to project management among others are still being developed and tested for



deployment. Another important aspect of iGovPhil is the creation of the PeGIF. Mentioned in the previous discussion as the medium for defining interoperability standards, PeGIF is composed of three aspects for achieving interoperability, namely (1) technical interoperability; (2) information interoperability, and (3) business process interoperability.

The technical interoperability aspect seeks to address matters relating to the integration of ICT systems and services. This includes interfaces, interconnection, data integration, data exchange, security, and presentation. PeGIF's technical interoperability is also based on four key tenets that must be subscribed to when procuring and developing ICT infrastructure. Box 2 above presents the tenets of technical interoperability. In terms of information interoperability, PeGIF calls for the adoption of the information life cycle approach in managing information resources. This suggests that PeGIF standards for information interoperability will subscribe to the phases of this life cycle.

Lastly, on business process interoperability, PeGIF underscores the importance of seamless integration of process through outcomes-oriented results. PeGIF is also envisioned to promote trust and security. It also prescribes a generic model for government regulatory agencies and envisions the development of standardized business processes for the model.

**Figure 2: Summary of interoperability initiatives from 2011-2016**

| Period Outputs              | 2011                    | 2012                                                                    | 2013                                                                      | 2014-2015    | 2016                            |
|-----------------------------|-------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------|---------------------------------|
| <b>Laws</b>                 |                         | Data Privacy Act (RA 10173)<br><br>Cybercrime Prevention Act (RA 10175) |                                                                           |              | Creation of the DICT (RA 10844) |
| <b>Policies &amp; Plans</b> | E.O. 47<br><br>EGMP 1.0 |                                                                         | A.O. 39: Government Web Hosting Service<br>JMC 2012-01: Creation of MITHI |              |                                 |
| <b>Initiatives</b>          |                         | Launching of iGovPhil PHIE                                              |                                                                           | PeGIF (2015) |                                 |

To summarize, Figure 2 presents the major laws, policies, plans and projects undertaken by the Philippine government from 2011-2016. This is a significant period for interoperability in the Philippines because the major initiatives for government integration were actively pursued during this time. Moreover, it can be seen in this figure that the important aspects of e-government interoperability started through the MITHI project and the development iGovPhil as well as the PeGIF. Lastly, cybersecurity and data protection laws were enacted together with the creation of the DICT.

Overall, the laying of institutional and the policy foundation to further push e-government interoperability and the protection of the information infrastructure of the Philippines was seen over this period. The development of shared government services applications combined with a standard framework was also pursued during this time.

#### **IV. New laws, plans, and programs: Pushing the e-government and interoperability agenda**

The change in political administration in 2016 involved the continued emphasis on e-government and interoperability. The creation of DICT has, in effect, designated a national agency responsible for e-government and the use of ICT in government. Furthermore, the DICT provides the needed institution to serve as steward of ICT-related initiatives in the Philippines.

Aside from the creation of the DICT, there are notable policy developments as well as important milestones that have been achieved. These are namely the enactment of the Ease of Doing Business Law (RA 11035) and the National ID or PhilSys Law (RA 11055). These two laws provide the needed legal impetus to pursue ICT integration initiatives both at the national and local level. Moreover, these two laws have defined new roles for the DICT as well as created new institutions that will enable the integration of public services.

Meanwhile, the DICT has also revised its EGMP. Dubbed as EGMP 2022, this new plan launched in 2019 sought the harmonization of the various e-government initiatives, pushing for the completion of the PeGIF and ensuring the continuous development of applications for the national government portal.

##### **National ID Act**

In August 2018, Pres. Rodrigo Duterte signed into law RA 11055 otherwise known as the National ID Law or PhilSys Law. The main aim of this law is to provide a legal framework for the integration of citizen related information through the provision of a national ID card. Moreover, this law provides Filipino citizens with a unique identification number that can be used for public transactions and identification. Emphasizing the need to promote a “seamless delivery of public services” by improving efficiency and administrative governance (Sec. 20), RA 11055 also provides the integration of local government systems in the PhilSys. In terms of governance, the Philippine Statistical Authority (PSA) was designated as the lead agency to be assisted by the DICT and other national government agencies. Box 3 provides a snapshot of the salient points of this Act.

##### **Box 3: Salient points of the PhilSys-National ID Law of 2018**

-According to Sec. 2 of the act, the State aims to create a standardized and single national identification system known as the “Philippine Identification System” or “PhilSys”. This will allow the easy-access, efficiency, and transparency between government services, the private sphere, and the public sphere;

-Each ID contains a PhilSys Number (PSN) wherein each number is unique and randomly generated through registration by the PSA (Sec 7.a). It contains the following information: the PSN, full name, sex, blood type, marital status (optional), place of birth, date of birth, address, and a photograph. (1);

-The use of the PhilID shall be honored in all transactions that requires verification or proof including but not limited to applications for eligibility with regard to social welfare and different benefits coming from the government, application for different services such as GSIS, SSS, PhilHealth, and others, application for passports and driver’s license, tax-related transactions, voting application, admission to government hospitals or health centers, other government transactions, application to schools, application and transaction for employee purposes, opening of bank accounts or with other financial institutions, verification of a person’s criminal record, and more.

Source: RA 11055

Lastly, the law also mandates the creation of the PhilSys Policy Coordinating Council which is tasked to develop policies and guidelines regarding the implementation of the law.

As to the need for interoperability, the Act together with the pertinent programs and supporting policies requires a data governance regime that takes into account the ongoing efforts of the DICT that are related to standardization and integration of government transaction systems. Furthermore, RA 11055 provides the legal basis to affect integration and interoperability as well as having to consider the need to secure transaction systems that will guarantee the integrity of transactions as well as promoting citizen privacy.

### **Ease of Doing Business Law of 2019**

The Ease of Doing Business and Efficient Government Service Delivery Act of 2018 (RA 11035) aims to improve the country's competitiveness by improving the process and speed of government services, promote transparency and cut red tape. Seen as a strengthened version of an old law, RA 11035 is intended to facilitate prompt action on transactions and the resolution of complaints. Moreover, this law is envisioned to eliminate graft and corruption through efficient public transactions from national to local levels of government. In addition, this law is necessary to improve the competitiveness ranking of the Philippines, promote good regulatory practices, remove red tape, and strengthen the capability of Civil Service Commission. Box 4 provides an overview of the salient points of RA 11035.

This new law was intended to replace the Anti-Red Tape Act of 2007 or RA 9485. In terms of the development of institutions, the law provides for the creation of the anti-red tape authority (ARTA) that will oversee the implementation of the law. The DICT was also tasked to assist ARTA with its ICT needs.

#### **Box 4: Salient points of the Ease of Doing Business Law of 2018 (source: RA 11035)**

- Zero contact policy (Section 7): This section aims to lessen corruption by lessening if not eliminating the need for physical (face to face) contact in availing public services;
- Requires the reengineering/streamlining of procedures to increase efficiency of service delivery (Section 5 & 11);
- Mandates the creation of the Philippine Business Databank (Sec 14) which will serve as a national registry of businesses as well as the development of a central business portal (Sec. 13) that will serve as an online gateway to public services related to permits, clearances, licenses and similar documents; and
- The law also highlights the need to develop infrastructure that will support interconnectivity of systems (Sec. 15)

### **E-Government Master Plan 2022**

With a vision of "One Digitized Government for the Philippines", EGMP 2022 is seen as a blueprint to harmonize and integrate the various policies and programs related to e-government. Anchored in the 3 major pillars of the Philippine Development Plan (2017-2022), the EGMP 2022 envisions the need to have an ICT-enabled government that will deliver cost effective and efficient public services. Moreover, it seeks to achieve a digitally enabled government that can provide a seamless service delivery of public services, enhance administrative governance, increase transparency, and empower the citizenry.

For its objectives, EGMP 2022 is expected to address the following (EGMP, 2022 page 17):

- **Optimize government operations**
  - Provide a more efficient service delivery platform
  - Integrate e-government systems and enable knowledge, information, resource sharing as well as database building
- **Engage citizens**
  - Unlock insights that improve citizen services for greater connection and participation
  - Ensure the delivery of digital public services to clients are fast, cost efficient and accessible
- **Transform services**
  - Facilitate business transactions through streamlined processing of licenses, permits and fees (simplified requirements and streamlined procedures)
- **Empower government employees**
  - Deliver productivity gains that can improve impact
  - Enhance the capacity and capability of government workforce to improve the internal efficiency and public service delivery

### 3 Major Pillars of the Philippine Development Plan (2017-2022)

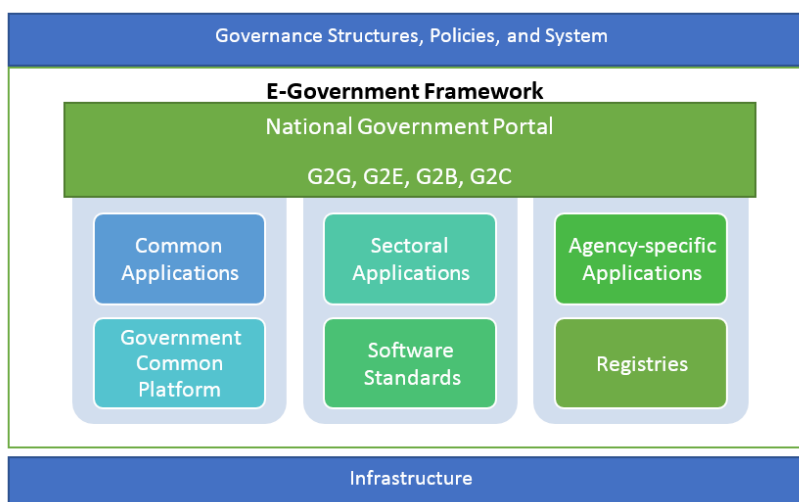
**“Malasakit”**: Enhancing the Social Fabric. Also refers to the need to regain people’s trust in public institutions;

**“Pagbabago”**: Inequality reducing transformation by increasing access to basic services and promoting inclusive growth;

**“Patuloy na Pagunlad”**: Increased economic potential by continuing the growth trajectory of the Philippines. This also stresses the need to invest on R&D, technology and other innovation-driven sectors.

Aside from these objectives, EGMP 2022 also presents the outcomes by identifying the roles of the plan. These are the following (Ibid, page 20): (a) EGMP 2022 is expected to bring cohesion to all ICT programs of the government; (b) it is expected to rationalize all ICT initiatives in government by developing a standards-based framework; and (c) developing human capacity, encouraging collaboration and information sharing across government, and promoting a culture of privacy and security. Furthermore, the plan recognizes the need to identify a set of government to citizen (G2C) and government to business (G2B) applications that can be accessed through the national government portal. Figure 3 provides an overview of the e-government framework as envisioned in the EGMP 2022.

**Figure 3: E-Government Framework based on the EGMP 2022**



Source: EGMP, 2022

Figure 3 further highlights the need to develop and implement the national government portal that will serve as an online gateway to various public services for both national and local transactions. Another aspect of this framework is the provision of a secure and stable system and telecommunications infrastructure. Furthermore, the framework also shows the need to develop common registries, applications, and access to agency specific applications through the NGP. It also recognizes the need to develop standards, policies, and an appropriate governance structure to support interoperability and sustain e-government efforts. Lastly, EGMP 2022 is seen as the manifestation of the country's commitment to ASEAN ICT Masterplan 2020.

### ***Important Milestones and Challenges***

The national government portal was launched in June 2017 while the first batch of trainees completed the trainers' training for data governance last February of 2019. As of 2018, the PeGIF is being reviewed and finalized. Another notable development is the implementation and continuous expansion of the National broadband plan (NBP). Starting in 2017, the NBP's goal is to improve internet connectivity by linking selected zones through fiber optic cabling. Ultimately, NBP envisions the creation of the Philippine Integrated Infostructure intended to connect government, small and medium scale enterprises as well as business process outsourcing companies to a higher bandwidth platform.

Another significant development in 2019 is the entry of Dito Telecommunity as the third major telecoms industry player. Dito Telecommunity is expected to provide an alternative to the current market duopoly, which is being blamed for the dismal internet services in the country.

## **V. Case Summary**

The government's effort to achieve its interoperability goals can be characterized as a work in progress. Together with partners from the private sector, the academe and civil society, the DICT as well as other agencies are continuously developing shared applications and policies that can further mainstream and sustain e-government in the Philippines. Overall, the e-government and interoperability efforts of the Philippines can be summarized with the following themes:

### ***a) e-Government and interoperability as a complex endeavor***

An examination of prevailing literature presents interoperability as a complex undertaking that is multi-faceted and requires political commitment as well as leadership. Furthermore, the desire to improve public services through interoperability requires the development of competencies that can develop and sustain these efforts. In the case of the Philippines, these qualities found in literature are consistent with its experiences. Hampered by inadequate resources and capacities as well as changing political priorities, the country has continuously struggled to push forward its e-government agenda. By 2011, the country experienced a resurgence in its desire to achieve its e-government and interoperability goals through the EGMP 1.0, MITHI and the iGovPhil. These initiatives are being strengthened through the Philippine Digital Transformation Strategy 2022 and the EGMP 2022. However, achieving a digitally enabled, integrated government remains an elusive goal for the Philippines. The enactment of new laws and the development of interoperability programs are notable achievements. However, there is a need to vigorously pursue its implementation. This requires serious political commitment coupled with a clear and good public proposition. This commitment must also be translated into the allocation of resources by the national government while measures must be in place to ensure its goals are achieved.

*b) Nature of e-government in the Philippines*

Since 2000, e-government has been considered as an ingredient in national development. This general view is reflected in the various medium-term development plans adopted by the Philippine government from 1998 to the present. Laws and policies have been enacted to ensure that resources are allocated to achieve this intention. Most notable laws of these are the E-Commerce Act (2000) and the Philippine Digital Strategy (2011), which underscore the role of e-government and ICT in addressing poverty and improve the delivery of government services. Another example of this is the MITHI, which was created to support the five key result areas (KRAs) defined by the government during that period. These KRAs include pronouncement on achieving inclusive growth and good governance.

Moving forward, it should be noted that it is important to once again reiterate the role of ICT in achieving development goals. For this, a review of the SDGs, the Philippine Development Plan as well as the 2030 “Ambisyon Natin” targets is highly suggested. A clear agenda for the whole government integration must be made in order to garner the needed support for interoperability.

*c) A Need to Adopt a Data Governance Framework*

Lastly, the proponents of e-government interoperability must understand the potential of data. For this, a data governance framework must be developed and integrated into the current e-government and interoperability initiatives. This framework can support interoperability initiatives by consciously identifying important datasets (or registries), its uses as well as its potentials for sharing and collaboration. Furthermore, such a framework must recognize its privacy and security implications while further strengthening organizational capacities in developing and maintaining data eco-systems. Finally, a data governance framework can also result in the continuous examination of data management and other related practices that can lead to the formulation of relevant policies and laws.

## **References**

Abadilla, D. (Feb. 2019). At 10 hrs, 2 mins a day, Filipinos spend most time online. Inquirer.net. Sourced from <https://business.inquirer.net/264438/at-10-hrs-2-mins-a-day-filipinos-spend-most-time-online#ixzz5zSTtSzbu>

APCICT (2019). Module on Realizing Data-Driven Governance. Academy of ICT Essentials for Government Leaders. Republic of Korea.

Ching, M. and Ona, S. (2014). Exploring the possible open data opportunities in maternal health and childcare in the Philippines. International Journal of Innovation, Management and Technology. Vol 5, No. 6

COA (2014). Assessment of disaster risk reduction management at the local level. Commission on Audit, Republic of the Philippines. Retrieved from [https://www.coa.gov.ph/disaster\\_audit/doc/Local.pdf](https://www.coa.gov.ph/disaster_audit/doc/Local.pdf) Sept. 10, 2019.

DICT & DOST (2017). 2017 iGov Philippines Annual Report. Department of Information and Communications Technology and Department of Science and Technology-ASTI.

DOH-DOST (2014). Philippine eHealth Strategic Framework and Plan. Department of Health and Department of Science and Technology. Manila. Sourced from <http://ehealth.doh.gov.ph/#openModal11>.



DOST-ICTO (2013). E-Government Master Plan (2013-2016). Taguig City. Information and Communications Office, Department of Science and Technology.

E-Government Master Plan 2022 (EGMP-2022). Department of Information and Communications Technology, Republic of the Philippines. 2019.

El Benany, M. and El Beqqali, O. (2018). Choreography for Interoperability in E-Government Applications. IEEE. Retrieved on Aug. 15, 2019.

GCI (2017). Global cybersecurity index. International telecommunications union. United Nations. Retrieved from <https://www.itu.int/en/ITU-D/Cybersecurity/Pages/global-cybersecurity-index.aspx> on September 01, 2019.

Gottschalk, P. (2009). Maturity levels of interoperability in digital government. Government Information Quarterly 26 (2009) pages 75-81.

Jimenez, C., Solanas, A. and Falcone, F. (2014). E-government interoperability: Linking open and smart government.

IEEE/0018/14.

Huntington, D., Banzon, E. and Recidoro, Z. (2012). A systems approach to improving health in the Philippines. Bulletin of the WHO 2012:90 pages 104-110.

Lallana, E. (2008). E-Government Interoperability. UNDP. Retrieved from <http://unpan1.un.org/intradoc/groups/public/documents/UN-OTHER/UNPAN032094.pdf> on Aug. 5, 2019.

Lallana, E., Lavilles, R. and Ona, S. (2019). Examining information management practices in disaster preparedness in the Philippines. DLSU Research Congress 2019. Manila, Philippines.

Lisboa, A. and Soares, D. (2014). E-government Interoperability Frameworks: A Worldwide Inventory. Procedia technology. Vol16,pages 638-648. Retrieved from <https://www.sciencedirect.com/science/article/pii/S2212017314002394?via%3Dihub> on Aug. 2, 2019.

Moya, R. (2013). A presentation on the Medium-term ICT Harmonization Initiative. Department of Budget and Management. Retrieved from

<https://www.dbm.gov.ph/wp-content/uploads/MITHI/July2013/The%20MITHI%20Journey%20by%20Usec.%20Moya.pdf> on Spet. 03, 2019.

NEDA (2017). Philippine Development Plan (2017-2022). Abridged version. National Economic Development Authority. Pasig City, Metro Manila, Philippines. Retrieved from [http://www.neda.gov.ph/wp-content/uploads/2018/01/Abridged-PDP-2017-2022\\_Updated-as-of-01052018.pdf](http://www.neda.gov.ph/wp-content/uploads/2018/01/Abridged-PDP-2017-2022_Updated-as-of-01052018.pdf) on Sept. 01, 2019.

Ona, S., Hecita, I. and Ulit, E. (2013). Exploring the role of open government data and new technologies: The case of the Philippines. ODDC. World Wide Web Foundation.

Ona, S. E., Ulit, E., & Hanna, N. K. (2012). The Philippines: The Quest for Genuine e-Development. Retrieved 9 2, 2019, from [https://link.springer.com/chapter/10.1007/978-1-4614-2086-6\\_5](https://link.springer.com/chapter/10.1007/978-1-4614-2086-6_5)

Open Data Barometer (2018). Open Data Barometer Leaders Edition: From Promise to Progress. World Wide Web Foundation. Retrieved from [http://webfoundation.org/docs/2018/09/ODB\\_Leaders\\_English\\_Screen.pdf](http://webfoundation.org/docs/2018/09/ODB_Leaders_English_Screen.pdf) on Sept. 01, 2019.

Ordiyasa, W., Nugroho, L., Santosa, I., Ferdinana, R. and Kumorotnomo, W. (2015). Review: Interoperability Model of e-Government Services. IEEE. Retrieved on Aug. 15, 2019.

Paul, A. and Paul, V. (2012). The e-Government interoperability through Enterprise Architecture in Indian perspective. World Congress on ICTs. 978-1-4673-4804-1 c.2012 IEEE.

PeGIF (Undated). Philippine e-Government Interoperability Framework. Sourced from <http://i.gov.ph/pegif/>

Republic Act (RA) 10844. Department of Information and Communications Technology Act of 2015. Retrieved from <https://dict.gov.ph/about-us/republic-act-no-10844/> on September 02, 2019.

Republic Act (RA) 11032. An Aact promoting ease of doing business and efficient delivery of government services, amending for the purpose republic act no. 9485, otherwise known as the Anti-red tape Act of 2007, and for other purposes. Retrieved from <https://www.officialgazette.gov.ph/2018/05/28/republic-act-no-11032/> on Sept 2, 2019.

Republic Act (RA) 11055. An Act Establish the Philippine Identification System. Retrieved from <https://www.officialgazette.gov.ph/downloads/2018/08aug/20180806-RA-11055-RRD.pdf> on September 02, 2019.

Scholl, H. and Klischewski, R. (2007). E-government integration and interoperability: Framing a research agenda.

International Journal of Public Administration 30. Pages 889-920. Routledge.

SEPO (2017). Examining the Philippines' disaster risk reduction management. Senate Economic Planning Office. PB- 17-01. Retrieved from [https://www.senate.gov.ph/publications/SEPO/PB\\_Examining%20PH%20DRRM%20System\\_Revised\\_27June2017.pdf](https://www.senate.gov.ph/publications/SEPO/PB_Examining%20PH%20DRRM%20System_Revised_27June2017.pdf) on Sept. 10, 2019.

Philippine Digital Transformation Strategy-2022. (PDTs-2022). Department of Information and Communications Technology, Republic of the Philippines. Diliman, Quezon City. 2018. Retrieved from [https://www.gov.ph/documents/820828/1076083/Philippine+Digital+Transformation+Strategy\\_20190208.pdf/74f4f221-2915-8136-a4c0-e6829c47dce9?t=1549932892309](https://www.gov.ph/documents/820828/1076083/Philippine+Digital+Transformation+Strategy_20190208.pdf/74f4f221-2915-8136-a4c0-e6829c47dce9?t=1549932892309) on Aug 30, 2019.

United Nations (2018). UN E-government survey: Gearing e-government to support transformation towards resilient and sustainable societies. UN New York 2018. Retrieved from [https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018\\_FINAL%20for%20web.pdf](https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018_FINAL%20for%20web.pdf) on Sept 01, 2019.

UNICEF (2017). Situation analysis of Children in the Philippines. Retrieved from <https://www.unicef.org/philippines/reports/situation-analysis-children-philippines> on September 05, 2019.

**Disclaimers:**

The case study was prepared by Sherwin E. Ona of La Salle Institute of Governance, De La Salle University, the Philippines with insights and guidance from Dr. Emmanuel C. Lallana. Mr. Dave Ballicud and Ms. Georgina Bianca Marbella provided assistance in the completion of this case study. This case study is presented as a complementary resource material of the Academy training module on Realizing Data-Driven Governance. The views expressed herein are those of the author, and do not necessarily reflect the views of the United Nations. The case study has been issued without formal editing, and the designations employed and material presented do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. The opinions, figures and estimates set forth in this publication are responsibility of the author. Any errors are the responsibility of the author. Mention of firm names and commercial products does not imply the endorsement of the United Nations. The United Nations bears no responsibility for the availability or functioning of URLs. Correspondence concerning this report should be addressed to the email: [apcict@un.org](mailto:apcict@un.org)