



Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY

DEPARTMENT OF INFORMATION AND
COMMUNICATIONS TECHNOLOGY

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[Signature]

INFORMATION SYSTEMS STRATEGIC PLAN for the Period 2018- 2020

DEPARTMENT OF HEALTH

Name of Department/Agency

Scope: Agency-Wide

With Central Offices, Regional Offices, Sixty Six DOH Hospitals and Medical Centers, Treatment and Rehabilitation Centers & the Philippine Institute of Traditional and Alternative Health Care

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EXECUTIVE SUMMARY

This three-year Department of Health's (DOH) Information Systems Strategic Plan (ISSP) for 2018-2020 is an updated version of the DOH ISSP, 2015-2017. It indicates the continues development for some systems while maintaining and deploying others to cover remaining health facilities, and developing new priority and critical information systems and ICT applications in support to the Philippine Health Agenda (PHA) of 2016-2022. This plan supports the goals of ensuring better health outcomes for all, promoting health and delivering health care through means that respect, value and empower clients and patients as they interact with the health system, and protect all families most especially the poor, marginalized and vulnerable against the high costs of health care.

The use of information and communication technology (ICT) in health or eHealth in this planning period will continue to address two challenges in the health sector, namely, equitable access to health care services most especially those in in geographically isolated and disadvantaged areas (GIDA), and access to quality real-time information for informed decision-making. It will cover priority areas in health information systems, electronic medical record in various health facilities, and use telemedicine. The focus is on supporting one of the guarantees indicated in the PHA which is 'access to health intervention through functional Service Delivery Networks which emphasize the utilization of telemedicine to expand specialty services. Moreover, in the PHA strategy, ACHIEVE, "I" is to 'Invest in eHealth and data for decision making.' It specifically mandates the use of electronic medical records(EMR) in all health facilities; require the electronic submission of clinical, drug dispensing and administrative and financial records; streamlining of information systems and administrative data collection systems and supporting collection of vital statistics; and automating major and mission critical processes and putting up a data warehouse and using business intelligence software. Thus, the emphasis of this plan is in these endeavors, and will continue what has been formally started the past years, which are aligned in the PHA.

The undertakings of DOH Monitoring and Evaluation and Data Governance Group, and Inter-agency Governance Structure of the National eHealth Program and current data harmonization activities with the Philippine Health Insurance Corporation (Philhealth) bring about implementation of similar or comparable systems that address the commitments to the PHA and more specifically the implementation of systems interoperability of various eHealth applications and health information systems, and addresses the data needs of the DOH, Philhealth and other stakeholders. The emphasis is the implementation of and electronic medical records in all primary care facilities and government hospitals which one of the promised DOH 12 legacies and DOH30 for Municipal/City Health Officers. A Philippine health information exchange (PHIE) which is system and infrastructure for secured patient data exchange among providers, for insurers and for production of service statistics will also be further established.

Thus, expanding coverage of the EMR and health information system for primary care facilities in particular iClinicSys, and for hospitals, IHOMIS or IHIS is given importance. The EMRs at the point of care feed to the PHIE with an initial use case of Primary Care Benefit of PhilHealth but other use cases soon. Additional Philhealth benefit packages will be incorporated and the disease registries that are currently vertically implemented if not included in the iClinicSys or IHOMIS. The integration of telehealth device(s) to iClinicSys or IHOMIS shall also be prioritized. The other direct health service delivery systems are e the expanded implementation of the blood banking systems in blood centers, and treatment and rehabilitation centers' health record. For regulatory services, these will include integration of existing modules or systems and development of an expanded system on health facilities and services licensing, revision of drug testing operations and management information system, expansion of the drug price monitoring and quarantine services and international health regulation. The health emergency management service system will be enhanced and deployed further to regional offices and hospitals. There will be also expansion and scaling up of implementation of the disease surveillance systems, and applications on environmental health services, organ donation, HHR and telemedicine. Support to operations systems implementation will be continued in the areas of financial, procurement, logistics and personnel management and international health coordination activities and information management. Key works are strengthening data capture, processing/ aggregation and sharing to improve completeness, accuracy and timeliness of data and data utilization. The definition and implementation adoption of national health data standards to help establish interoperable systems, and ensuring data protection and security will be emphasized. A health enterprise data warehouse will be completely established. Use of social media and providing better access and interaction of the public with DOH anywhere and anytime given proper measures to protect personal data are planned.

Equally important to be able to implement the above systems is a better ICT infrastructure in health facilities and connectivity, and related information and communication technologies and human resource ehealth maturity . Some of these will be coordinated with the relevant agencies or the private sector which can do them better.

These systems will be guided by the priorities of the PHA, the enterprise architecture and ehealth framework.

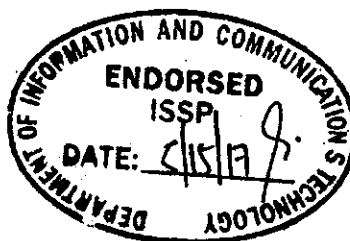




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PART I. ORGANIZATIONAL PROFILE

A. DEPARTMENT OF HEALTH'S MISSION STATEMENT

A.1 MANDATE

- **Legal Basis**

The Department of Health (DOH) holds the over-all technical authority on health as the national health policy-maker and the health regulatory institution.

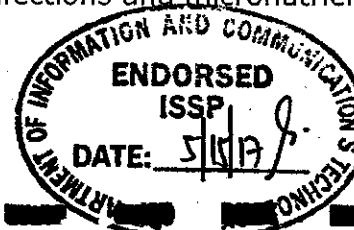
Basically, the DOH has three major roles in the health sector:

1. Leadership in health;
2. Enabler and capacity builder; and
3. Administrator of specific services.

Its mandate is to develop national plans, technical standards, and guidelines on health. It is also a regulator of all health services and products. It is also the provider of special tertiary health care services and technical assistance to health providers and stakeholders.

Based on Executive Order 102, issued by the Office of the President in May 24, 1999, which redirected its functions and operations in accordance to devolution of health services to the local government units, the DOH is responsible for and serve as the:

1. Lead agency in articulating national objectives for health, to guide the development of local health systems, programs and services;
2. Direct service provider for specific programs that affect large segments of the population, tuberculosis, malaria, schistosomiasis, HIV-AIDS and other emerging infections and micronutrient deficiencies;

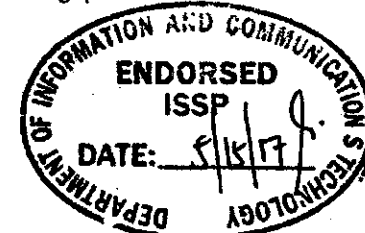




3. Lead agency in health emergency response services, including referral and networking systems for trauma, injuries and catastrophic events;
4. Technical authority in disease control and prevention;
5. Lead agency in ensuring equity, access and quality of health care services through policy formulation, standards development and regulations;
6. Technical oversight agency in charge of monitoring and evaluating the implementation of health programs, projects research, training and services;
7. Administrator of selected health facilities at sub-national levels that act as referral centers for local health systems i.e., tertiary and special hospitals, reference laboratories, training centers, centers for health promotion, center for disease control, and prevention, regulatory offices among others;
8. Innovator of new strategies for responding to emerging needs;
9. Advocate for health promotion and healthy life styles for the general population;
10. Capacity-builder of LGUs, the private sector, non- governmental organizations, peoples organizations, national government agencies in implementing health programs, services, through technical collaborations, logistical support, provision of grants and allocation and other partnership mechanism;
11. Lead agency health and medical research;
12. Facilitator of the development of health industrial complex in partnership with the private sector to ensure self-sufficiency in the production of biologicals, vaccines and drugs and medicines;
13. Lead agency in health emergency preparedness and response;
14. Protector of standards of excellence in the training and education of health care providers at all levels of the health care system;
15. Implementer of the National Health Insurance Law; providing administrative and technical leadership in health care financing; and
16. Expressing national objectives for health to lead the progress of local health systems, programs and services.

• Functions

To accomplish its mandates and roles, the Department has the following powers and functions:

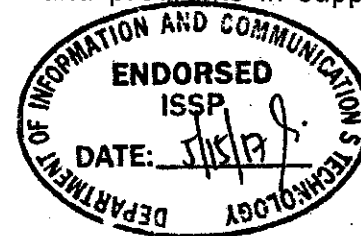




1. Formulate national policies and standards for health;
2. Prevent and control leading causes of death and disability;
3. Develop disease surveillance and health information systems;
4. Maintain national health facilities and hospitals with modern and advanced capabilities to support local services;
5. Promote health and well-being through public information and to provide the public with timely and relevant on health risks and hazards;
6. Develop and implement strategies to achieve appropriate expenditure patterns in health as recommended by international agencies;
7. Develop sub-national centers and facilities for health promotion, disease control and prevention, standards, regulations and technical assistance;
8. Promote and maintain international linkages for technical collaboration;
9. Create the environment for the development of a health industrial complex;
10. Assume leadership in health in times of emergencies, calamities, and disasters and system failures;
11. Ensure quality of training and health human resource development at all levels of the health care system;
12. Oversee financing of the health sector and ensure equity and accessibility to health services; and
13. Articulate the national health research agenda and ensure the provision of sufficient resources and logistics to attain excellence in evidenced-based intervention for health.

Performing these functions are the various central office bureaus and services and sixteen (16) field offices called Regional Offices (ROs) including special and specialty hospitals and regional hospitals and medical centers, rehabilitation centers and attached agencies.

Within the devolved set-up, there are Provincial Health Teams composed of a Team Leader and DOH Representatives in each province reporting directly to the Regional Director. They are assigned to represent the DOH at the LGUs and in the Local Health Boards in the province, city and municipality. They are agents of the DOH in the localization and cascading of national health policies and programs in support to national health





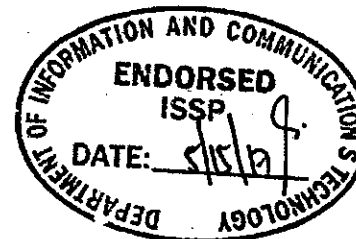
thrusts, programs and standards. On the other hand they act as go-betweens of the LGU and its constituents and the regional and national offices in bringing up concerns that may influence or provide input to national policy, programs and standards development. It is also the PHTs responsibility to connect the LGUs to networks and partners for projects and program implementation. They facilitate the transfer of management competencies to LGUs along program & project management and implementation, systems management, standards development, financial and logistics management, etc. They also provide technical assistance on health planning, health program development & implementation, health facilities improvement among others. They monitor and evaluate the implementation of health services, programs and projects and provides feedbacks on LGUs performance and concerns. They make sure inter-agency and inter-sectoral collaboration and networking towards strengthening local health systems.

A.2 VISION STATEMENT (by 2030)

A global leader for attaining better health outcomes, competitive and responsive health care system, and equitable health financing.

A.3 MISSION STATEMENT

To guarantee equitable, sustainable and quality health for all Filipinos, especially the poor, and to lead the quest for excellence in health.

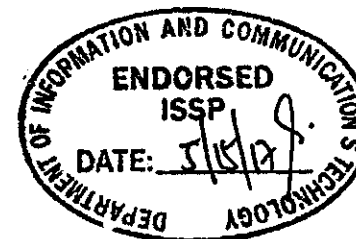




A.4 MAJOR FINAL OUTPUTS

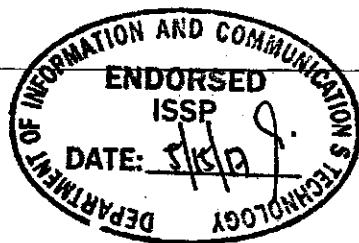
The DOH has four (4) major final outputs as indicated below with a description of coverage/application and the means of targeting and reporting:

MFO PERFORMANCE INDICATORS	DESCRIPTION OF TARGETING AND REPORTING
MFO 1: HEALTH SECTOR POLICY SERVICES	<i>For all DOH units/offices developing policies/standards involving LGUs and other partners. All programs/activities/projects that lead to the issuance of policies that covers the LGUs and other DOH partners are subsumed under this MFO and its performance targets.</i>
Number of policies issued and disseminated	Number of policies (AO, DO, DM containing guidelines, MOPs, SOPs, etc) that can influence the health sector including LGUs and other health partners which are issued and posted at the DOH website within the quarter. Amendments within the same year and sub-allotments are not considered in the counting.
Average % of stakeholders that rate health policies as good or better	Percentage of stakeholders who are satisfied with health policies and rated good or better in the customer satisfaction survey.
% of policies in the last 3 years reviewed and updated	The numerator is the total number of relevant policies reviewed and updated during the quarter. The denominator is the total number of relevant policies issued in the past 3 years.





MFO PERFORMANCE INDICATORS	DESCRIPTION OF TARGETING AND REPORTING
MFO 2: TECHNICAL SUPPORT SERVICES	<i>For all DOH units/offices providing technical assistance/ funding support/commodities/ HRH/services/ trainings to LGUs and other partners.</i>
PI 1: Training Support	
Number of Human Resources for Health from LGUs and other partners trained	Number of LGU and health partner personnel who have undergone training/capacity buildings such as workshops, conferences, fellowship, and trainings locally and abroad funded by the DOH for the quarter using the current appropriation. Staff from the central office, regional offices and DOH hospitals shall not be included in the reporting.
Number of training days delivered	Number of days upon which training and other capacity building activities are conducted for the quarter using the current appropriation.
Average % of course participants that rate training as good or better	Percentage of participants who are satisfied with the trainings and other capacity building activities conducted by the DOH, and who rated these trainings and/or activities as good or better in the customer satisfaction survey. Numerator: Total number of participants that rated a trainings/capacity-building activity as good or better for the quarter Denominator: Total number of participants who answered the CSS for the same quarter
% of requests for training support that are acted upon within one week of request	Percentage of training support requests acted upon within one week of request as evidenced by response thru a letter or any form of communication. Verbal requests and response or those that are not supported by adequate evidence shall not be included in the counting Numerator: Total number of training support requests responded within one week for the quarter Denominator: Total number of trainings support requests received during the same quarter
PI 2: Funding Support (Health Facilities Enhancement Program or HFEP)	
Number of LGUs and other health partners provided with health facilities	Number of LGUs (provinces, municipalities, cities, or chartered cities) and other health partners (NGOs, private societies, or development partners) provided with health facility infrastructure and/or equipment for the quarter using the current appropriation. Do not include in the count LGUs with DOH facilities provided with infrastructure or equipment support. *LGUs provided with more than one health facility/ equipment shall only be counted as one; only



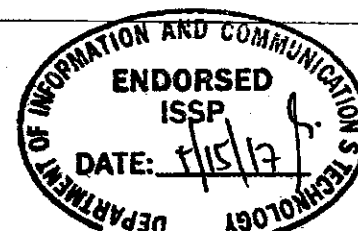


MFO PERFORMANCE INDICATORS	DESCRIPTION OF TARGETING AND REPORTING
	one count per LGU provided with support
% of clients that rate the provided health facilities as good or better	<p>Percentage of clients who are satisfied with the health facility infrastructure and/or equipment provided and who rated the infrastructure and/or equipment as good or better in the customersatisfaction survey for the quarter.</p> <p>Numerator: Total number of clients that rated the health facilityprovided as good or betterfor the quarter Denominator: Total number of clients who answered the CSS for thesame quarter</p>
% of provided health facilities that are fully operational 3 years after acceptance/installation	<p>Percentage of HFEP-funded LGU and other health partners healthfacilities that are still fully operational three years after installationor acceptance of the facility or equipment for the quarter.</p> <p>Numerator: Total number of HFEP-funded facilities that are stillfully operation after 3 years ofacceptance or installation ofequipment or infrastructure for the quarter Denominator: Total number of HFEP funded facilities for LGUs andother health partners that has beenfully constructed/ accepted/ installed 3 year before.</p>
% of facilities for which funding is provided that are fully operational within 6 months from approval of request from the LGU	<p>Percentage of HFEP-funded health facilities which are owned/ managed by LGUs and other health partners, and are fully operational within 6 months from approval of request from the LGU.Count of accomplishment for this indicator shall only include healthfacilities accepted/installed not more than 6 months ago, and are operational within the quarter.</p> <p>Numerator: Total number of HFEP-fundedfacilities that arefullyoperational within 6 months after approval of requestfrom LGUsduring the quarter Denominator: Total number of HFEP-fundedfacilities that has beenfully constructed/ accepted/ installed during the year</p>



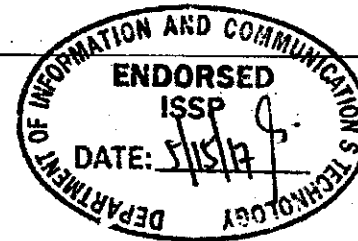


MFO PERFORMANCE INDICATORS	DESCRIPTION OF TARGETING AND REPORTING
PI 2: Disease Prevention	
Number of commodities and services provided to LGUs: Vaccination, Doctors Hours, Nurses Hours and Midwives Hours	Number of commodities and services provided to LGUs (provinces/municipalities/chartered cities) and other DOH partners (such as NGOs, private societies/development partners) using the current appropriation for the quarter. Services provided by HRH should be reflected in terms of man hours, and should not reflect the number of HRH provided to LGUs. Commodities and services provided to DOH facilities shall not be included. Units of commodities used during the target setting (e.g. vials, boxes or combination of different units) should be consistent during the accomplishment reporting.
% of stakeholders who rate the commodity supply service as good or better	Percentage of stakeholders who are satisfied with the commodity supply provided and who rated the commodities as good or better in the customer satisfaction survey for the quarter. Numerator: Total number of stakeholders that rated the commodity supply service as good or better for the quarter Denominator: Total number of stakeholders who answered the CSS for the same quarter
% of requests for commodities and human resource services met in full within 48 hours	Percentage of LGU commodities and human resource services requests met in full within 48 hours. Met in full means responded to in letter or other forms and/or provided with/or rejected within the time frame prescribed. Verbal requests and response shall not be included in the counting. Numerator: Total number of LGU commodities and human resource services requests met in full within 48 hours during the quarter Denominator: Total number of requests from LGUs and other partners for the same quarter
MFO 3: HOSPITAL SERVICES	<i>All activities of the hospitals/ sanitaria and drug abuse treatment and rehabilitation centers are subsumed under this MFO/ performance targets. Facilities should fill-up only the data for applicable indicators.</i>
Number of out-patients managed	Count all out-patients during the quarter
Number of in-patients managed	Count all in-patients admitted per quarter
Number of elective surgeries	Count all elective surgeries per quarter
Number of emergency surgeries	Count all emergency surgeries per quarter



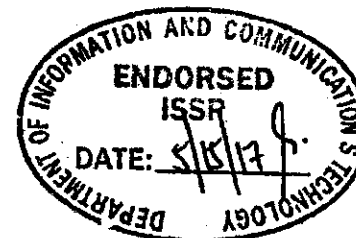


MFO PERFORMANCE INDICATORS	DESCRIPTION OF TARGETING AND REPORTING
Net death rate among in-patients	Determine the net death rate per quarter
% of clients that rate the hospital services as good or better	The numerator is the total number of patients that rated the hospital services satisfactory or better annually/ for the quarter. The denominator is the total number of raters annually / for the quarter.
% of in-patients with hospital-acquired infection	The numerator is the total number of patients who had hospital acquired infections per quarter. The denominator is the total number of in-patients for the quarter.
% of patients with level 2 or more urgency rating attended to within 30 minutes	The numerator is the total number of patient raters with level 2 or more urgency rating attended within 30 minutes during the quarter / annually in the emergency room. The denominator is the total number of patient raters for the quarter / annually in the emergency room.
MFO 4: HEALTH SECTOR REGULATION SERVICES	For all regulatory unit/offices of the DOH and all offices with some regulatory functions.
PI 1: Licensing/Regulation/ Accreditation	
Number of permits, licenses and accreditations issued for health products/establishments/facilities/ devices and technologies	Number of permits, licenses, and accreditations issued for healthproducts/ establishments/ facilities/ devices and technologies/personnel during the quarter
% of authorized/accredited entities with detected violations of license or accreditation conditions	Percentage of authorized/ accredited entities with detected violations of license or accreditation conditions during the quarter Numerator: Total number of authorized/ accredited entities with detected violations of license or accreditation conditions for the quarter Denominator: Total number of authorized/ accredited entities during the same quarter
% of applications for permits, licenses or accreditation acted upon within 3 weeks of application	Percentage of applications for permits, licenses or accreditation acted upon within 3 weeks of application during the quarter Numerator: Total number of applications for permits, licenses or accreditation acted upon within 3 weeks of application for the quarter Denominator: Total number of applications for permits, licenses or accreditation received during the same quarter





MFO PERFORMANCE INDICATORS	DESCRIPTION OF TARGETING AND REPORTING
PI 2: Monitoring	
Number of inspections of regulated products and entities	Number of inspections conducted on regulated products and entities during the quarter
% of submitted reports that resulted in the issuance of notice of violations and penalties imposed	Percentage of reports submitted that resulted in the issuance of notice of violations and penalties imposed during the quarter Numerator: Total number of reports from monitoring activities that resulted in the issuance of notice of violations and penalties imposed for the quarter Denominator: Total number of reports from monitoring activities conducted during the same quarter
% of entities which have been monitored at least once a year	Percentage of entities which have been monitored during the quarter Numerator: Total number of entities monitored for the quarter Denominator: Total number of entities with valid and non-valid/unlicensed/not accredited/ no permit during the quarter
PI 3: Enforcement	
Number of reported violations and complaints acted upon	Number of violations and complaints reported to concerned unit/office/ bureau which were acted upon during the quarter
% of cases resolved	Percentage of cases (violations and complaints) resolved during the quarter Numerator: Total number of violations and complaints resolved during the quarter Denominator: Total number of violations and complaints noted/received during the same quarter
% of stakeholders who view DOH enforcement as satisfactory or better	Percentage of stakeholders who are satisfied with the DOH enforcement and rated it as satisfactory or better in the customer satisfaction survey for the quarter. Numerator: Total number of stakeholders that rated the DOH enforcement as satisfactory or better for the quarter Denominator: Total number of stakeholders who answered the CSS for the same quarter
Number of cases acted upon within 30 days	Number of unique cases acted upon within 30 days during the Quarter





B. DEPARTMENT/AGENCY PROFILE

B.1 DESIGNATED IS PLANNER

Name of Designated IS Planner : **CRISPINITA A. VALDEZ**

Plantilla Position : Director IV, Knowledge Management & Information Technology Service

E-mail Address/Telephone : cavalez@doh.gov.ph; cavalez2005@yahoo.com; 651-7800 local 1926-1928

This plan has been prepared in consultation with the various DOH units and based from various DOH technical and management documents such as the Philippine eHealth Strategic Framework and Plan, 2014-2020, DOH Enterprise Architecture, National Objectives for Health, Philippine Health Agenda, 2016-2020, and various technical documents with eHealth components produced by the eHealth Expert Groups & the Technical Working Group. Formulation and finalization were done with Systems and Software Engineering Division, Information Technology Infrastructure and Security Division and the Knowledge Management Division of the Knowledge Management and Information Technology Service.



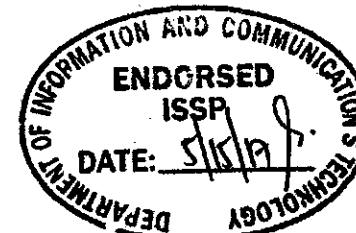
**B.2 CURRENT ANNUAL ICT BUDGET (2016)****DOH Budget**

Expense Type	GAA 2016	GAA 2017
Personal Services	21,012,441,000	29,645,801,000
Maintenance & Other Operating Expenses (MOOE)	74,077,638,000	38,140,153,000
Capital Outlay	27,540,074,000	25,180,830,000
TOTAL	122,630,153,000	92,966,784,0000

DOH CURRENT ANNUAL ICT Budget (2016-2017)***LINE ITEM: Health Information System and Technology Development**

	2016	2017
Personnel Service	14,825,000	19,127,000
MOOE	119,221,000	154,771,000
Capital Outlay	164,000,000	584,664,000
TOTAL	298,046,000	758,562,000

* Knowledge Management & Information Technology Service budget in the GAA. The 2016 ICT capital outlay budget was included in the General Management & Supervision under the Office of the Secretary but already transferred to the above line item in 2017 budget. Does not include personnel services budget for IT staff for hospitals and regional offices and realignment for ICT from hospital income, if available. Some of the project components in most cases systems analysis and experts assistance are funded by development partners (DAS) such as the World Health Organization for some disease registries, European Union for logistics management system and enterprise architecture, Global Fund for TB IS and Bloomberg for Smart VA. There are no capital outlay from DAS.





B.3 ORGANIZATIONAL STRUCTURE

▪ Total Number of Employees for offices covered in this ISSP

- Regular Central Office : 986
- Hospitals : 47,658
- Regional Office : 2,386
- TRC : 284
- PITACH : 146
- Contractual : 800 (central office only, variable in regions/hospitals)
- Contractor : 0

TOTAL : 52,260

- No. of Central Offices/Centers/Bureaus/Services : 24
- No. of Regional Offices : 17 (to include NIR)
- No. of Other Offices : 91
 - Medical Centers & Hospitals : 72
 - Dangerous and Drug Abuse Treatment & Rehabilitation Centers : 14
 - Attached Agencies : 5
- TOTAL : 132**





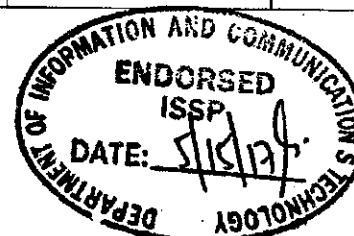
Table B-1 List of Organizational Units included in this ISSP

Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
Office of the Secretary (+ 6 Undersecretaries and 6 Assistant Secretaries & Public Assistance Unit)	DR. PAULYN JEAN ROSELL-UBIAL Secretary	}				63	
- Office for Administration, Finance, & Procurement	MR. ACHILLES GERARD C. BRAVO Undersecretary (Usec) MS. CAROLINA V. TAINO Assistant Secretary (ASec)	}					*
- Office for Technical Services	DR. GERARDO V. BAYUGO Usec DR. MA. FRANCIA M. LAXAMANA ASec	}			651-7800 loc. 1926, 1928		
- Office for Policy and Health Systems	DR. LILIBETH C. DAVID Usec						*
- Office for Health Regulations	DR. MARIO C. VILLAVERDE Usec MS. AGNETTE P. PERALTA- ASec	}					*
- Office for Health Service Delivery	DR. ROGER P. TONG-AN Usec DR. ELMER G. PUNZALAN ASec	}					





Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
- Office for Field Implementation Management	DR. HERMINIGILDO V. VALLE USec DR. NESTOR F. SANTIAGO ASec DR. ABDULLAH B. DUMAMA, JR. Asec (Mindanao) DR. LEONITA P. GORGOLON OIC Asec (Visayas) Dr. MYRNA C. CABOTAJE OIC Asec (Luzon)	CRISPINITA A. VALDEZ, over-all IS Planner & central office main IS Planner	Director IV, KMITS	cavaldez@doh.gov.ph; cavalez2005@yahoo.com			
CENTRAL OFFICE Bureaus, Centers, Services,							
1. Administrative Service	MS. ANGELINA A. DEL MUNDO, Director IV					28	
2. Bureau of International Health Cooperation	MS. MAYLENE M. BELTRAN Director IV					28	
3. Bureau of Local Health Systems Development	DR. ENRIQUE A. TAYAG Director IV					23	6
4. Bureau of Quarantine	DR. FERDINAND S. SALCEDO Director IV DR. FERCHITO AVELINO Director III					298	
5. Disease Prevention and Control Bureau	DR. MARIO S. BAQUILOD Director III/OIC- Director IV DR. LYNDON LEE SUY Director III DR. JOYCE U. DUCUSIN OIC-Director III					78	
- Philippine National AIDS Council Secretariat	DR. FERCHITO AVELINO Director III						
6. Epidemiology Bureau	DR. IRMA ASUNCION Director IV					30	
7. Finance and Management Service	MR. LAUREANO C. CRUZ Director IV					38	
8. Health Emergency Management Bureau	DR. GLORIA J. BALBOA Director IV					41	





DOH Information Systems Strategic Plan, 2018 - 2020

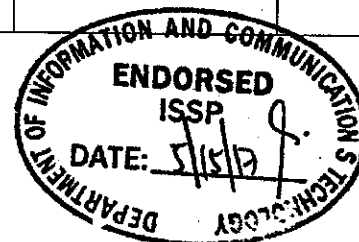
Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
9. Health Facility Development Bureau	DR. CRISELDA ABESAMIS Director IV ARCH. MA. REBECCA PENAFIEL Director III					53	
10. Health Facilities and Services Regulatory Bureau	ATTY. NICOLAS B. LUTERO III Director IV DR. MA. ROSARIO CLARISSA S. VERGEIRE					77	
11. Health Human Resource Development Bureau	DR. ELVIRA SN DAYRIT Director IV					44	
12. Health Policy Development & Planning Bureau	DR. KENNETH G. RONQUILLO Director IV					49	
13. Health Promotion & Communication Service	DR. MARWYN BELLO OIC-Director IV					28	
14. Internal Audit Service	MR. JESS CALZADO OIC Director IV					17	
15. Knowledge Management and Information Technology Service	MS. CRISPINITA A. VALDEZ Director IV					43	298,046,000
16. Legal Service	ATTY. ROMELA DE VERA Director IV					18	
17. National Voluntary Blood Services Program & Operation of Blood Centers	DR. CRISELDA ABESAMIS Director IV					27	
18. Procurement Service	DR. MA. THERESA G. VERA Director IV					30	
19. Drug Abuse Treatment & Rehabilitation Centers (TRC)	Chief of Hospital III/II						





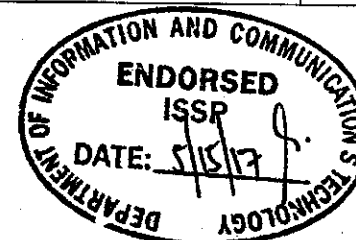
DOH Information Systems Strategic Plan, 2018 - 2020

Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
a. Tagaytay City Rehabilitation Center	DR. RONNIE DEL MUNDO	DR. RONNIE DEL MUNDO	Chief of Hospital				
b. Mandaue City Rehabilitation Center & TRC Argao, Cebu	DR. DAVID BARON	DR. DAVID BARON	Technical Administrator				
c. Cebu City Rehabilitation Center	DR. JUAN ZALDARRIAGA	DR. JUAN ZALDARRIAGA	Director				
d. Cagayan de Oro City Rehabilitation Center	DR. BENSON GO	DR. BENSON GO	Chief, Cagayan De Oro TRC	bensoncgomd@yahoo.com			
e. Iloilo (PNP) Rehabilitation Center	DR. MA. LOURDES HEMBRA	DR. LOURDES HEMBRA	Center Director	mayokmd@yahoo.com			
f. San Fernando, Camarines Sur (PNP Rehabilitation Center)	DR. LOURDES ANSON	DR. LOURDES ANSON	Chief				
g. Malinao Regional Drug Rehabilitation Center, Albay	DR. TERESA INIGO	DR. TERESA INIGO	OIC Chief	dra_mtci@yahoo.com			
h. Bicutan (PNP) Rehabilitation Center	DR. MARVIN DIOKNO	DR. MARVIN DIOKNO					
i. Dulag, Leyte Rehabilitation Center	DR. TERESITA CAJANO	DR. TERESITA CAJANO					
j. TRC CARAGA	DR. MA. FLORDELIZ LLELIZ	DR. MA. FLORDELIZ LLELIZ					
k. TRC, Pilar Bataan	DR. ELIZABETH SERRANO	DR. ELIZABETH SERRANO					
l. TRC Dagupan City	DR. DELFIN GUBATAN, JR	DR. DELFIN GUBATAN					
m. TRC Fort Magsaysay	DR. MANUEI QUIRINO					[908]	
Attached Agency							
20. Philippine Institute of Traditional and Alternative Health Care (PITAHC)	DR. ANNABEL DE GUZMAN Director General	DR. ANNABEL DE GUZMAN Director General	Executive Director	pitahc@gmail.com		146	





Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
Regional Offices (RO)	Director IV						
1. RO I (Ilocos Region)	DR. MYRNA C. CABOTAJE	CORAZON R. BILLONES	Administrative Assistant III	carbilliones@yahoo.com	(072) 242-5315	149	1,210,000
2. RO II (Cagayan Valley)	DR. VALERIANO V. LOPEZ	ROLANDO BINARAO	Administrative Assistant III	rolly7459@gmail.com	(078) 846-7271	137	
3. RO III (Central Luzon)	DR. LEONITA P. GORGOLON	THELMA VICTORIA	OIC- Administrative Assistant III	doh_chd3@yahoo.com	(045) 861-3426 Local 110	183	
4. RO IV-A (CALABARZON)	DR. RIO L. MAGPANTAY	DANILO ADVIENTO	Computer Maintenance III	yann694@yahoo.com	9904032 local 166	176	
5. RO IV-B (MIMAROPA)	DR. EDUARDO C. JANAIRIO	RICARDO P. MALUBAG, JR.	Computer Maintenance III	r_malubag@yahoo.com	921-7754	133	867,000
6. RO V (Bicol Region)	DR. NAPOLEON L. AREVALO	CHRISTOPHER ASONZA	Administrative Aide IV	chd_bicol@yahoo.com.ph	(052) 4830934	151	100,000
7. RO VI (Western Visayas)	DR. MARLYN W. CONVOCAR	MA. CLARISSA T. JUANICO	Planning Officer III	ning_357@yahoo.com	(033) 321-1036	172	800,000
8. RO VII (Central Visayas)	DR. JAIME S. BERNADAS	DR. LAKSHMI LEGASPI	Director III	chd7_cebu@yahoo.com	(032) 253-6355	167	
9. NEGROS ISLANDS REGION	DR. EMILIA MONICPIO	ROLLY VILLARIN	Planning Officer III				
10. RO VIII (Eastern Visayas)	DR. MINERVA MOLON	DR. EMILIA MONICPIO	Director IV				
11. RO IX (Zamboanga Peninsula)	DR. ARISTEDES C. TAN	ELMA BERNADETTE LEGO	Administrative Assistant III	doh.region8@yahoo.com	(053)323-7841	159	
12. RO X (Northern Mindanao)	DR. NIMFA B. TORRIZO	JOHN MARY STA. TERESA	Administrative Assistant VI	nhojyram@outlook.com	(062) 983-0932	132	928,000
13. RO XI (Davao Region)	DR. ABDULLAH B. DUMAMA, JR			voltzu@yahoo.com	(088) 858-7132	144	
		JOSE MARIA AGANA	Computer Maintenance Technologist III	aganaj@yahoo.com	(082) 305-1906 local 1110	142	1,280,000





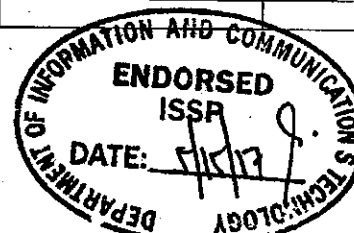
Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
14. RO XII (Central Mindanao)/SOCCSKSAR GEN	DR. FRANCISCO V. MATEO	RENANTE C. NATANO	Planning Officer II	rencn1129@yahoo.com	(064) 421-9586	130	1,131,000
15. RO National Capital Region	DR. ARIEL I. VALENCIA	ZENaida B. REYES AMIN TOMAWIS GIBSON MIJARES	Administrative Officer IV Administrative Assistant IV Computer Programmer III	ynenez_reyes@yahoo.com	535-4583	146	
16. RO Cordillera Administrative Region	DR. LAKSHMI I. LEGASPI	CAROLINE MAMARADLO	Statistician I	jck_mamaradlo@yahoo.com.ph	(074) 442-8098	135	
17. RO CARAGA	DR. JOSE LLACUNA, JR	PAULITO OFIASA	Statistician III	paolof_caraga@yahoo.com	(085) 342-6207	130	
HOSPITALS/MEDICAL CENTERS	Director/Chief/OIC						
Special Hospitals							
1. Jose Reyes Memorial Medical Center, Rizal Avenue, Manila	DR. EMMANUEL MONTANA, JR.	CARLITO CELESTINO	Administrative Aide IV	jrmmc.it@gmail.com josereyesmedical@yahoo.com	711-9491 loc 208732-1629	1,862	
2. Rizal Medical Center, Pasig City	DR. RELITO SAQUILAYAN	MARIVILLA A. OSORIO	Acting Chief Finance Officer / CCIHOMP Head	rizalmedicalcenter@gmail.com relito_saguilayan@yahoo.com	671-9740	1,046	
3. East Avenue Medical Center, East Avenue, Quezon City	DR. MA. VICTORIA ABESAMIS	ROSARIO MARIANO	MIS Head	mariano_rosario@yahoo.com / eamc.info@gmail.com; rolandcortes_md@yahoo.com	928-0611 local 438; 426-4405	1,765	
4. Quirino Memorial Medical Center, Project 4, Quezon City	DR. EVELYN VICTORIA RESIDE	JOMA ROQUE REVILLA	Lead IT Administrator	joma_revilla@yahoo.com;	421-2250 loc 175	1,380	2,000,000
5. Tondo Medical Center, Tondo, Manila	DR. ISABELITA ESTRELLA	DR. CRISTINA ACUESTA	Medical Center Chief II/IHOMP Chair	cristina_acuesta@yahoo.com; mimestrella@yahoo.com; tmcdohgovph@gmail.com	522-1174	747	
6. Dr. Jose Fabella Memorial Hospital, Manila	DR. ESMERALDO ILEM	JOEL LAGMAN	Admin. Officer I	Jclagman117465@yahoo.com; jfmh@doh.gov.ph	310-6611 734-5561	1,681	





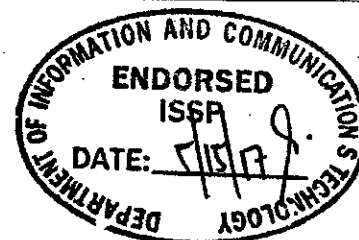
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Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
7. National Children's Hospital, E. Rodriguez Avenue, Quezon City	DR. EPIFANIA SIMBUL	MARLON B. GUMBOC	System Administrator	gumboc72@yahoo.com esimbul@yahoo.com	724-0656	852	1,000,000
8. National Center for Mental Health, Mandaluyong City	DR. BERNARDINO VICENTE	ROMMEL RODRIGUEZ	IHOMP/IT	rodriguez.rommel@gmail.com; bernardinovicente@yahoo.com	531-9001 loc 5005318682	2,522	
9. Philippine Orthopedic Center, Quezon City	DR. JOSE BRITANIO PUJALTE JR.	ROBERTO RODRIGUEZ	Lead IT Administrator	robert_g_rodriguez@yahoo.com; jspujalte@yahoo.com; medicalcenterchief@gmail.com	711-4276	1,488	
10. San Lazaro Hospital, Quiricada, Manila	DR. WINSTON GO	ZIEGFRED CONSTANTINO/ OWEN MILANES	Admin Aide I/ Admin Aide IV	zfred_em8@yahoo.com/owenmilanes@yahoo.com wsgo.doh@gmail.com sanlazarohospital@yahoo.com	708-8819	1,537	
11. Research Institute for Tropical Medicine, Alabang, Muntinlupa City	DR. SOCORRO LUPISAN	DR. SOCORRO LUPISAN	Director IV	ritm@doh.gov.ph socorrolupisan@yahoo.com	807-2628	465	
12. Amang Rodriguez Medical Center, Marikina City	DR. EMMANUEL BUENO	RODOLFO T. SEDANO, CE, SE, MBA	Chief Administrative Officer	rtседано@yahoo.com amangrod@yahoo.com	942-0245 948-1263 941-5854	1,148	
Regional Medical Centers & Hospitals							
National Capital Region							
13. Valenzuela Medical Hospital, Valenzuela City	DR. IMELDA MATEO	BILLY T. LUCENA	Lead IT Administrator	billy_lucena@yahoo.com valgenhosp@yahoo.com; immateomd@gmail.com	297-6711/ 294-5090	497	
14. Las Piñas General Hospital and Satellite Trauma Center, Las Piñas City	DR. EDMUNDO LOPEZ	JENICE R. NARIDO	COS - System Administrator	lpghstc_doh@yahoo.com; lpghstc@gmail.com	873-0556/57	603	
15. San Lorenzo Ruiz Special Hospital for Women, Malabon	DR. MARILOU T. NERY	RYAN HERNANDEZ	Designated System Admin/IT Head	slrwh_malabon@yahoo.com	294-4853	98	
16. Dr. Jose N. Rodriguez Memorial Hospital, Tala, Quezon City	DR. ALFONSOH. VICTORINO FAMARAN	NORMITA B. TOMEN, RN, MPA	STATISTICIAN II, HEAD STATISTICS AND IT	djnmh2003@yahoo.com; alfonsovictorinofamaranir@yahoo.com	962-82-09/ 962-98-84	753	5,065,196
Ilocos Region							





Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
17. Mariano Marcos Memorial Hospital and Medical Center, Batac, Ilocos Norte,	DR. MA. LOURDES K. OTAYZA	DENNIS RUBIO	Administration Assistant II	aeromacci2004@yahoo.com; mmmh_doh@yahoo.com; marl_otayza@yahoo.com	(077) 792-3144	729	
18. Region I Medical Center, Dagupan City	DR. JOSEPH ROLAND O. MEJIA	ANDRE LOS C. MAMARIL	IHOMP Head	region1mc2003@yahoo.com; jrbum@yahoo.com	(075) 523 4103	368	
19. Ilocos Training and Regional Medical Center, San Fernando, La Union	DR. EMMANUEL F. ACLUBA	CLARENCE C. MORALES	Computer Maintenance Technologist III	clarenzm@yahoo.com; itrmc2010@yahoo.com	(072) 607 6418	888	
Cordillera Administrative Region							
20. Baguio General Hospital and Medical Center, Baguio City	DR. RICARDO B. RUNEZ, Jr	MARITESS N. BALORAN	Nurse II – Lead Information Technology Administrator (LITA)	mb0918_1999@yahoo.com; bgh_mc@yahoo.com	074 - 4423809	1,355	
21. Luis Hora Memorial Regional Hospital, Bauko, Mt. Province	DR. GLENN MATTHEW G. BAGGAO	RACHEL A. BENITO	Nurse Aide/SA Designate	ihmrh_doh@yahoo.com	(084) 217-3347, 217-3671	221	
22. Conner District Hospital, Conner, Apayao	DR. NELSON O. RIGOR	DR. NELSON O. RIGOR	Chief of Hospital I	connerdistricthospital@yahoo.com	C/O RHO CORDILLERA - 074- 442- 8096	104	
23. Far North Luzon General Hospital and Training Center, Luna, Apayao	DR. MARLENE P. LABATIGUE-LUBO	MICHEL S. DURAN	Computer Programmer (Jo)/ iHOMIS System Administrator Designate	msduran_sti@yahoo.com; lubomarlene@gmail.com; fnightc@yahoo.com	0919-3343827	248	
Cagayan Valley							
24. Cagayan Valley Medical Center, Tuguegarao City, Cagayan	DR. EDUARDO M. BADUA III	DR. EMMANUEL F. ACLUBA	Chief of Hospital III	cvmr2@yahoo.com	(078) 846-7240, 844-3789, 844-3790	1,022	
25. Veterans General Hospital, Bayombong, Nueva Vizcaya	DR. CIRILO GALINDEZ	ABRAHAM BLANCO, JR.	Admin Aide IV	Vrh211994@gmail.com	(078) 805-3560	687	2,200,000
26. Southern Isabela General Hosp., Santiago City, Isabela	DR. JOSE ILDEFONSO B. COSTALES JR.	DR. JOSE ILDEFONSO B. COSTALES JR.	Chief of Hospital III	sighsantiagoc@yahoo.com; sigh_coh@yahoo.com	(078)305-0459	301	





Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
27. Batanes General Hospital, Basco, Batanes	DR. JEFFREY ANTHONY CANCERAN	CHARLES LUTHIAN BALA	System Administrator designate	charlesluthian@gmail.com bataneshospital@gmail.com	0999-553-3785	170	
Central Luzon							
28. Dr. Paulino J. Garcia Memorial Research & Medical Center, Cabanatuan City	DR. HUBERTO LAPUZ	DR. HUBERTO LAPUZ	Medical Center Chief I	dr_pjgmrmc_cabanatuan@yahoo.com; dr_hubertolapuz@yahoo.com	(044) 463-8888, 463-9937	1,030	
29. Talavera Extension Hospital, Talavera Nueva, Ecija	DR. MARIA ISABEL GALLARDO	DR. ALBERTO DE LEON	Medical Center Chief III	teh_talavera@yahoo.com; misgallardo824@yahoo.com,ph	(045) 411-7960	128	
30. Jose B. Lingad Memorial General Hospital, San Fernando, Pampanga	DR. MONSERRAT S. CHICHIOCO	ROBERTO M. AMANSEC, MD	Medical Specialist III	jeff_paulo21@yahoo.com; chief_jblmgh@yahoo.com	(045) 961-3921, 961-3544	1,025	
31. Mariveles Mental Hospital, Mariveles, Bataan	DR. MA. LOURDES L. EVANGELISTA	VINCENT A. ISIP	Administrative Officer III	mmhdoh_63@yahoo.com	(047) 935-4617; 935-4138	277	
32. Bataan General Hospital, Balanga, Bataan	DR. GLORIA BALTAZAR	DR. GLORIA BALTAZAR	OIC, Chief of Hospital III	bgh_bataan2005@yahoo.com	(047) 237-2269, 237-3635	479	
CALABARZON							
33. Batangas Medical Center, Batangas City	DR. RAMONCITO C. MAGNAYE	MARICEL S. PARCON / VINIA MARIE M. CABRERA	System Administrator	brhihomp@yahoo.com batmedcen@yahoo.com.ph	(043) 702 1371	1,312	
MIMAROPA							
34. Culion Sanitarium and Balala Hospital, Culion, Palawan	DR. ARTURO C. CUNANAN JR.	DR. ARTURO CUNANAN JR.	Chief of Sanitarium II	dohchd4b@piddsl.net	(048) 433-7743, 759-3956 to 12	242	
35. Ospital ng Palawan, Puerto Princesa, Palawan	DR. MELECIO N. DY	ABELARDO GOMEZ	Information Systems Analyst (LITA)	abelbgomez@yahoo.com.ph; ospital.palawan@yahoo.com	(048) 434-6864, (048) 434-8339, (048) 434-6864 (TF)	367	400,000
Bicol Region							



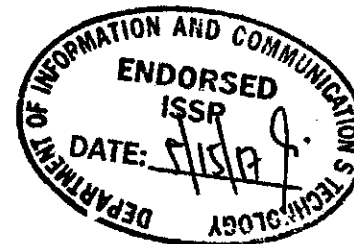


Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
36. Bicol Medical Center, Naga City	DR. MA. ESTRELLA B. LITAM	DOMINIC TAPAN/ RICHARD SMITH	Info. Systems Analyst II/AA IV	tapnick75@yahoo.com; smith_363@yahoo.com; bmc.nagacity@gmail.com	(054) 472-3434 loc 113	1,106	
37. Bicol Regional Training and Teaching Hospital, Legazpi City	DR. ROGELIO G. RIVERA	DR. ROGELIO RIVERA	Chief of Hospital III	butchmd_55@yahoo.com; brtth_cares@yahoo.com	052-483-0017, 483-0886(TL)	818	
38. Bicol Sanitarium, Cabusao, Camarines Sur	DR. EDGARDO R. SARMIENTO	DR. EDGARDO R. SARMIENTO ROMINA C. IGNACIO	Administrative Aide VI	bicolsan@yahoo.com	(054) 473- 2244/472- 4422/255-3355	145	
Western Visayas							
39. Western Visayas Medical Center, Iloilo City	DR. JOSEPH DEAN NICOLO	IVY C. HUERTAS	Lead Information System Administrator	Westernvisayasmedicalcent er@yahoo.com; ivyich39@yahoo.com	(033) 321-2841 to 50 Local 134, 321-1797	1,112	
40. Corazon LocsinMontelibano Memorial (Western Visayas) Regional Hospital Bacolod City	DR. JULIUS DRILON	JUNE CAROL CANLAS	OIC, MISCO-IHOMP	mis.clmmrh@live.com; jmdrilon@hotmail.com; clmmrh_coh@yahoo.co m	(034) 433 2697	959	4,768,000
41. Western Visayas Sanitarium, Sta. Barbara, Iloilo City	DR. ROEL JARINA	JASOND REX HUYABAN	ADA IV	wvsanitarium@yahoo.com	(033) 523-8082, 523-9515	167	
42. Don Jose S. Monfort Medical Center, Extension. Hospital, Barotac Nuevo, Iloilo	DR. MARIANO HEMBRA	DR. MARIANO HEMBRA ROUDIEMAR DIERON	Chief Administrative Aide (JO)	jdnicolo@yahpoo.com	(033) 361-2008	98	
Central Visayas							
43. Vicente Sotto Sr. Memorial Medical Center, Cebu City	DR. GERARDO m. AQUINO	DR. GERARDO AQUINO	Chief of Hospital III	gmajr27@yahoo.com gma27_ecs@yahoo.com	(032) 253-9882 to 91, 253-2592	1,716	
44. Gov. Celestino Gallares Memorial Hospital, Tagbilaran City	DR. MUTYA KISMET MACUNO	DR. MUTYA MACUNO	Chief of Hospital III	gcgmh_bohol@yahoo.com ph	(038) 411-4831, 411-3181 to 85	574	





Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
45. St. Anthony Mother and Child Hospital, Cebu City	DR. ROBERT DENOPOL	DR. ROBERT DENOPOL ARIEL G. NOCOS	IT Technician	samch.doh@gmail.com; ecschedv@gmail.com	(032) 261-9989	129	
46. Eversley Child Sanitarium, Mandaue City	DR. LOPE MARIA P. CARABANA	ALAN L. BUTIHEN	Administrative Aide III / LITA designate	agosir_surgeon@yahoo.com albut2k1@yahoo.com	(032) 3462468	146	
47. Talisay District Hospital, Talisay, Cebu	DR. AGUSTIN AGOS	DR. AGUSTIN AGOS RANDY VILLACARLOS	IT Specialist	talisaydistricthospital@gmail.com	(032) 273-8785	116	
48. Don Emilio del Valle Memorial Hospital, Ubay, Bohol	DR. MARIA ESPERANZA BAYONAS	EDUARDO A. SUCANO, JR.	IT Technician	devmh_ubay@yahoo.com	(038) 518-8301	153	
Eastern Visayas							
49. Eastern Visayas Regional Medical Center, Tacloban City	DR. AVITO H. SALANIS	DR. AVITO SALANIS	OIC Chief of Hospital III		(053) 321-3129, 321-3363, (053) 321-8724	1,111	
50. Schistosomiasis Hospital, Palo, Leyte	DR. AMELITA G. AVENIDO	CHARLEMAGNE ESCAPE, MD, MHA JOSEFA MOLON/	Chief of Hospital IT (JO)/ I	schistosomiasishospital@yahoo.com	(053) 323-8207, 524-9246 and 524-9247 (TF), (053) 524-9247	109	360,000
Zamboanga Peninsula							
51. Zamboanga City Medical Center, Zamboanga City	DR. ROMEO A. ONG	KENNETH A. MARTIREZ	System Administrator	ongromeo87@yahoo.com. au tirezam@yahoo.com	(062) 991-2934 Local 102, 991-0573 (TF)	1,346	
52. Mindanao Central Sanitarium, Pasabolong, Zamboanga City	DR. HANNA TURCO	ALDWIN D. MALINAO	Lead Information & Information Technology (LITA) I	mcschdzp@yahoo.com remus_dayrit@yahoo.com.ph	(062) - 926-2491	146	
53. Labuan Public Hospital, Labuan, Zamboanga City	DR. ROY ALEXIS VALDEZ	DR. ROY ALEXIS VALDEZ	Medical Officer IV	alexisroyf_valdez@yahoo.com	C/O RHO WESTERN MINDANAO (062) 991-3380	103	
54. Basilan General Hospital, Isabela, Basilan	DR. RUFINO GAUDIEL	DR. RUFINO GAUDIEL	Chief of Hospital II		(062) 200-3427, 955-0437	62	
55. Dr. Jose Rizal Memorial Hospital, Dapitan City, Zamboanga del Norte	DR. MA. DINNA VIRAY-PARIÑAS	DR. MA. DINNA VIRAY-PARIÑAS	Chief of Hospital II	cohdrmh@gmail.com dohdjrhm@gmail.com	(065) 213-6421	440	





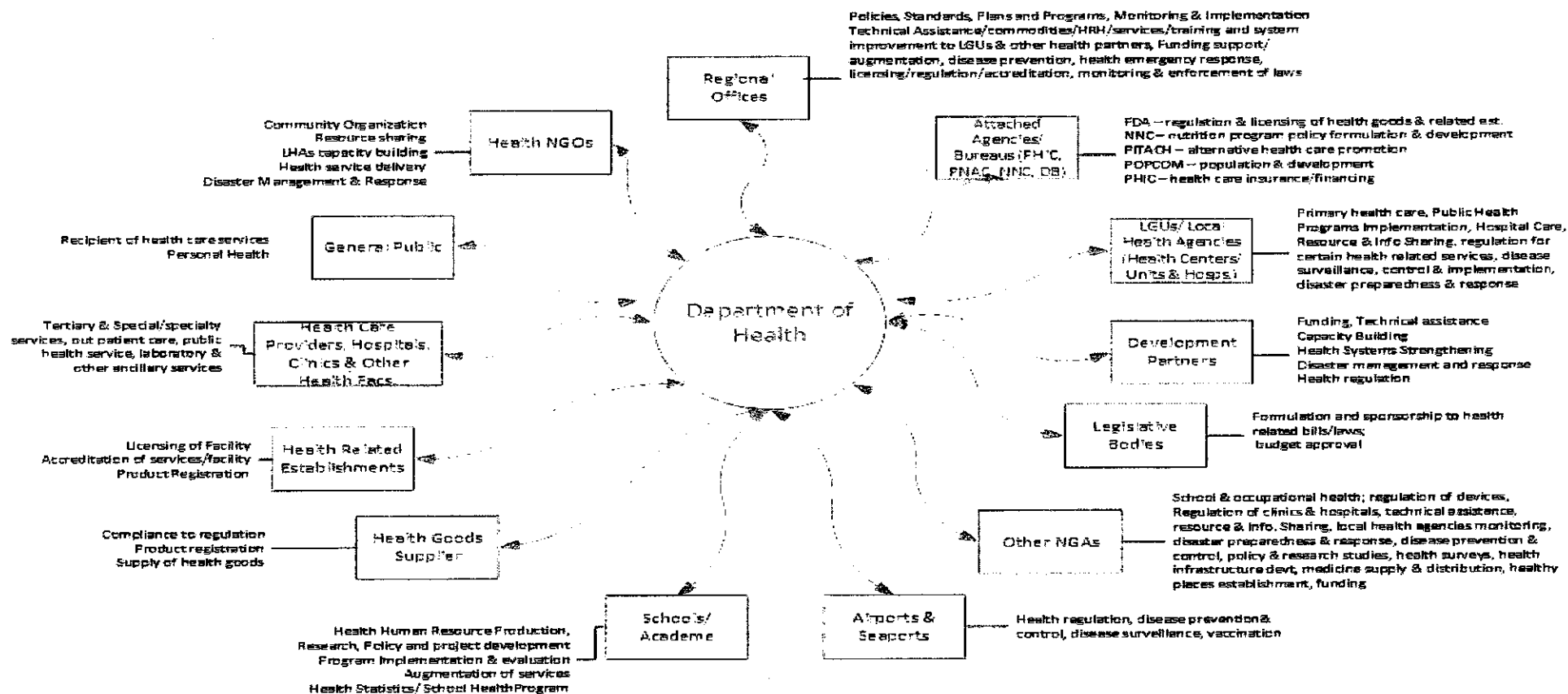
Organizational Unit	Name of Agency Head (as of April, 2017)	Designated IS Planner				Yte	Current Annual ICT Budget (2016)
		Name	Plantilla Position	E-mail Address	Contact Nos.		
56. Margosatubig Regional Hospital, Margosatubig, Zamboanga del Sur	DR. RICHARD B. SISON	DR. RICHARD SISON	Medical Center Chief I	richard_sison2003@yahoo.com mrh_gov@yahoo.com	(062) 211-5634, (062) 211-5058	585	
Northern Mindanao							
57. Northern Mindanao Medical Center, Cagayan De Oro City	DR. JOSE C. CHAN	DR. JOSE CHAN JOFHIL JANUBAS/ SHEILA ILAGAN	Chief of Hospital Adm. Aide III	nmmc_cdo@yahoo.com josechan592000@yahoo.com	(0882) 726362/ 721794	911	
58. Mayor Hilarion A. Ramiro Sr. Regional Training and Teaching Hospital, Ozamis City	DR. JESUS MARTIN SANCIANGCO III	DR. JESUS MARTIN SANCIANGCO III	Chief of Hospital II	mharstt@yahoo.com	(088) 521-0022	466	
Davao Region							
59. Southern Philippines Medical Center, Davao City	DR. LEOPOLDO VEGA	DR. LEOPOLDO VEGA	Chief of Hospital III	dmcenter01@yahoo.com lvega@spmcc.com.ph	227-2731, (082) 221-7029 (F)	1,684	
60. Davao Regional Hospital, Tagum, Davao Del Norte	DR. BRYAN O. DALID	DR. BYRAN DALID	Chief of Hospital III	drh_tagum@yahoo.com info@drhtagum.gov.ph			
SOCCSKSARGEN							
61. Cotabato Regional and Medical Center, Cotabato City	DR. HELEN P. YAMBAO	DENNIS ENLAYO	Lead IT Administrator	drenlayo@yahoo.com	(064) 421-2340 Locals 119-120, 421-2192, (064) 421-2192 (TF)	909	
62. Cotabato Sanitarium, Cotabato City	DR. IBRAHIM PANGATO, JR.	DR. IBRAHIM PANGATO	OIC, Chief of Sanitarium I		(064) 429-0133, 429-0082	115	
63. ArnaizPakpak Medical Center, Marawi City, Lanao del Sur	DR. AMER SABER	DR. AMER SABER	Chief of Hospital II	apmc_marawi@yahoo.com	(063) 352-0070, 352-0274	716	
64. Sulu Sanitarium, San Raymundo, Jolo, Sulu	DR. MINKADRA MAJID	DR. CLEMENTE ALMONTE	Medical Specialist II	clementealmonite@yahoo.com			
CARAGA							
65. CARAGA Regional Hospital, Surigao City	DR. ANDRES M. DOLAR JR.	DR. ANDRES DOLAR JR. IAN TOM L. BELTRAN, MIT	Chief of Hospital I.T. Staff	caragahospital@gmail.com itlbeltran@yahoo.com	(086) 826-2459	455	290,000
66. Adela Serra Ty Memorial Medical Center, Tandag, Surigao del Sur	DR. JAMIE ALCORDO	DR. JAMIE ALCORDO	Chief of Hospital III	astmmc_doh13@live.com.ph donelimgangcomd@yahoo.com	(086) 211-3700	412	





C. THE DEPARTMENT/AGENCY AND ITS ENVIRONMENT

FIGURE 1: FUNCTIONAL INTERFACE CHART

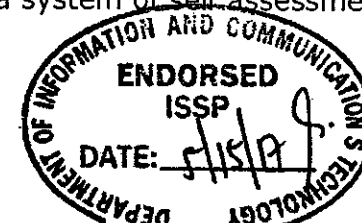




The functional interface chart shown in Figure 1 indicates a multiple interaction among stakeholders with the DOH. These interactions exist between and among the various participants in the health systems. The Department of Health directs the the country's health system and services provided by both public and private sector. It undertakes health sector policy and standard development, regulation, technical advisory and support services. It does these functions with with various stakeholders and players in government and the private sector.

Provision and receiving health care is more than two-way affair between the provider and the recipient as services and providers become specialized and specialist in various fields of medicine, respectively. There is also a multidimensional interaction among various stakeholders in other aspects of the health systems not only in direct service delivery but in regulation, health promotion, referral, standards and policy development among others. Also, given innovation in health care technologies and changing levels of service needs, and need for transparency in government affairs and systems and processes, the DOH must have information and feedbacks from recipients, providers and partners. Given the opportunity to listen to patients' satisfactions and complaints are requisites to drive change and innovativations, meet consumer demands, provide services tailored to the individual or corporate needs, and consequently, for DOH and health sector to be able reconfigure services to be more efficient and effective. These are also needed to be able to cut costs, allocate and reprogram budgets where most needed, and provide services where most essential, respond to variations to suit local needs, reform policies and standards, decide what and where to prioritise areas for actions to keep momentum going and to encourage continuous quality improvements. This is also to focus efforts consistent with health service national priorities and international commitments and to effectively engage with people so they help manage their own health. It is also important for the DOH to able to ensure accountability for the public health services.

A typical interaction is patient consultation when a patient goes to a DOH hospital. When they queue and register for the service they need and actually see a nurse first then a doctor and more doctors and even other health professionals like a laboratory technologist, pharmacist or X-ray technician if consultation and the specific care demands it. The patient provides data to the doctor who fills up or make a medical record of the patient and diagnose or issue orders for treatment or medicines or for further tests to confirm diagnosis. Such record goes to the Philhealth for reimbursement of cost of care received or to account for free services provided and its cost. The record becomes part of a shared health record that the Philhealth can use for claims processing and a shared data set for the production of service statistics or reference of another service provider if permitted by a patient. In the case of health facilities licensing, a system of self assessment is done by the

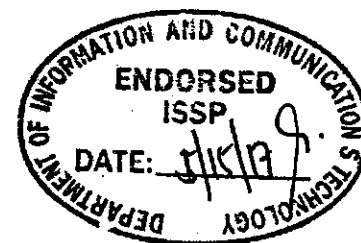




health facility owner and submits an application to the DOH. The DOH assess the application and goes through a process of inspection of the facility and its personnel and produce an assessment report. Depending on the level of compliance to specific licensing standards, the applicant and the DOH confer with others until a license is issued or further denied or not granted at all. Moreover, DOH conduct unscheduled visits to check on compliance which may be a basis for revocation of license or accreditation issued.

In the field of health research, the DOH based on the defined unified health research agenda, engages and provides funds to the another government agenc, academe and to qualified consultants to conduct these researches and who in turn provide results and policy recommendations to the DOH. For providers of health services such as hospitals, clinics and other health facilities, the DOH regulates them and will require their application for permit to operate or license or accreditation to provide specific services. Subsequently, inspection and assessment based on DOH defined standards occurs before DOH issues permit or accreditation. In this process, the health providers submits data or information or documents to the DOH which does document review and actually conduct site visits to check veracity of facts and compliance to standards.

In the case of international health regulation, where restrictions are imposed to avoid emergence or reemergence of diseases that may cause public health concern or epidemics or massive health consequences such as Ebola, ports and airports are checked including passengers. Passengers for example are asked about their travel histories which the DoH use to trace infected travelers. For development partners and NGOs, that fund and also provide services in normal and in times of emergencies or disasters, their linkages with DOH and other partners are crucial to conform to the sector development approach for health (SDAH), a sector-wide approach. In this approach, DOH takes the lead in effectively coordinating and managing donors support and aligning these with government support towards full implementation of health sector programs. This is to improve the quality and efficiency of mobilizing and utilizing foreign investments for healthand harmonizing the same with national and local investments and also with private investments. Likewise, this is to reduce the transactions costs of managing foreign investments in health, reduce duplication and overlaps of donor initiatives with each other and with existing government programs and to ensure sustainability of health reforms. These are done through joint planning and assessment, unified monitoring framework and tools, unified project management, and technical assistance(TA) map formulated to guard against duplication and redundancies.





D. PRESENT ICT SITUATION (STRATEGIC CHALLENGES)

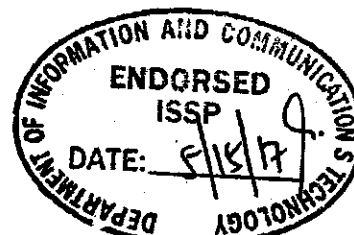
D.1 MISSION CRITICAL/FRONTLINE SERVICES

Like the previous planning period, this plan will further trying to help address access to health care services most especially for those in geographically isolated and disadvantaged areas (GIDA) and access to quality real-time information for decision-making.

Since government health services is a devolved function and the private sector is major missing portion in national health data aggregates, covering these sectors are key in this plan. Some of the systems automate processes to facilitate and make transactions more efficient at the health facility level namely in hospitals and primary care facilities and in the central and regional offices of DOH.

This ISSP support the implementation of the Philippine Health Agenda 2016-2022 (DOH Administrative Order No.2016-0038 dated Octoberr 26,2016). Likewise this ISSP, builds on the on the achievements made on ehealth or use of ICT in health in the past years. *The Philippine Health Agenda (PHA) builds on the gains of earlier reform policies such as the Health Sector Reform Agenda (1999), FOURmula One for Health (2005) and Kalusugan Pangkalahatan (2010). It aligns with the National Economic Development Authority's AmBisyon Natin 2040, and emphasizes the country's commitment to the global 2030 Agenda for Sustainable Development. The PHA aims to uphold every Filipino's right to health as enshrined in the 1987 Philippine Constitution - to make these rights explicit and tangible and in line with President Rodrigo Duterte's promise to the people of "tunay na pagbabago" or real positive change that people can feel. The PHA seeks to fulfill the global call for Universal Health Coverage, adopting "All for Health towards Health for All" as the rallying point to realize the vision of a Healthy Philippines by 2022.*

A. Goals: *The PHA aims to (1) ensure the best health outcomes for all, without socio-economic, ethnic, gender, and geographic disparities; (2) promote health and deliver healthcare through means that respect, value, and empower*





clients and patients as they interact with the health system; and (3) protect all families especially the poor, marginalized, and vulnerable against the high costs of healthcare.

B. Values : All actions shall be implemented in accordance with the values of equity, quality, efficiency, transparency, accountability, sustainability, and resilience.

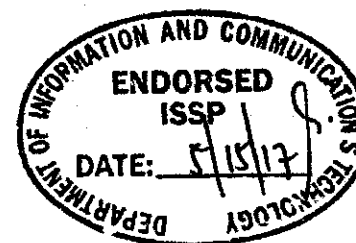
C. Guarantees : The health system shall guarantee:

1. Population- and individual-level interventions for all life stages that promote health and wellness, prevent and treat the triple burden of disease, delay complications, facilitate rehabilitation, and provide palliation

- a. All Life Stages (ALS) refers to services for pregnant women, children, adolescents, adults, and older persons
- b. Triple Burden of Disease pertains to the (1) backlog of communicable diseases and neglected tropical diseases; (2) increasing challenges of noncommunicable diseases such as cancer, diabetes, heart disease, and their risk factors like obesity, smoking, poor diet, sedentary lifestyles, as well as malnutrition; and (3) problems related to globalization, urbanization and industrialization like injuries, substance use and abuse, mental illness, pandemics, travel medicine, and health consequences of climate change.

2. Access to health interventions through functional Service Delivery Networks (SDNs) that:

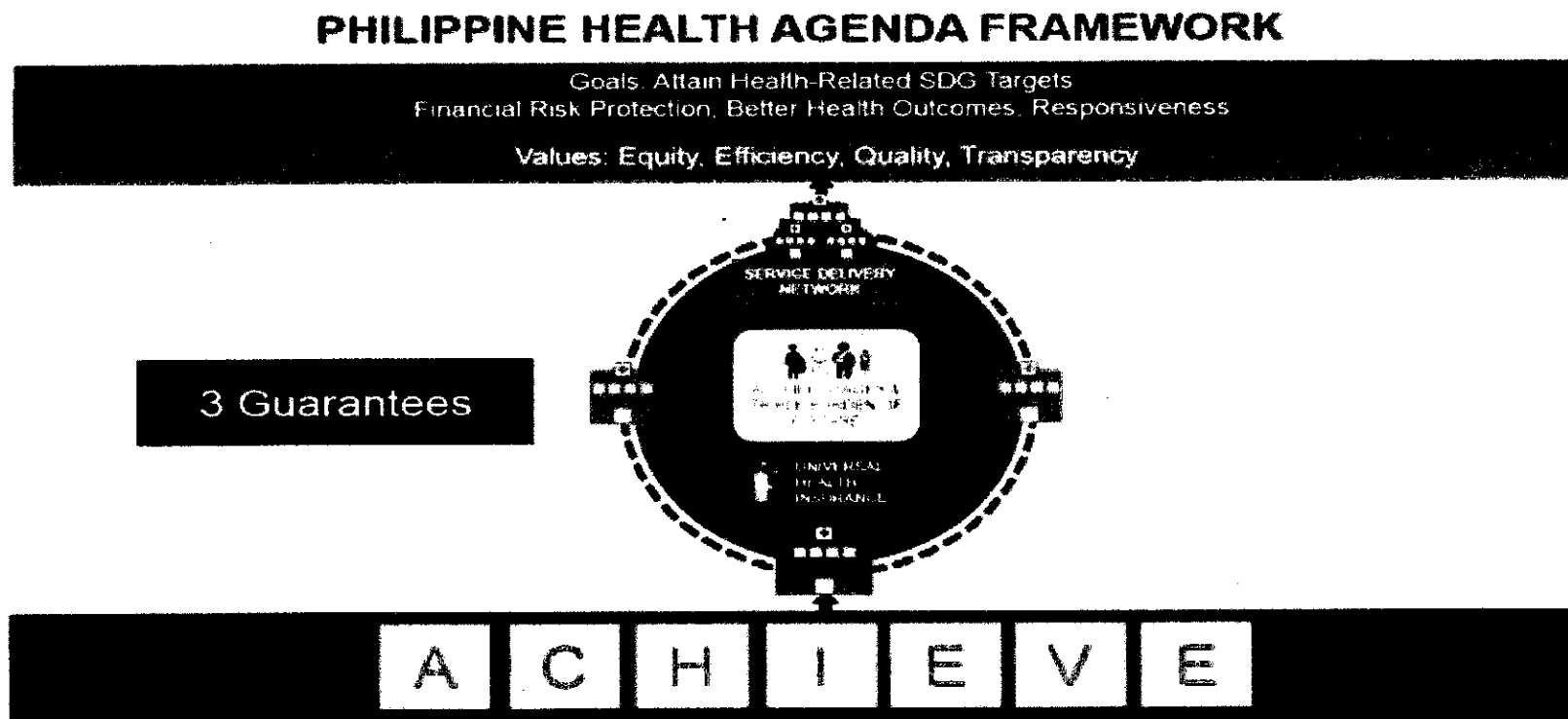
- a. Consist of primary care networks (PCNs) linked to Level 3 hospitals and specialty care, where each PCN is an aggrupation of one district or Level 1 or Level 2 hospital and between 5 to 10 rural health units or private outpatient clinics.
- b. Ensure well-equipped and fully-staffed network of health facilities, either static or mobile, that are close to the people





- c. *Render services that are compliant with clinical practice guidelines, available 24/7, and are resilient during disasters*
- d. *Practice gatekeeping and utilize telemedicine to expand access to specialty services (e.g. tele-radiology, dermatology, pathology or psychiatry).*

FIGURE 2: PHILIPPINE HEALTH AGENDA FRAMEWORK, 2016-2022





3. **Financial freedom when accessing these interventions through Universal Health Insurance** such that the:

- a. National Health Insurance Program (NHIP) enrolls 100% of Filipinos where formal sector premiums are paid through payroll and non-formal sector premiums are paid by tax subsidies
- b. NHIP's support value is 100% (or zero-copayment) for the poor and those admitted in basic accommodation; and a predictable (fixed co-payment) for those admitted in non-basic, private accommodation
- c. NHIP covers a comprehensive range of services and becomes the main revenue source of public health care providers.

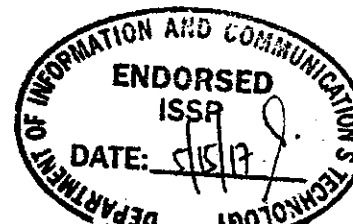
D. Strategies : The strategies needed to fulfill the guarantees may be summarized by the word "ACHIEVE."

1. **Advance** quality, health promotion, and primary care;
2. **Cover** all Filipinos against health-related financial risk;
3. **Harness** the power of strategic human resources for health development;
4. **Invest in eHealth and data for decision-making;**
5. **Enforce** standards, accountability, and transparency;
6. **Value** All Clients and Patients, especially the poor, marginalized, and vulnerable;
7. **Elicit** multisectoral and multistakeholder support for health.

To realize the 3 Guarantees of the PHA, the DOH and its attached agencies shall develop policies, plans, and programs in support of ACHIEVE.

A. Advance Quality, Health Promotion and Primary Care

1. DOH shall require health providers to conduct annual health visits for all poor families, marginalized, vulnerable and special populations (eg. DSWD Listahanan-identified poor, Indigenous Peoples, Persons with Disabilities, Senior Citizens)
2. DOH shall develop an explicit list of primary care entitlements, along with clinical practice guidelines, that will become the basis for licensing/accreditation standards, contracting arrangements for PCNs, and benefit expansion of PhilHealth.





3. DOH shall transform select DOH hospitals in Luzon, Visayas, and Mindanao into mega-hospitals or hospitals with multi-specialty training capabilities and reference laboratory
4. DOH shall support LGUs in advancing local health policies (resolutions or ordinances) that improve access to lifesaving interventions and reduce exposure to risk factors for premature death and disability (e.g. city-wide smoke-free or speed limit ordinances)
5. DOH shall establish expert bodies for health promotion, surveillance, and response.

B. Cover all Filipinos against Health-related Financial Risk

1. DOH, PhilHealth, other NGAs, all LGUs, and all others concerned shall collectively work for revenue generating measures, such as but not limited to, further increasing excise taxes for tobacco and alcohol, imposing taxes on sugar-sweetened beverage and supporting other health-promoting taxes, increasing NHIP premium rates, and improving collection efficiency from the public and private formal sector.
2. DOH and PhilHealth shall lead in aligning all health financial programs (GSIS, MAP, PCSO, PAGCOR) to support Universal Health Insurance
3. PhilHealth shall expand benefits of NHIP to cover outpatient diagnostics, medicines, and blood and blood products, as guided by health technology assessment
4. PhilHealth shall review and update costing of current case rates to ensure that they cover the full cost of care and that they link payment to quality of service rendered
5. PhilHealth shall enhance and enforce its contracting policies (e.g. setting up of primary care trust funds, network based contracting, income retention for LGUs health providers with retained budget support incentives).

C. Harness the Power of Strategic Human Resources for Health (HRH) Development

1. DOH in coordination with the HRH Network shall review and revise the curriculum of health professionals to make it more primary care-oriented and responsive to local and global needs
2. It shall review and streamline HRH compensation packages, including financial and non-financial incentives for those serving in high-risk or geographically-isolated and disadvantaged areas (GIDA), and support the full implementation of Magna Carta for Health Care Workers
3. It shall update frontline staffing complement standards from profession-based to competency-based





4. It shall make available fully-funded scholarships for HRH hailing from GIDA areas or IP groups
5. It shall formulate mechanisms for mandatory return of service schemes for all health graduates.

D. Invest in eHealth and Data for Decision Making

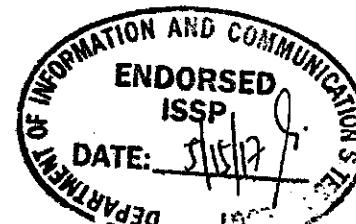
1. DOH and PhilHealth shall mandate the use of electronic medical records in all health facilities
2. DOH, PhilHealth, FDA shall make online submission of clinical, drug dispensing, and administrative and financial records as prerequisite for registration, licensing, and contracting
3. DOH, PhilHealth, FDA shall commission nationwide surveys to supplement unavailable or incomplete administrative data, streamline information systems and administrative data collections systems, and support efforts to improve local civil registration and vital statistics
4. DOH, PhilHealth, FDA shall automate major business processes and invest in warehousing and business intelligence softwares
5. DOH in coordination with academic partners and research institutions shall facilitate ease of access of researchers to available data.

E. Enforce Standards, Accountability and Transparency

1. DOH shall initiate publication of health information that can trigger better performance and accountability (e.g. prices of common drugs and services, non-compliant/erring providers, national objectives for health targets, and various health scorecards)
2. DOH shall set up a dedicated performance monitoring unit that will employ appropriate mechanisms to track performance or progress of reforms, including but not limited to medical audits and third-party monitoring.

F. Value All Clients and Patients, especially the poor and vulnerable

1. DOH shall ensure that the poorest 20 million Filipinos are prioritized in all health programs and supported in non-direct health expenditures (e.g. transportation subsidy)
2. DOH in coordination with other partners and stakeholders shall make all health entitlements simple, explicit, and widely published to facilitate understanding





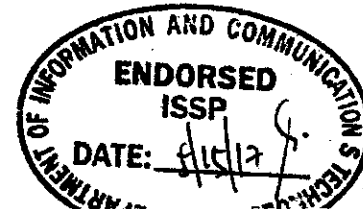
3. DOH shall set up participation and redress mechanisms
4. DOH and its attached agencies shall reduce turnaround time and improve transparency of processes at all DOH offices and health facilities
5. All health care facilities shall eliminate queuing and guarantee decent accommodation and clean restrooms in all government hospitals.

G. Elicit Multi-sectoral and Multi-stakeholder Support for Health

1. DOH and PhilHealth shall harness and align the private sector in planning supply-side investments, forming SDNs, and expanding PhilHealth contracting to immediately include the private sector (e.g. Z benefits, primary care benefit)
2. DOH shall ensure convergence and develop a health policy agenda with other NGAs (DILG, DENR, DSWD, DepEd, HUDCC, among others) in addressing social determinants through Health in All Policies and other multisectoral approaches
3. DOH shall require health impact assessment and a corresponding public health management plan as a prerequisite for initiating large-scale, high-risk development projects in the areas of mining, power plants, oil rigs, etc.
4. DOH shall foster collaboration and partnership with CSOs and other stakeholders on budget development, and monitoring and evaluation.

The mission critical or frontline services of the DOH agencies included in this ISSP that support the PHA are the following:

- **Health Sector Management.** This includes national health sector policy development, standards development, health planning, health sector performance assessment, monitoring & evaluation, and implementation/compliance monitoring, health research, quality management, corporate communication and information management, local and international health cooperation coordination. Systems needed in these services are varied and mainly are composed of access to and sharing relevant and timely data, establishing communities of practice, data visualization systems, dashboards and systems that support DOH works as the major leader in the health sector. Systems to be enhanced, implemented or developed include the Integrated Executive Information System (iEIS) with existing sub-systems such as the Unified Health Management Information System (UHMIS), National Health Atlas (NHA), Health Information Technology Standard Terminology Registry (HITSTR), National Health Data Dictionary System (NHDDS), Health Data Standards Terminology





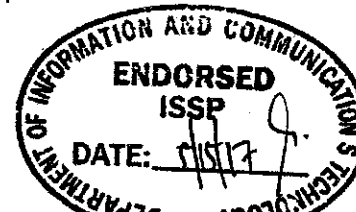
Registry (HDSTR), National Health Facility Registry (NHFR) and Philippine Health Agenda Dashboard (PHAD) and so on. Most of these system are existing but will need regular updating and harmonization with the health sector groups or with in the social services or human development clusters.

What is lacking is a working Philippine Health Enterprise Data Warehouse (PHEDW). Other existing data sources to establish the datawarehouse need to be incorporated. An initial DOH – Philhealth Data Harmonization is on-going as well as with the Department of Social Welfare and Development and Anti-poverty Commission given same priority target clients under the National Household Targetting System. The DOH Dashboard and M&E data system to correspond to the PHA and SDGs indicators will be established. A Unified Health Management Information System (UHMIS) which was started in 2012 has been integrating data collection, processing, reporting and use of health information. UHMIS is portal for most data and information systems and provides access to aggregates from various databases. This is an initial DOH central datawarehouse. Some of the information systems and data currently included in the UHMIS are the NHDDS and the various data registries and terminologies and data generated from systems on injury surveillance, firecrackers, unified disease registry system and some infectious diseases registries including drug price monitoring, drug testing, health facilities and services licensing, hospital reporting system, health facility registry, health human resources, and some neglected tropical diseases.

Coordination with and providing technical assistance to the local health units will need a working Local Health Systems (LHS). Thus a Political Profiling System (PPS) will need to be further established as well a Performance monitoring system or LGU Scorecard as well as a system on Health Human Resources Augmentation in terms Barangay Health Workers, Doctors to the Barrios, Community Health Teams, Nurses etc. These sub-systems will have to be with be further developed and data updated.

The Philippine Health Information Exchange with Philhealth Primary Care Benefit as use case is currently being deployed and with only RHUs, DOH and PhilHealth involved. The systems will be fully developed and is envisioned as a major source of data through the shared record and disease registries, and allow other use cases.

- **Provision of hospital services** including rehabilitation services provided by Treatment & Rehabilitation Centers (TRCs). The DOH hospitals included in this ISSP are either general or specialty hospital and are either level 3 or level 4 hospitals.



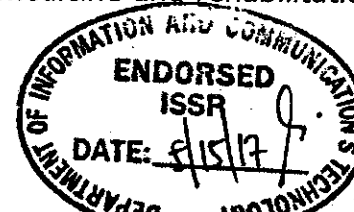


The general hospital provides services for all kinds of illnesses, diseases, injuries or deformities. It provides medical and surgical care to the sick and injured, as well as maternity, newborn and child care. It is equipped with the service capabilities needed to support board certified or eligible medical specialists and other licensed physicians rendering services in, but not limited to, the following: Clinical Services, Family Medicine, Pediatrics, Internal Medicine, Obstetrics and Gynecology, Surgery, Emergency Services, Outpatient Services, Ancillary and Support Services, such as clinical laboratory, imaging facility and pharmacy. A specialty hospital specializes in a particular disease or condition or in one type of patient.

A Level 1 Hospital has as minimum, the following services and capacity: a staff of qualified medical, allied medical and administrative personnel headed by a physician duly licensed by the Professional Regulation Commission; Bed space for its authorized bed capacity in accordance with DOH Guidelines in the Planning and Design of Hospitals (DGPDH); an operating room with standard equipment and provision for sterilization of equipment and supplies; a post-operative recovery room; a maternity facilities, consisting of ward(s), room(s), and a delivery room exclusively for maternity patients and newborns; isolation facilities with proper procedures for the care and control of infectious and communicable diseases as well as for the prevention of cross infections; a separate dental section/clinic; a blood station; a DOH-licensed secondary clinical laboratory with the services of consulting pathologist; a DOH-licensed Level 1 imaging facility with the services of a consulting radiologist; and a DOH-licensed pharmacy.

A Level 2 hospital has at a minimum, all of Level 1 capacity, including, but not limited to, the following: an organized staff of qualified and competent personnel with Chief of Hospital or Medical Director and appropriate board-certified Clinical Department Heads; departmentalized and equipped with service capabilities needed to support board-certified or eligible medical specialists and other licensed physicians rendering services in the specialties of Medicine, Pediatrics, Obstetrics and Gynecology, Surgery, their sub-specialties and ancillary services; a general Intensive Care Unit (ICU) for critically ill patients; a Neonatal Intensive Care Unit (NICU); a High Risk Pregnancy Unit (HRPU); provision of respiratory therapy services; A DOH-licensed tertiary clinical laboratory; and a DOH-licensed Level 2 imaging facility with mobile x-ray inside the institution and with capability for contrast examinations.

A Level 3 hospital has at a minimum, all of Level 2 capacity, including, but not limited to, the following: teaching and or training hospital with accredited residency training program for physicians in the four (4) major specialties, namely: Medicine, Pediatrics, Obstetrics and Gynecology, and Surgery; a physical medicine and rehabilitation unit; an ambulatory

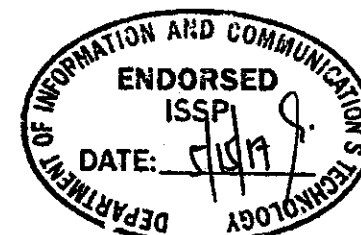




surgical clinic; a dialysis unit; a blood bank; a DOH-licensed tertiary clinical laboratory with standard equipment, reagents and supplies necessary for the performance of histopathology examinations; and a DOH-licensed level 3 imaging facility with interventional radiology. Level 3 hospital services include the following services: critical care clinical services, nursing and ancillary services. The clinical services include critical care services, care, emergency care, outpatient services and general dentistry. The critical services are Department of Medicine, Department of Pediatrics, Department of Obstetric and Gynecology, and Department Surgery and Anesthesia, Intensive Care, post Anesthesia Care, and Pathologic-premature nursery. The Nursing Service are Intensive Care and Management and Health Education and Counseling. The Ancillary Service are tertiary Clinical Laboratory, 2nd level Radiology and Pharmacy.

A level 4 hospital have the following service level capability: teaching and training hospital that provides clinical care and management on the prevalent diseases in the locality, as well as specialized and sub-specialized forms of treatment, surgical procedure and intensive care; Clinical services provided in the Level 3 Hospital, as well as sub-specialty clinical care; Provision of appropriate administrative and ancillary services (clinical laboratory, radiology, pharmacy); Nursing care provided in the Level 3 Hospital, as well as continuous and highly specialized critical care. The Clinical Service Specialty Clinical Care: Department of Medicine, Department of Pediatrics, Department of Obstetrics and Gynecology, Department of Surgery, Department of Anesthesia, Department of Emergency Medicine. The subspecialty Clinical Care Critical Care includes Intensive Care, Pathologic – Premature Nursery, Outpatient Service, Rehabilitation Service, General Dentistry and Nursing Service. The Highly Specialized Critical Care and Management includes Department of Medicine, Department of Pediatrics, Department of Obstetrics and Gynecology, Department of Surgery and Anesthesia and Health Education and Counseling. It must also have any Accredited Residency Training Program for Physicians or Accredited Training Program for Nurses or Accredited Training Program for Medical Technologists. There must be a current Certificate of Accreditation is available for Ancillary Service, Tertiary Clinical Laboratory, Radiology – 3rd Level and Pharmacy.

The hospitals must have an electronic medical record (EMR) system and a hospital information system to comply with Philhealth and DOH reporting requirements and more importantly to improve clinical care. What is being implemented by DOH is the (iHOMIS), Integrated Hospital Operations and Management Information System. At least Module 1 is implemented in 104 public hospitals wherein 50 are DOH hospital out of the 70. What needs to be implemented in most of these hospitals are module 2 and 3 and to increase the number of hospitals implementing the system. A web-based system EMR/HIS is being developed with KOICA and will be implemented in 15 hospitals in CALABARZON called





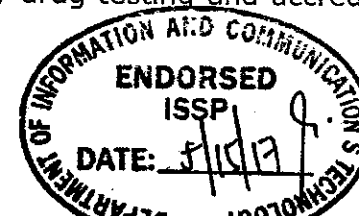
Interoperable Health Information System (IHIS) and in 130 primary care facilities. This is an integration of the curative and preventive care at the local health system. The rest of DOH hospitals are using other EMRs.

The integrated Hospital Operations and Management Information System integrated(iHOMIS) has a quite developed Philhealth's e-claims processing. The electronic submission of claims using an EMR will be made compulsory in April 2017 and the PHA mandates EMR implementation in 601 government hospitals. The IHOMIS has three modules- Module 1: Admitting, Billing, Cashier, PhilHealth, Medical Records, Medical Social Service; Module 2: Wards, Laboratory, Pharmacy, Radiology, Emergency, Outpatient Department, Dietary and Other Ancillaries Cost Centers. Module 3: Personnel Information System, Integrated Logistics Management Information System including Financial Management.

The National Blood Bank Network System (NBBNetS) is another critical system. This was developed to help guarantee safe and quality assured blood that is accessible and available everywhere at all time. There is a network of modernized national and regional blood centers operating on a full voluntary and non-renumerated blood donation which when the NBBNetS is implemented will render the blood system more efficient. It is envisioned that NBBNetS which is implemented in only 13 hospital blood centers to date will support the availability and easier access to needed blood and other blood elements.

The drug abuse treatment and rehabilitation center operations system (DATRCOS) is planned to be using the EMR of IHOMIS or iClinicSys with customization This is on the drawing board and a decision will be made which medical record system for drug dependents will be used.

- **Health Regulation and Licensing.** The DOH is a regulatory agency and regulates health facilities or related establishments, health related goods those that produce them including selected services based on established standards. This ISSP excludes regulation of health commodities done by the Philippine Food and Drug Administration, an attached agency of DOH. Health regulation done by the Health Facility and Service Bureau, the Bureau of Quarantine and Pharmaceutical Division are included. Currently, there is an Integrated Licensing Information System (ILIS) for health facilities such as hospitals, X-ray facilities and free-standing dialysis clinics, clinical laboratories, and OFW clinics, and services with a few running sub-systems. A full blown system development is being planned to start in 2017. An Integrated Drug Test Operations and Management Information System (IDTOMIS) is operational and is catering to around 1,000 drug testing laboratories (DTL) nationwide in terms of ensuring quality drug testing and accreditation of DTLs. In





2017, the system enhancement or a more simple system to replace the existing will be started. The Electronic Drug Price Management System (EDPMS) is also operational but has to be enhanced in terms of its functionalities as well in terms of coverage. The Quarantine Services and International Health Regulation system is in its Phase 1 implementation and Phase 2 and Phase 3 will be developed and implemented in 2017 and 2018 respectively.

- **Provision of Technical Advisory & Support Services.** The DOH is considered as the technical expert in health. In relation to this, it defines standard operating procedures for various health programs and concerns, develops health systems and lend support services on specific areas to health providers especially the local government units. There are application systems as part of technical services support to service providers. These services are done as a result of the the devolution of services where in all primary health care facilities namely rural health units/health centers and barangay health stations (RHU/HCs/BHSs) and district and provincial hospitals which may be either level 1, 2 or 3 hospitals are managed by the local government units. As they are at the point of care, they are major sources of data for DOH in particular and the health sector in general. Since they are first level health care service providers, they are also provided additional resources by the DOH and Philhealth to be able to provide quality primary care and even curative care from district and provincial hospitals. The ICT assistance and provision of standard application systems for implementation is to enhance local health facilities' system and ensuring that equity in quality health care. These are on health emergency management, disease surveillance; disease prevention and control; health promotion & education; health facility development & enhancement; health human resource development; information management and health commodities support for public health programs of national importance.

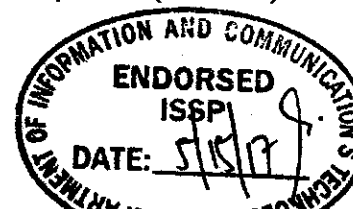
The system in these areas are varied and in various stages of development or implementation and some are still on the drawing board stage. The major ones includes:

- iClinicSys or the Integrated Clinic System, an EMR and a health information system for primary healthcare facilities. It now includes the following operational vertical system that the DOH has been harmonizing the past few years: Field Health Service Information System (FHSIS); Integrated TB Information System; Maternal And Neonatal Death Reporting System; Schistosomiasis Information System; Filariasis Information System; National Rabies Information System; Watching Over Mothers And Babies (WOMB); Leprosy Information System/Leprosy Alert Response And Surveillance Network; Family Planning (FP) Registry; Philippine Integrated Disease Surveillance Reporting System (PIDSR); Other Vertical Health Programs Info/Reporting Systems like Malaria And Other Infectious Diseases (ID), and also Non-Communicable Diseases (NCD). It is operational in 1,000 RHU/HCs.





- Health Emergency Management Service Integrated Information System (HEMS IIS) is for implementation initially at Health Emergency Management Bureau and then in regional offices and hospitals. As result if the Typhoon Yolanda experience, there is an Health Emergency Preparedness and Response Information System (HERIS) that provides daily data and information for DOH and its partner agencies. Also operational and essential to managing post disaster health concerns is the Surveillance in Post Extreme Emergencies and Disasters (SPEED) using mobile technology in health (mHealth). The SPEED include early detection, verification of potential disease outbreaks, and monitoring of trends of priority health events for timely and appropriate program response in order to avert avoidable morbidity and mortality during extreme emergencies and disasters.
- A verbal autopsy system is envisioned to help strengthening of Civil Registration and Vital Statistics (CRVS), the official source of births and mortality statistics.
- For Disease Surveillance System, an Event Based Surveillance and Reporting System (ESR) is being implemented nationwide in sentinel hospitals. Under development is the Phil. Integrated Disease Surveillance Reporting System (PIDSR). What is planned to be developed soon that will interoperate with Bureau of Quarantine system is the International Health Disease surveillance.
- Integrated Health Human Resource Development Information Systems support the health human resource development in terms of capacity building, production, deployment and establishing service delivery networks. There are an on-going and future development of the HHR systems that will be used by the multi-agency HHR network for planning and production including addressing migration as the government addresses care equity issues. Also, there is HHR augmentation using DOH budget to help in capacitating facilities to provide services. The HHR capacity building or training in particular is being harmonized to limit service providers being away from service delivery points. The system to be developed will manage training and establishing eLearning system for the DOH Academy.
- Unified Disease Registry System (UDRS) include registries for Non-Communicable Diseases and infectious Diseases. In the absence of full PHIE with a shared health record to produce the registries, the disease registries are separately or vertically implemented with harmonization in iHOMIS and iClinicSys. Some of these registries include Online National Electronic Injury Surveillance System (ONEISS), Violence against Women and Children Registry System (VAWCRS), Philippine Registry for Persons with Disabilities (PRPWD), Integrated Philippine Network for Injury Data Management System (iPNIDMS), Integrated Chronic Non-Communicable Disease Registry System (ICNCDRS) which includes Cancer Registry, Diabetes Mellitus Registry, Stroke Registry, Coronary Artery Disease Registry, Prevention of Blindness Registry and Cataract Surgical Outcome Monitoring, Integrated Chronic Obstructive Pulmonary Disease and Occupational Disease, Firework Related Respiratory Illness Surveillance System (FRRISS). Infection Diseases systems



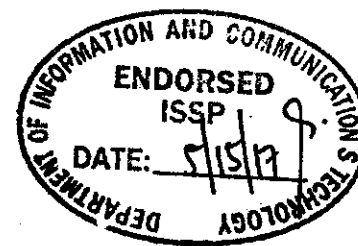


include Integrated Neglected Tropical Diseases (INTD) for *lymphatic filariasis, schistosomiasis, soil-transmitted helminthiasis, food and waterborne diseases, leprosy and rabies* and Integrated Tuberculosis Information System (ITIS) and Environmental Health Information System (EHIS) and Water and Social Hygiene (WASH) System.

- There is a web-based public assistance system that monitors support to indigent patient hospitalization or medical support under the Medical Care Assistance Program.
- Resource augmentation as mentioned are in terms of goods, and personnel. Likewise, upgrading health facilities capacities through civil works and medical equipment is a major work and have to be also properly planned and recorded. Systems are being put in place that allows online supplies inventory system, health facilities enhancement monitoring, and for health human resources support. The monitoring of commodities augmentation to local health facilities and DOH hospitals is being expanded and will implement an inventory, monitoring and ordering system. This system however need to be integrated with other related systems such as the iClinicSys.

The harmonization of system has been done in more than 10 years. Though significantly reduced, there is proliferation of various systems as part of the health facility own initiatives, the academe or imposed by development partners with little coordination with DOH. The implementation is allowed as long as the system is validated to comply with DOH and PhilHealth requirements and conforms to national health data standards to ensure interoperability.

The use of ICT or eHealth needs to be further exploited to facilitate and/or improve access to and sharing of health/medical information, knowledge, and locally relevant content for strengthening public health research, disease prevention and control, regulation of services and policy development specially in making service delivery more relevant and efficient. This a major focus of this plan. Another issue that has to be addressed in eHealth is with respect and compliance to security and protection of citizen's right to privacy. Specific guidelines have been formulated with various stakeholders pursuant to health laws, ethics and Data Privacy Act of 2012 but will also need facility level and individual provider guidelines.





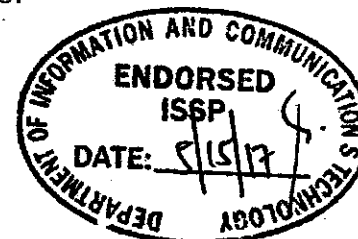
D.2 OFFICE AUTOMATION AND WEB PRESENCE

The use of ICTs in the DOH has remarkably supported and improved most of its functions. Such that employees are regularly equip through hands-on training. There is significant increase in number of personnel trained for office automation, mostly on word processing, use of spreadsheet and in making presentations and even in geographic information system and other data visualization tools. Laptops have been provided to least section chiefs at the central office and regional health offices.

With exposure to technology benefits and social media and need for immediate responses to various activities, there is continuous demand of offices to computerize their operations, workflows and/or reporting systems. To partially address these demands, the DOH has an ICT training room with continuous ICT training program annually. Central office personnel are 100% trained on office automation especially among technical staff. For regional office, this around 90%. . There are less percentages of computer literacy in various hospitals and drug abuse rehabilitation centers. Most untrained are old and technophobic staff and 'too busy' for service delivery especially in hospitals.

Computer ratio among management and technical staff at central office and regional office is 1:1 but already need replacements for most. For hospitals and TRCs, it is on the average 1:10 ratio

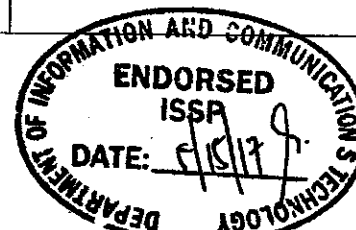
In terms of *Web presence* , DOH has established its existence on the World Wide Web, through a web site/portal, e-mail, and social media such as Facebook and Twitter and started blogs on major health issues and concerns. There are also white pages and FAQs. Some application systems allows online transactions such as job posting and application, procurement postings and licensing application and on line registration for example for training and application to conduct of medical and surgical mission by external partners. The DoH has also has started incorporating web-technology solutions in developing information systems including development of e-health applications. All regional offices and except for one hospital of the 70 hospitals have a website. This will be a focus including the TRCs. The DOH websites conforms to the DICT standard templates. Content updating is a major issue though but improving with ICT regular staff in hospitals and regional offices.





E. STRATEGIC CONCERNS FOR ICT USE

MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
MFO 1. HEALTH SECTOR POLICY SERVICES			
	Health Policy Development	<ul style="list-style-type: none">• Limited availability and access to quality data, information and knowledge products, references for policy development and planning• Limited access to evaluation and monitoring data and other information or knowledge products for policy development• Limited info on status of policies development and implementation• Limited utilization of available data• Inadequate networking among policy makers, health managers and technical experts	<ul style="list-style-type: none">• Enhancement/establishment of electronic access of database health policies and laws, health programs and services standards.• Webpage to Health and Health-Related Laws and Research results• Literature databases• On-line collections of pdf documents available to email or web• Establishing communities of practice of specific experts in research and policy development• Health enterprise data warehouse• Scaling-up Unified Health Management Information System (UHMIS)• Enhancing implementation of the disease registries, and data sources for service statistics etc• Expand use of social media or social participation• Dashboards• Digital Surveys• Mobile applications for data collection and analytics• GIS or mapping• Electronic discussion groups• On-line newsletters or emailed newsletter• Video conferencing• Learning centers





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
	Health Program Standard Development	<ul style="list-style-type: none">• Inadequate access to existing and various health standards• Inadequate access to quality data for standard development	<ul style="list-style-type: none">• Same as above
	Performance Monitoring	<ul style="list-style-type: none">• Lack of timely, updated and complete data/information• Inability to access reports to monitor performance from hardcopies and even existing databases or information systems	<ul style="list-style-type: none">• Enhancing LGU scorecard system and other score cards (central offices, regional offices, Hospitals & development partners)• Scaling up implementation of the UHMIS• Philippine health information exchange• National health enterprise data warehouse• Improving point of care (hospital and primary care facilities) application systems – electronic medical record• Consolidating and scaling up disease registries• Improving systems for resource augmentation monitoring• Maintenance updating of the health atlas and health facility registry• GIS• Online collections of PDF documents available on-line or e-mail• Literature databases• On-line newsletters or e-mailed newsletters
	Health Research Management	<ul style="list-style-type: none">• Limited knowledge and access to data, and information and knowledge products, research management and results• Limited knowledge translation• Inadequate networking among research managers, institution research ethics review	<ul style="list-style-type: none">• Research agenda, ongoing underatknings and results/papers database, and webpage• Establishing communities of practice• Public access to research ethics guidelines and research participants rights• Networking resource centers and medical libraries



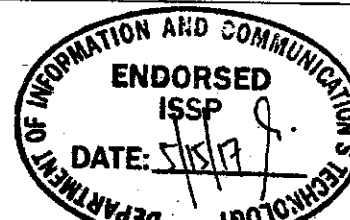


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
		boards and other research experts	<ul style="list-style-type: none"> and establishing knowledge hubs • Online collections of PDF documents available on-line or e-mail • Literature databases • On-line newsletters or e-mailed newsletters
	Health Planning	<ul style="list-style-type: none"> • Burdensome and laborious health planning process • Limited information for management and monitoring performance • Repetitive data encoding • Difficulty of locating official data • Difficult to harmonize and consolidate various plans • Difficult to check for duplication or unnecessary redundancies • Limited monitoring performance and budget utilization 	<ul style="list-style-type: none"> • Adoption of the government integrated financial management information system • Scaling up of the enterprise health datawarehouse • Enforcement of health data standards • Health datadashboard • Health atlas& health facility registry updating • GIS • Online collections of PDF documents available on-line or e-mail • Literature databases • On-line newsletters or e-mailed newsletters
	Health investment and financial resources mobilization and utilization management	<ul style="list-style-type: none"> • Untimely and late reporting of local and foreign-assisted projects' status • Difficulty in accessing to monitoring reports • Limited access to processed data on various financial resources • Inadequate transparency on financial resources mobilization and utilization of external and internal sources • Limited info on status of various investments 	<ul style="list-style-type: none"> • Enhancement of International Health Coordination Information System • Improve on-line/web access to data and information on sources, allocation and utilization of financial resources • Scaling up of the HEDW/UHMIS • Enhance functionality and implementation of the integrated financial, and procurement systems , and integrated logistics management system • Application updating of the health atlas And other data visualization system



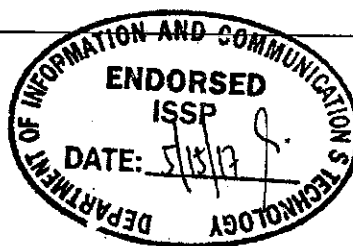


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
			<ul style="list-style-type: none"> • Online collections of PDF documents available on-line or e-mail • On-line newsletters or e-mailed newsletters
MFO 2. TECHNICAL ADVISORY AND SUPPORT SERVICES			
		<p>Common problems:</p> <ul style="list-style-type: none"> • Unsystematic management of data and operational reports or decision-making and monitoring. • Repetitive data encoding • Inadequate public information for disease control and prevention • Inadequate sharing and access to policies & guidelines and standards among key stakeholders especially at sub-national levels • Too many unnecessary data collected • Limited processing and utilization available data • Inadequate access to relevant data • Vertical health program implementation for some 	
	Health Systems Development	<ul style="list-style-type: none"> • Inadequate access to good or exemplary practices and systems • Incomplete data on political profiles as inputs to local health development and technical assistance • Deficient networking and collaboration among services providers • Lengthy and late service statistics reporting • Unreliable data from monitoring and 	<ul style="list-style-type: none"> • Institutionalize documentation, web-based sharing and establishment of a database and/or linkages/ access to exemplary practices, local systems models • Scaling-up of the Integrated Clinic Systems (rural health/health center system) and integrated hospital operation and management information system • Updating of the Health Facilities Database/Registry



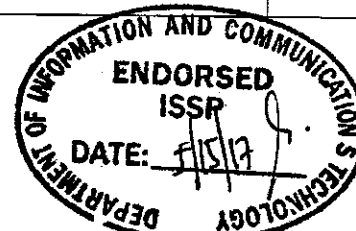


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
		<ul style="list-style-type: none">measurement of performance• Challenging to get quality data to determine LGU performance and in checking utilization of extended TA & resources• Problematic monitoring of distribution and inventories of provided national public health programs commodities	<ul style="list-style-type: none">• LGU profile system & LGU score card harmonization with other LGU information system• Establishing KM tools and provide ICT tools for Provincial Health Teams (PHTs) and DOH Representatives (DOH Rep)• Establish a local knowledge-base (Info book)• Institutionalize Health atlas• Development and implementation of Barangay Health Worker (BHW) Registry• Harmonize all Community Health Teams Systems• Continue the customer relations management system• Integration of the CHT systems with existing systems• Online collections of PDF documents available on-line or e-mail• Literature databases• On-line newsletters or e-mailed newsletters
	Disease Surveillance	<ul style="list-style-type: none">• Inadequate & inefficient networking of epidemiological surveillance units• Inadequate and slow means of providing information to health providers and epidemiologists and other stakeholders during investigations and times of disease outbreaks or emergencies• Slow and late reporting• Incomplete reports	<ul style="list-style-type: none">• Disease Surveillance System<ul style="list-style-type: none">◦ Event-based Surveillance and Reporting System◦ Phil. Integrated Disease Surveillance Reporting System◦ International Health Disease Surveillance• Quarantine Services and International Health Regulation System• Implementation of Philippine Health Information Exchange• Disease Registries



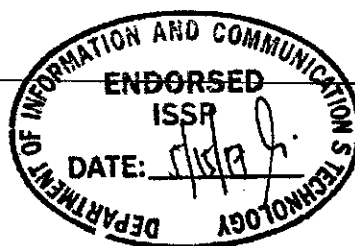


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
			<ul style="list-style-type: none">• Infectious Disease Data Management and Registries, and National Epidemiology Sentinel Surveillance System.• Public access to information on disease prevention and control• Business Analytics• Access to data and analysis on disease surveillance• Establishing communities of practice• Transition implementationn of e-FHSIS to iClinicSys• GIS, Health Atlas• Mobile health• Health Emergency Management Service health emergency management reporting system including SPEED• Handheld computers for data collection• Online collections of PDF documents avialable on-line or e-mail• Literature databases• On-line newsletters or e-mailed newsletters
	Disease Prevention and Control	<ul style="list-style-type: none">• Limited information and knowledge sharing among managers, technical staff and service providers• Very delayed reporting and limited access to service statistics• Limited public access to disease prevention and control policies, guidelines and standards amendments• Limited or restricted access to program performance data	<ul style="list-style-type: none">• Unified Disease Registry system<ul style="list-style-type: none">a. On-linenational electronic injury surveillance systemb. Integrated chronic non-communicable disease registry system – cancer, diabeytes mellitus, stroke, coronary artery disease, blindness, cataract surgery monitoring, chronic obstructive pulmonary disease, occupational lung diseasec. Fireworks related respiratory illness surveillance system





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
			<ul style="list-style-type: none">d. Neglected tropical diseases inf syse- filariais, schistosomiasis, soil transmitted helminthiasis, ffod-borne diseases, leprosy & rabiese. Tuberculosis info system• Strengthening of Civil Registration and Vital Statistics –Verbal Autopsy System• Implementation of the Electronic Medical/Health Record in primary care facilities and hospitals<ul style="list-style-type: none">• Iclinicys• iHOMIS/IHIS• Implementation of the Philippine Health Information Exchange• Data harmonization with the Philhealth and common dashboard for Philippine Health Agenda• Environmental Health Information system- Water and social hygiene system• Enhancement of the Philippine Organ Donor and receipt Registry system• Greater public access to information to disease prevention and control disease prevention and control• Establishing communities of practice among public health experts• Subscription to on-line scientific journals• GIS, Health Atlas• Health facility registry• Data Analytics• Online collections of PDF documents avialable on-line or e-mail• Literature databases• On-line newsletters or e-mailed newsletters





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
			<ul style="list-style-type: none">• E-mailed updates• Handheld devices for data collection
	Health Emergency Preparedness and Disaster Management	<ul style="list-style-type: none">• Weak management tools and data to support disaster preparedness and response• Incomplete and delayed reporting• Inefficient data and information sharing among response teams and facilities even with operations centers• Limited providers networking and sharing of information• Oftentimes inadequately sluggish response and coordination• Inefficient coordination with support offices	<ul style="list-style-type: none">• Implementation of the of Health Emergency Management Service Integrated Information System• Maintenance of SPEED• Providing greater access and sharing of information and knowledge on health emergency preparedness and response• Maintenance and scaling-up of SPEED or post-emergency reporting system• Establishing communities of practice• Using a variety of communication systems for disasters response• GIS, Health Atlas• Maintenance of HEMB website• Handheld computers for data collection• Online collections of PDF documents available on-line or e-mail• Literature databases• On-line newsletters or e-mailed newsletters• mHealth
	Health facilities planning and infrastructure development upgrading and enhancement	<ul style="list-style-type: none">• Inadequate, limited not updated data on health facilities' capacities• Unsystematic collection and organization of monitoring data on status enhancement and capacities• Limited access to data on status of various facilities	<ul style="list-style-type: none">• Enhancement of the health facilities enhancement program tracking system• National Health Facility Registry• Full implementation of a health facilities mapping system/health atlas• Publishing or regularly disseminating health facilities status and conditions to management• GIS, Health atlas





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
			<ul style="list-style-type: none">• Handheld devices for data collection & submission
	Health Promotion	<ul style="list-style-type: none">• Inefficient access to health promotion materials• Not updated database of health promotion materials• Inadequate access to international health promotion and education materials• Lack of monitoring system to gauge effect of health promotion activities• Deficient access of the general public, other health providers and stakeholders to DOH promotion data and materials• Inefficient dissemination	<ul style="list-style-type: none">• Enhancement of the HPCS web-site• Implementation of monitoring system for HPCS activities• Improve archiving of health promotion materials• Quad media• Blended Web and other technologies like radio & video• E-learning tools• Mobile health• Use of social media• Health workers access to health promo materials and electronic dissemination and presentation in health facilities and cathment areas• eLearning centers• emailed updates• Online collections of PDF documents avialable on-line or e-mail• On-line newsletters or e-mailed newsletters• Handheld devices for advocacy or learning sessions
	Health Human Resource (HHR) Development	<ul style="list-style-type: none">• Deficient data on HHR in the private sector, HR distribution, employment and skills and skill mix requirements• Weak HHR data sources and information systems• Incomplete data/information on providers health education and training; migration and similar problems• Weak public access to employment	<ul style="list-style-type: none">• Integrated health human resource development information system<ul style="list-style-type: none">◦ Integrated human resource helath management information system◦ National HHRH IS• Training information System enhancement• eLearning system for DOH academy• Enhancement of the e-job system (posting of vacancies & application uploading)



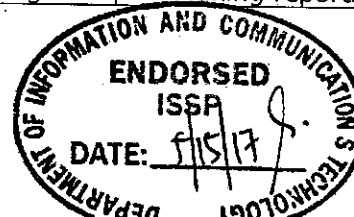


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
		<ul style="list-style-type: none"> opportunities in DOH Weak access to information on the availability of medical experts in various localities Inadequate transparency in HHR deployment 	<ul style="list-style-type: none"> Establishing communities of practice TeleHealth services for specific health providers such as DTTBs and PHTs in GIDA Handheld computers for data collection& sharing Online collections of PDF documents avialable on-line or e-mail On-line newsletters or e-mailed newsletters
MFO 3. HOSPITAL SERVICES			
	Hospital Operations and Management	<ul style="list-style-type: none"> Limited data sharing among hospital care providers and policy makers Hard to consolidate data at hospital level and national level including accessing data for each hospital cost centers Highly inadequate availability of timely and updated data/information from hospitals for consolidation and policy and standards development Inadequate capacity to document and report data and to use data to improve operations to make the appropriate decisions Electronic medical records policy and standards have not been developed Secured patient data sharing or information exchange Limited capacity to process and utilized hospital data Weak referral system with lack of data transfer from one facility to the other 	<ul style="list-style-type: none"> Electronic Medical Records – Scale up implementation of the integrated Hospital Operations and Management Information System in DOH Hospitals or Integrated Health Information System PhilHealth eClaims Module processing and PhilHealth membership verification and electronic claims submission Hospital service statistics reporting system Unified Health Management Information System and integration other database and reporting system Access to information and knowledge on hospital indicators, hospital management standards, policies and performance Enhancement of the Web-Enabled Public Assistance Information System and or Medical Assistance Program National Health fcaility Registry GIS, Health Atlas Handheld computers for data sharing Online collections of PDF documents avialable on-



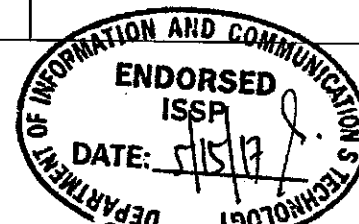


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
			<ul style="list-style-type: none">line or e-mailLiterature databasesOn-line newsletters or e-mailed newslettersmHealth
	National Blood Supply Coordination	<ul style="list-style-type: none">Weak system of sharing and accessing of data on inventory of blood units in various blood centers and knowing where these are availableWeak system of blood supply referrals and access to availability of blood supplyCommunication difficulties among blood supply stakeholders	<ul style="list-style-type: none">Expand implementation of the National Blood Bank Networking SystemPublic access to blood donation requirements & blood products availabilityHandheld computers for data collection & sharingOnline collections of PDF documents available on-line or e-mailLiterature databasesOn-line newsletters or e-mailed newslettersmHealth
	Drug Abuse Treatment and Rehabilitation Operation	<ul style="list-style-type: none">Manual recording and monitoring clients in rehabilitation centerInefficient data managementDifficulty of producing service statistics	<ul style="list-style-type: none">Enhancement of the Integrated Drug Test Operation and Management Information System (IDTOMIS)EMR in rehabilitation centers (iClinicSys or iHOMIS) as a drug abuse treatment and rehabilitation center management/patient systemMaintenance of the Yellow Prescription Pad System
MFO 4. HEALTH SECTOR REGULATION SERVICES	Health Facilities and Services Regulation	<ul style="list-style-type: none">Inadequate public access to information on available licensed and accredited services and facilitiesInadequate or difficult access to data to monitor compliance for some health facilities and servicesLimited sharing of data among licensing	<ul style="list-style-type: none">Expansion of the Integrated DOH Licensing Information SystemOnline application for registration/licensingOnline paymentUse of mobile technology to give status of applications to health facility ownersMaking reports accessible to the public – list of



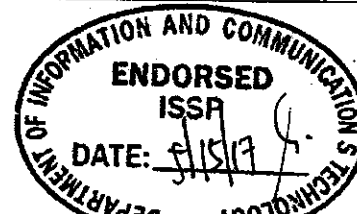


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
		<ul style="list-style-type: none">officers• Slow, limited and inefficient access of applicants/licensee on the status of application• Need to travel to or call HFSRB or Regional Office to apply, pay and know status of application• Multiple entries of same data• Inefficient and centralized entry of data on inspection and only done when regulatory officer returns to office• Inspection and Monitoring of Establishment Activities<ul style="list-style-type: none">• Slow reporting of violation and reporting of inspection results• Slow response to complaints• Ineffective system of accessing inspection history / records of certain establishment or owner• Information & Knowledge Management:• Difficult for other agencies to verify the registration/ licensing• Unability for general public to check if the facility or service is accredited or licensed .• Difficulty of accessing and sharing of specific information for and bylicensing officers at central and regional levels• Difficulty for evaluators and inspectors to respond to queries• Lengthy manual checking• Voluminous technical data	<p>licensed health facilities, etc.</p> <ul style="list-style-type: none">• Customer relations management• Subscription to on-line scientific journals• System implementation of the Integrated DOH Licensing info system to support the "One-Stop-Shop" for health facilities licensing including OFW Clinics, Dialysis Clinic Licensing, X-ray facilities and pharmacy Licensing• Exchange and Sharing&access to the ASEAN health facilities regulation harmonization efforts; Establish communities of practice• Public access to information and knowledge to safe and quality health facilities and services through the health portal• Document archiving of regulatory document requirements• Customer relations management





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
		<ul style="list-style-type: none">• Difficulty in document filing• Difficulty in processing the applications and payments.• Difficulty of checking the status of application• Slow manual verification of applications contributes to backlogs• Limited harmonization of systems and processes for licensing, accreditation and certification of drug products• Complicated and non-responsive client systems• Inadequate management and operational reports for decision-making and monitoring• Repetitive data entries for various accreditation and licensing requirements• Non-availability and slow access to relevant, timely and updated data and information• Difficult management of voluminous data on licensing establishment and products registration• Limited sharing and slow access to policies & guidelines among stakeholders slow adoption or development of standards that are applicable to the country	
	Drug Testing Operation Regulation	<ul style="list-style-type: none">• Need to ensure authentic and quality of drug testing• Fake testing and multi use of drug testing kits	<ul style="list-style-type: none">• Enhancement of the Integrated Drug Testing Operations and MIS to include:<ul style="list-style-type: none">◦ Licensing & accreditation of Drug test laboratories(DTL) and treatment & rehabilitation





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
		<ul style="list-style-type: none">• Data exchange among data beneficiaries	<ul style="list-style-type: none">centers (TRC)○ Operations of of DTLs & TRCs○ Quality Assurance Monitoring on proficiency testing, drug test kit registration and validation, operations○ Agency data beneficiary data exchange○ EIS
	Quarantine services and International Health Regulation	<ul style="list-style-type: none">• Need to continuously implement the International Health Regulations (IHR) (2005) with the technical support of WHO, by all the countries who committed themselves to meet the new requirements of the Regulations to significantly enhance national, regional and international public health security.• Limited access to information of disease outbreaks of international public health importance or public health emergency status• Difficulty monitoring regulation of ports and airports especially when there are emerging diseases• Inefficient reporting or problems of in accessing data for various quarantine stations including internal requirement for vaccinations	<ul style="list-style-type: none">• Quarantine services & international health regulation information system (Phase I implementation; Development of I and III)• Access to relevant international and regional information of outbreak verification list, disease outbreak news, weekly epidemiological records of cases or outbreaks of diseases under the IHR (yellow fever, plague, cholera) and other disease surveillance information and knowledge products• Information exchange and sharing, and management and dissemination of relevant data and information to the public and other health facilities and providers and even traveling citizens, transport crews• Bureau of Quarantine (BOQ) website enhancement• Implementation of the National Single Window with other agencies• Handheld computers for data collection• Online collections of PDF documents available on-line or e-mail• Literature databases• On-line newsletters or e-mailed newsletters





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
	Essential Medicines Regulations and Access	<ul style="list-style-type: none">• Asymmetry of information where consumer knowing very little about nature of products and options versus what is known by the physicians, pharmacies, drug manufacturers and intermediaries;• Not balanced regulatory environment• Constraint sharing of info on regulatory standards, pharmaceutical trials, policies & guidelines among key stakeholders• Limited access to information on high quality generic pharmaceutical products• Inadequate and disorganized distribution networks• Inadequate access to quality and updated drug prices• Late and inefficient access to product registration status, and banning	<ul style="list-style-type: none">• Enhancement and scale up of the revitalized drug price monitoring and inventory systems, and integrating this with health statistics database with systems for drug inventory, drug price monitoring system, and procurement• Enhancement & scaling up of the Drug Price Watch and drug Price Reference Index• Scaling up drug supply chain systems integration to support medicine procurement and distribution of and inventory to essential drugs• Access to information on international standards, scientific studies and various efforts on good governance in medicine and other pharmaceutical products• Public access to information on low-priced quality essential medicines, counterfeit drugs and related information• Maintenance of the website• Electronic link with the FDA website and information system• Customer relations management• GIS, Health Atlas• Literature databases• Electronic discussion groups
SUPPORT TO OPERATIONS		Common:	<ul style="list-style-type: none">• Establishment of COPs



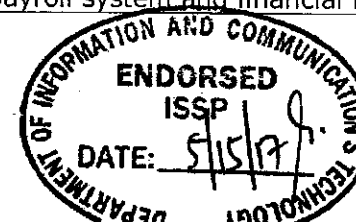


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
		<ul style="list-style-type: none">• Limited and difficult coordination process• Slow processing of transactions• Limited access to data from other offices• Limited coordination with other offices• Repetitive data entries and consolidation	<ul style="list-style-type: none">• Partners' portals• Common databases• Use of ICT tools
	Information and Knowledge Management	<ul style="list-style-type: none">• Unshared data; Limited access to of various data by various stakeholders• Disorganized an multiple duplicative and unparallel data sources• Most data and information are in hardcopies• Voluminous unclassified data• Difficult to locate documents; determine aging of documents in a particular action officers• Limited access by DOH to health information and knowledge sources	<ul style="list-style-type: none">• Regular enhancement, maintenance and operations<ul style="list-style-type: none">▪ Health Enterprise Data Warehouse▪ Health Portal including regional office & hospital websites▪ DOH Intranet▪ Communication systems (IPPBX, mobile/satellite phones, SSB, BGAN etc)▪ KM Tool Kits/KM hubs▪ Telehealth Applications▪ Call center services/Help Desk, CRM• Establishing communities of practice• Further improve information and knowledge exchange and sharing• Scaling up of the enhanced Document Tracking IS• Full implementation of the enhanced administrative issuance billboard• Full implementation of the e-library systems and inclusion of other modules• Continue with the DOH call center/put up a Customer Relation Management• Development of an Executive Information System/expanded dashboard• Scaling up implementation of the UHMIS• Use of social media





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
			<ul style="list-style-type: none"> • Call center operation & knowledgebase expansion • Telephone hotline
	Document Management and Library systems/ Resource centers	<ul style="list-style-type: none"> • Difficulty of tracing documents for action • Very long process of locating manually archived documents especially historical or past documents • Limited access to international and national databases and publication by various technical staff and medical practitioners especially in training hospitals 	<ul style="list-style-type: none"> • Scaling up document tracking system • Expansion of coverage of automated archiving system • Enhancement & maintenance of the Admin Issuance Billboard • Use of Integrated Library System • Subscription to on-line scientific journals • Online collections of PDF documents available on-line or e-mail • Literature databases • On-line newsletters or e-mailed newsletters
	Financial Management	<ul style="list-style-type: none"> • Slow consolidation a DOH financial report within acceptable period; • Late reporting or not updated financial status any time • Difficulty, tedious and slow consolidation of financial reports from field offices • Difficult monitoring and use of financial resources • Cannot monitor other sources of funding • Very tedious financial transactions with repetitive data entries • Limited integration of financial transaction with personnel management systems 	<ul style="list-style-type: none"> • Implementation of GIFMIS • System Integration of the Computerized Payroll System, Daily Time Record, and Monthly Report of Attendance and Personnel Information System • Integration of the financial, procurement transaction, logistics and assets management • e-payment
	Personnel Management	<ul style="list-style-type: none"> • Limited public access to employment opportunities in DOH and inability of the DOH to have a better selection of staff to be 	<ul style="list-style-type: none"> • Enhancement & integration and scaling up of the Personnel Information System with the HRHIS and payroll system and financial management



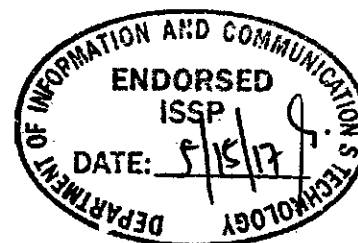


MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
		<ul style="list-style-type: none">employedLimited integration of data encoding for Payroll and Personnel Information SystemDifficulty of monitoring financial resources required and expendedDifficulty of monitoring vacancies	<ul style="list-style-type: none">Provide better access to vacant positions hiring opportunities such as enhancement of the e-job system and DOH portalEnhancement of biometric systemsEnhancement of e-jobs systemDevelopment of the Integrated Personnel Transaction Information SystemDevelopment of an online e-learning system for Doctors to Doctors to the Barrios and other health workersBiometric system upgrading
	Procurement Management	<ul style="list-style-type: none">Repetitive data entries in one transaction involving procurement, logistics and financial managementTedious and slow consolidation of annual procurement planInadequate price reference data for planning and procurement, and basis for evaluating overpricingDifficulty of monitoring of results of procurementsLimited interfacing various procurement and logistics processes or in completing the cycle up to payment	<ul style="list-style-type: none">Expansion of system's functionalityna implementation of the Procurement Operations and MIS (POMIS) and continue development harmonization with logistics and financial Management Information SystemDrug and medicines supply chain system enhancement





MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/ OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
	Logistics Management	<ul style="list-style-type: none">• Repetitive data entries in one transaction involving procurement, logistics and financial management• Difficulty of monitoring results of procurements, status of stocks/inventories and monitoring of distributed goods• Limited interfacing various procurement and logistics and financial processes or in completing the cycle	<ul style="list-style-type: none">• Scaling up the national online stock inventory and reporting system (NOSIRS)• Scaling up of Integrated Logistics Management System to primary health care facilities• Distribution and warehousing system models;• Integration of current Logistics and Management Information System modules or sub-systems, and the Property Accountability Management System.• Drug and medicines supply chain system enhancement• Use of handheld device for data collection & submission of requests• Telephone hotline
	Assets management	<ul style="list-style-type: none">• Inadequate control on DOH tangible assets• Inadequate data for monitoring and control; If there are, these are disorganized and in manual form; difficult to locate, collate and consolidate• Difficulty of managing personnel accountabilities during employment, retirement, resignation, long term leaves	<ul style="list-style-type: none">• Full implementation of the Property Accountability Management System• Provide access to DOH employees for clearance and inventory purposes• Integration of the financial, procurement transaction, logistics and assets management• Barcoding system• Handheld computers for data collection & submission• Online collections of PDF documents available on-line or e-mail• On-line newsletters or e-mailed newsletters



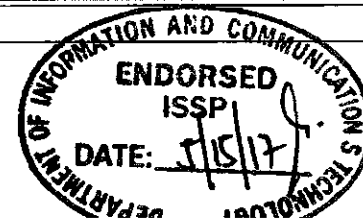
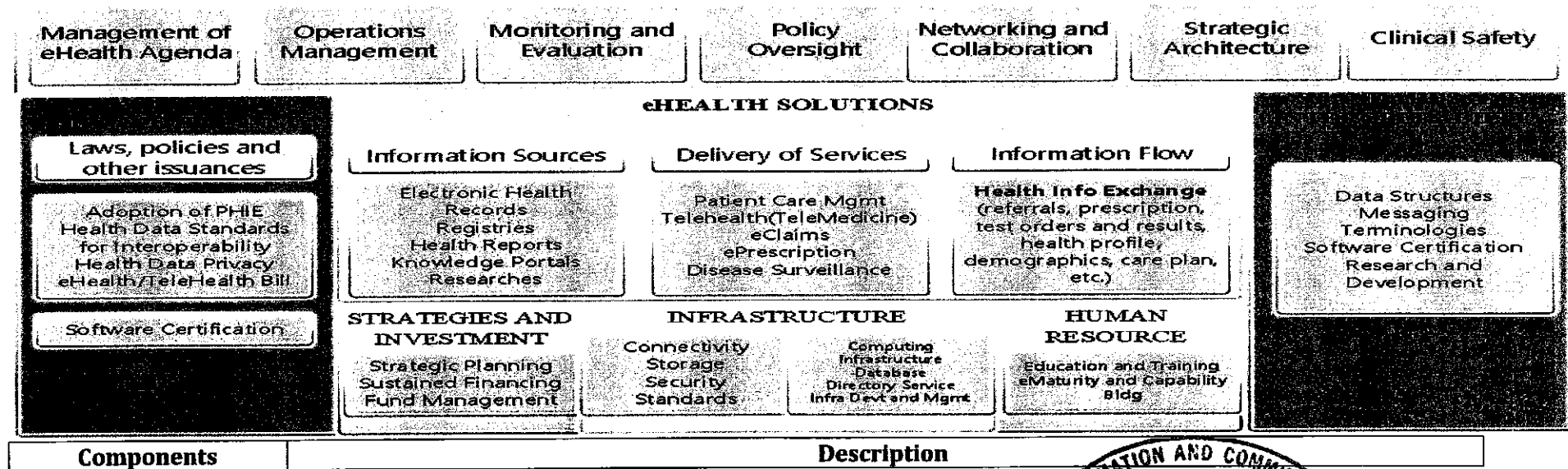


PART II. INFORMATION SYSTEMS STRATEGY

A. CONCEPTUAL FRAMEWORK FOR INFORMATION SYSTEMS(Diagram of IS Interface)

This ISSP also conforms to the Philippines eHealth Strategic Framework and Plan (PeHSFP) of 2014-2020. Figure 3 below shows the eHealth components or building blocks that have to put in place to achieve the eHealth vision which the ISSP subscribes to. The ehealth solutions at the middle portion of this figure which is based on ITU-WHO eHealth tool kit are the applications that are priorities of this ISSP. The other components on governance, legislation, policy and compliance, strategy and investment, infrastructure, human resources, and standards and interoperability are equally crucial for a successful ehealth, and this ISSP's implementation and thus major undertakings for DOH. These are described below. Figures 4 and 4a to 4e on the other hand show the detailed the information systems conceptual framework or interfaces.

Figure 3: Philippine eHealth Components
GOVERNANCE





1	Governance	Directs and coordinates eHealth activities at all levels like hospitals and health care providers. Critical areas of governance are management of the eHealth agenda, stakeholders' engagement, strategic architecture, clinical safety, management and operation, monitoring and evaluation, and policy oversight.
2	Legislation, Policy and Compliance	Formulation of the required legislations, policies and compliance to support the attainment of the eHealth vision. Examples of these are the national legislations, policies, and regulations on how health information are stored, accessed and shared across geographical and health sector boundaries; implementation of unique health identifier; implementation of national health data standards; and software certification or accreditation.
3	Standards and Interoperability	Promotes and enables exchange of health information across geographical and health sector boundaries through use of common standards on data structure, terminologies, and messaging. One strategy to ensure compliance to health data standards for interoperability is the implementation of software certification or accreditation where eHealth solutions must comply in order to be certified as able to exchange health information.
4	Strategy and Investment	Develops, operates and sustains the national eHealth vision. These components support the development of a strategy and plans to serve as guide in the implementation of the eHealth agenda. Investment refers to the funding or amount needed for executing the strategies and plans.
5	Infrastructure	Establishes and supports health information exchange, i.e. the sharing of health information across geographical and health sector boundaries, and implementation of innovative ways to deliver health services and information. Infrastructure includes physical technology and software platforms, services and applications to support health information exchange. Examples of these are high-speed data connectivity and computing infrastructure, like computers and mobile devices for the collection, recording and exchange of electronic information, among others.
6	Human Resource	Workforce or manpower to develop, operate or implement the national eHealth environment such as the health workers who will be using eHealth in their line of works, health care providers, information and communication technology workers, and others.
7	eHealth Solutions	Required services and applications to enable widespread access to health care services, health information, health reports, health care activities, and securely share and exchange patient's information in support to health system goals. These address the needs of the various stakeholders like individuals, health care providers, managers, officials, and others. Examples of eHealth solutions are electronic health/medical/personal records, electronic referrals, medications management, distance learning and electronic resources, telemedicine, mobile health, adverse event monitoring, disease surveillance, among others.

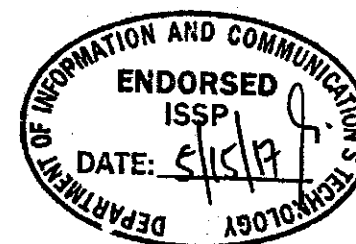
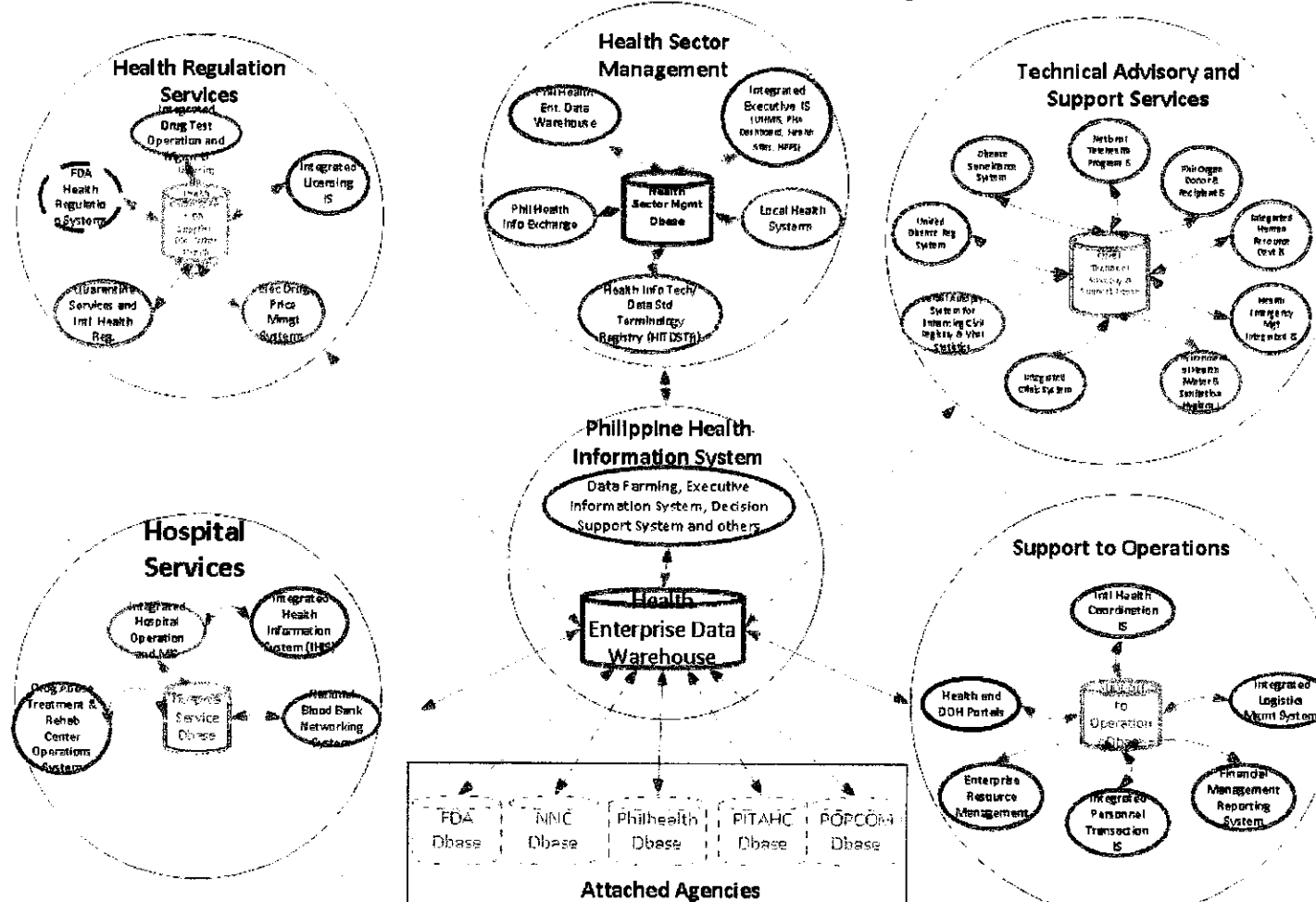




Figure 4: Detailed Diagram of Information Systems Interface



Red symbols—for development, Blue symbols—for enhancement, Black symbols—operational & continuing, Green symbols—IGovphil & other cross agency services





Figure 4a: Detailed Diagram of Information Systems Interface for Health Sector Management

Health Sector Management

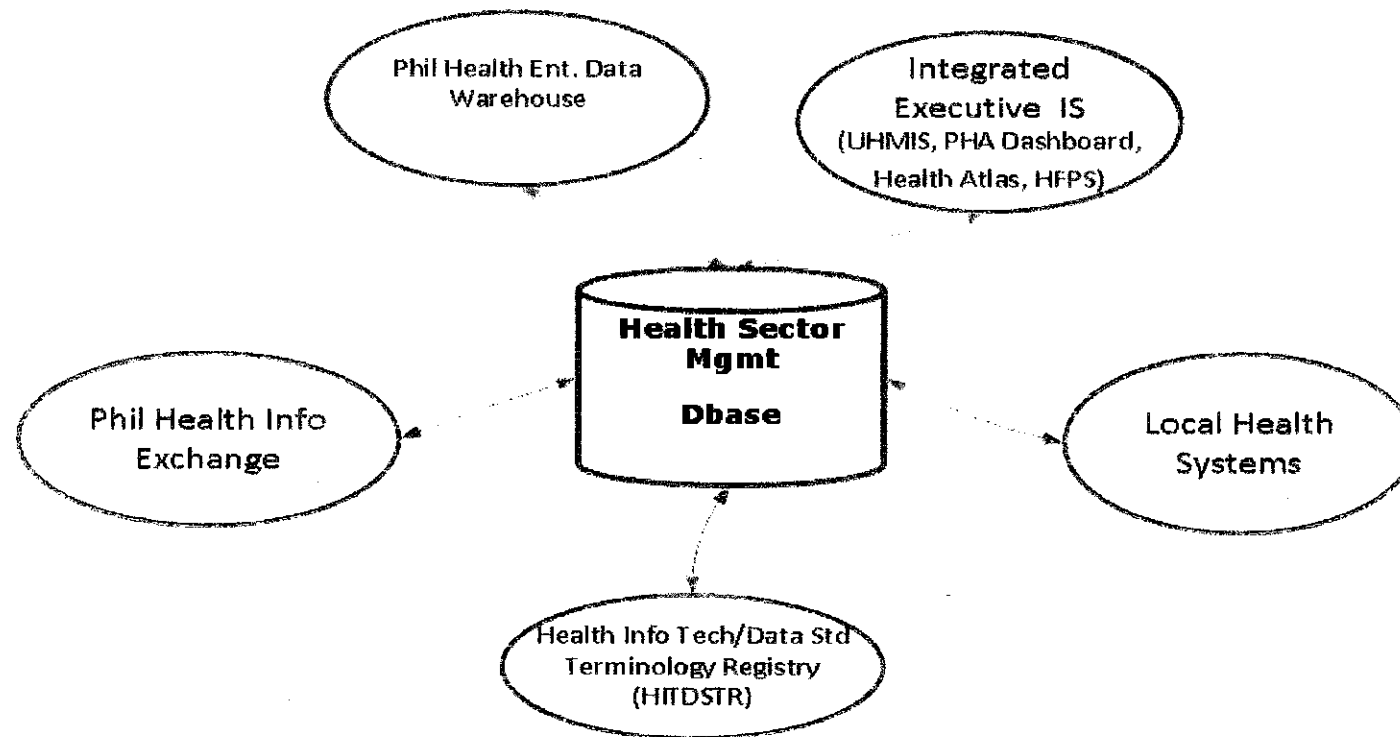




Figure 4b: Detailed Diagram of Information Systems Interface for Hospital Services

Hospital Services

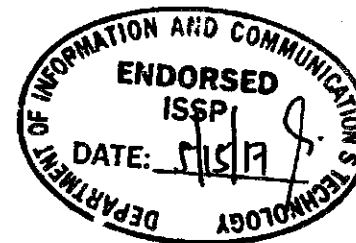
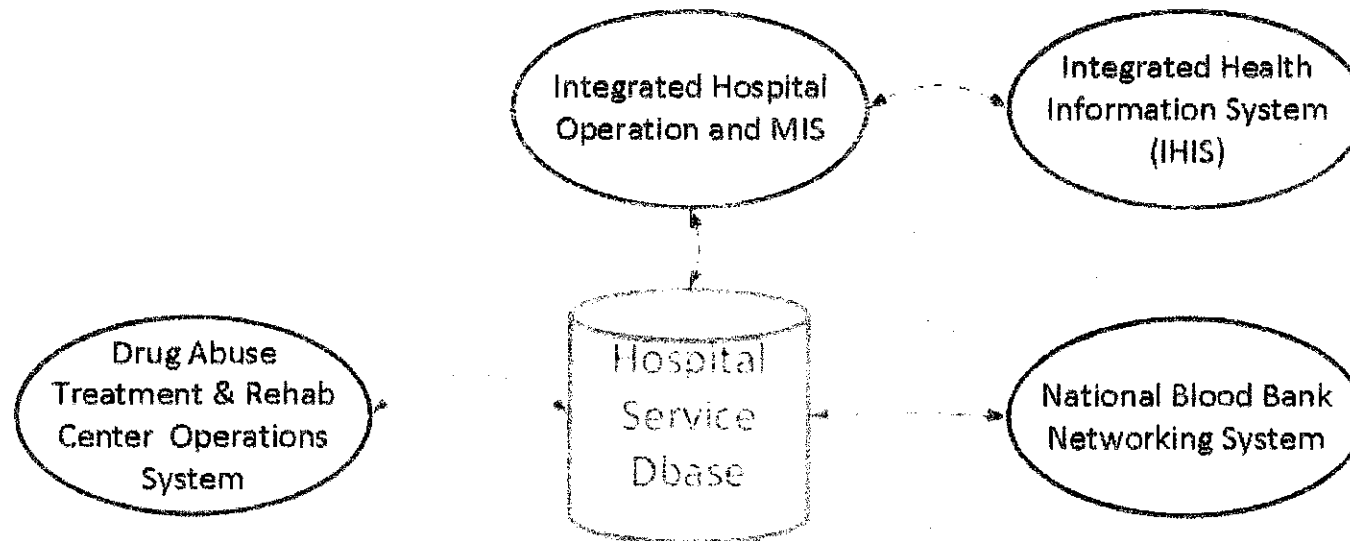




Figure 4c: Detailed Diagram of Information Systems Interface for Health Regulation
Health Regulation Services

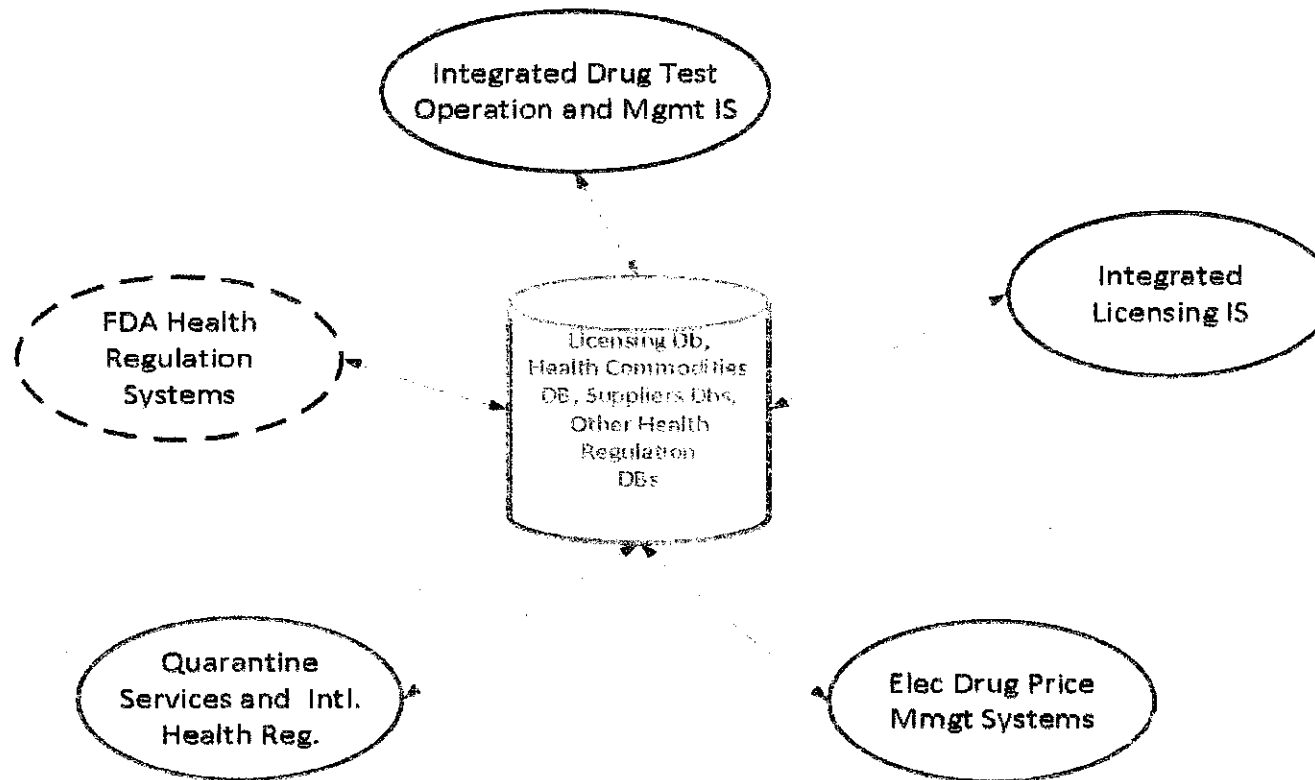




Figure 4d: Detailed Diagram of Information Systems Interface for Technical Advisory & Support Services

Technical Advisory and Support Services

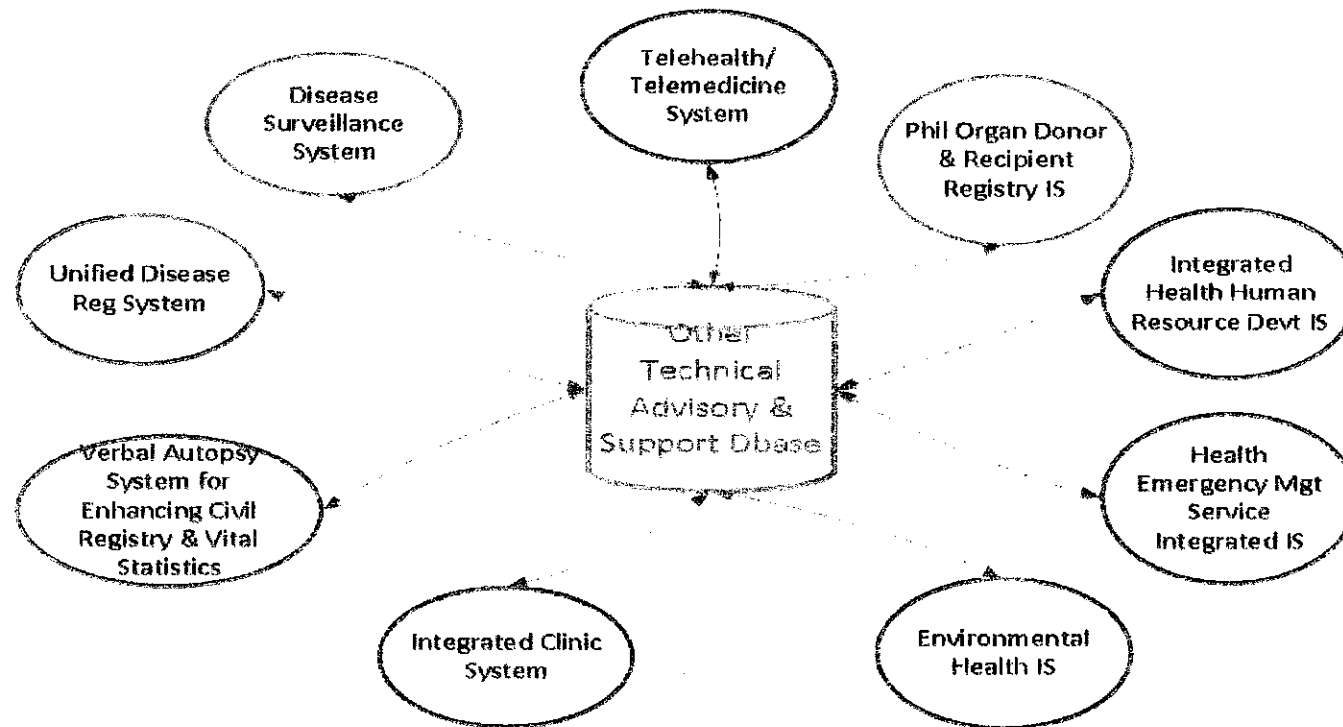
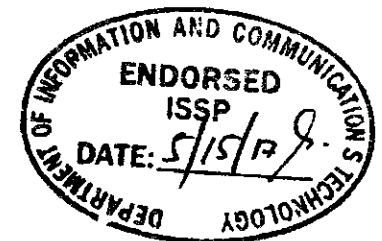
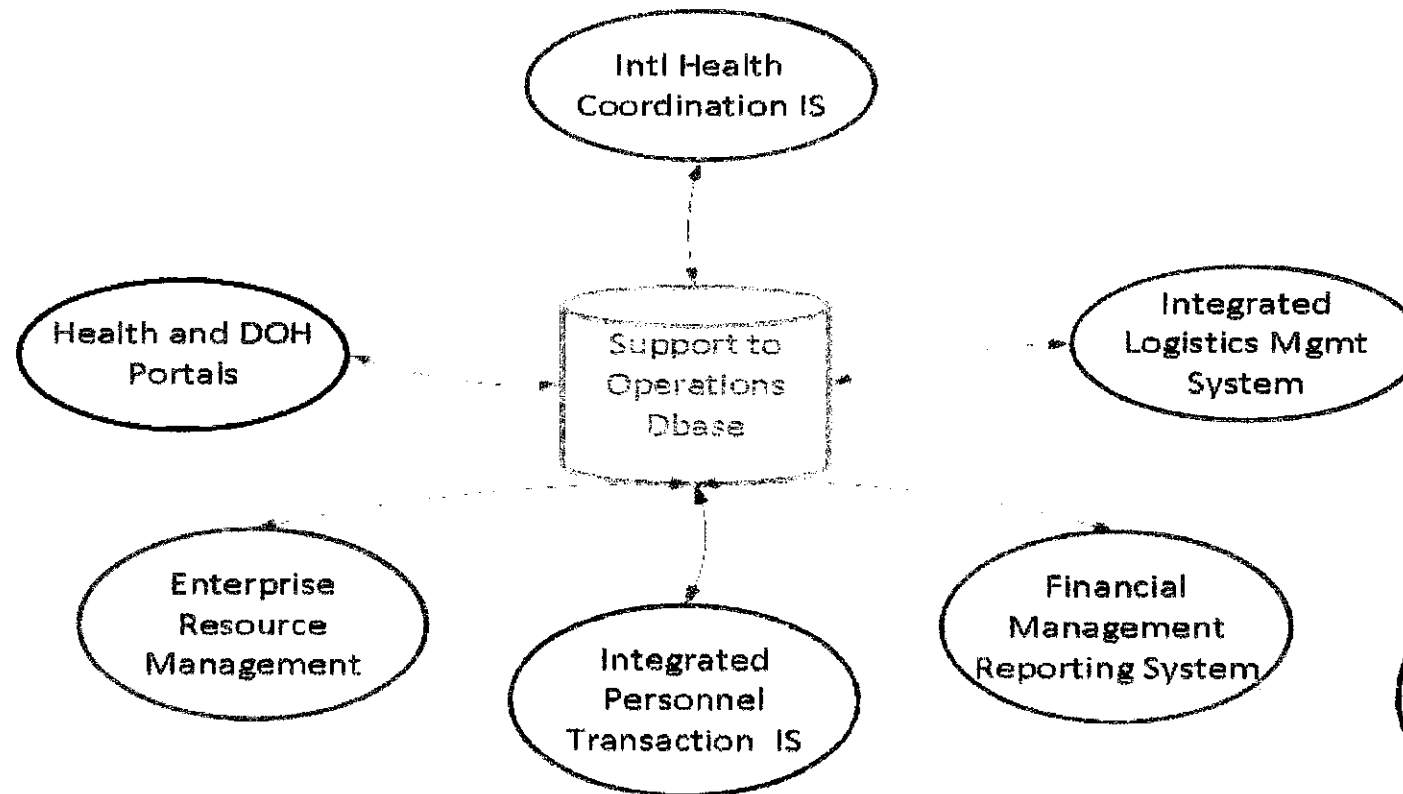




Figure 4e: Detailed Diagram of Information Systems Interface for Support to Operation Services

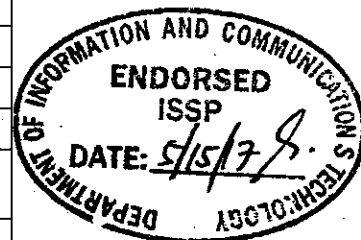
Support to Operations





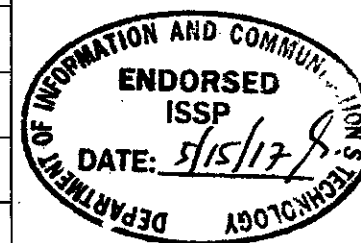
The following matrix illustrates existing or envisioned linkages of the major information systems and databases. Since this is a strategic plan and most systems are still not at the stage of functional and technical design, and some existing systems are being redesigned and integrated, the linkages between the two and even groupings may change during the process of development.

Databases	Information systems																										
	Health Sector Management Services					Hospital Services			Health Regulation				Technical & Advisory								Support to Operations						
	PHIE	Integrated EIS	HITDSTR	Phil. Health enterprise Data house	Local Health System	IHOMIS/IHIS	NBBNets	DATRCOS	ILicensing IS	iDrug Testing OMIS	e Drug Price MS	Quarantine Services & IHR	Health emergency MSIS	iClinicSYS	VAS for ECRVS system	IUDRS	Disease Surveillance System	Environmental and Health IS	Integrated Health HR Development system	Telehealth Service System	Phil. Organ Donor & Recipient Registry IS	Health & DOH Portals	ERM	FMRS	ILMS	IPTIS	International Health Coordination
Health Data Standards	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Health Facility	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Shared Health Record	/			/		/		/						/													
Health Atlas		/		/	/				/				/				/	/		/		/	/				
Local Health					/																						
Political Profile					/																		/				
Licensing				/			/		/	/	/																
Health Commodities					/	/	/	/			/		/	/									/	/	/		



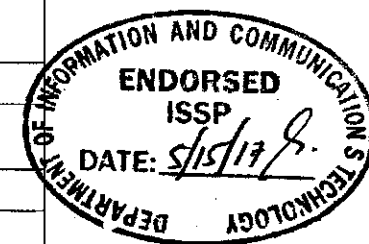


Databases	Information systems																										
	Health Sector Management Services					Hospital Services			Health Regulation			Technical & Advisory								Support to Operations							
	PHIE	Integrated EIS	HITDSTR	Phil . Health enterprise Data house	Local Health System	IHOMIS/IHIS	NBBNets	DATRCOS	ILicensing IS	iDrug Testing OMIS	e Drug Price MS	Quarantine Services & IHR	Health emergency MSIS	iClinicSYs	VAS for ECRVS system	IUDRS	Disease Surveillance System	Environmental and Health IS	Integrated Health HR Development system	Telehealth Service System	Phil. Organ Donor & Recipient Registry IS	Health & DOH Portals	ERM	FMRS	ILMS	IPTIS	International Health Coordination
Suppliers																							/	/	/		
Drug prices											/												/	/	/		
Ports & Airports Health												/															
Health Emergency													/				/										/
IClinicSys EMR	/			/										/		/											
Disease Registry	/			/												/											
Disease Surveillance																	/										
Field Health Services	/	/		/													/										
Hospital Statistics				/																							
Health Equipment																							/	/	/		
Public Assistance						/																					



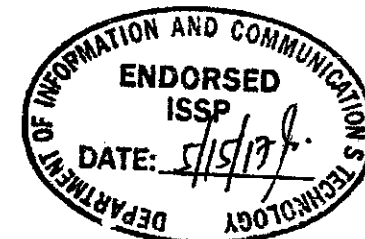


Databases	Information systems																										
	Health Sector Management Services					Hospital Services			Health Regulation				Technical & Advisory								Support to Operations						
	PHIE	Integrated EIS	HITDSTR	Phil. Health enterprise Data house	Local Health System	IHOMIS/IHIS	NBBNets	DATRCOS	ILicensing IS	iDrug Testing OMIS	e Drug Price MS	Quarantine Services & IHR	Health emergency MSIS	iClinicSYs	VAS for ECRVS system	IUDRS	Disease Surveillance System	Environmental and Health IS	Integrated Health HR Development system	Telehealth Service System	Phil. Organ Donor & Recipient Registry IS	Health & DOH Portals	ERM	FMRS	ILMS	IPTIS	International Health Coordination
Organ Donor & Recipient																					/						
Births						/								/	/												
Deaths						/								/	/												
Hospital EMR	/			/		/																					
Hospital Services						/																					
Blood banks						/	/																				
Drug Abuse Treatment								/	/	/																	
Financial		/																					/	/			
Goods Inventory																							/	/	/		
Procurement																							/	/	/		
Warehousing Management																							/	/	/		
Infobook/FAQs																						/					
Health Human						/													/				/	/		/	





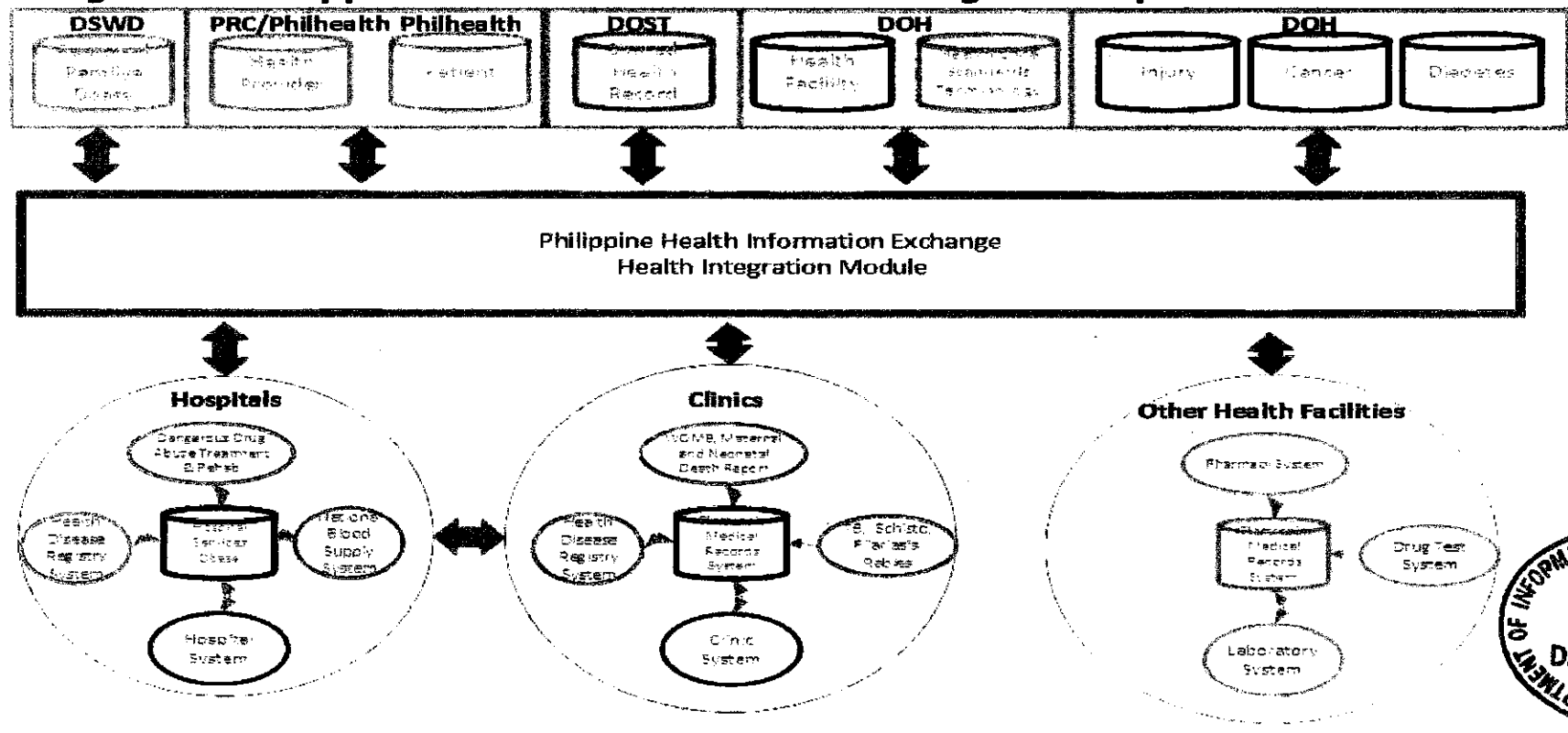
Databases	Information systems																										
	Health Sector Management Services				Hospital Services		Health Regulation			Technical & Advisory								Support to Operations									
	PHIE	Integrated EIS	HITDSTR	Phil. Health enterprise Data house	Local Health System	IHOMIS/IHIS	NBBNets	DATRCOS	ILicensing IS	iDrug Testing OMIS	e Drug Price MS	Quarantine Services & IHR	Health emergency MSIS	iClinicSYs	VAS for ECRVS system	IUDRS	Disease Surveillance System	Environmental and Health IS	Integrated Health HR Development system	Telehealth Service System	Phil. Organ Donor & Recipient Registry IS	Health & DOH Portals	ERM	FMRS	ILMS	IPTIS	International Health Coordination
Resource																											
Training						/													/							/	
Job Posting						/																				/	
Personnel						/																				/	
Payroll																			/							/	
Document Tracking																			/				/	/	/	/	
Document Archiving																			/						/	/	
International Health Projects																							/	/			/





Figures 5 & 6 show the Philippine Health information Exchange Framework and Architecture, respectively and illustrate relationships and interfaces of the various point care systems which are major ICT projects and information systems in this ISSP to common registries, shared health record, health data reporting mechanism and the health data standards with the standards health and the integration module in between. This a key endeavour included in this ISSP. Figure 7 shows the current status for 2017 and the planned tracks for the two to three years.

Figure 5: Philippine Health Information Exchange Conceptual Framework



Red symbols—for development, Blue symbols—for enhancement, Black symbols—operational & continuing, Green symbols—iGovphil & other cross agency services

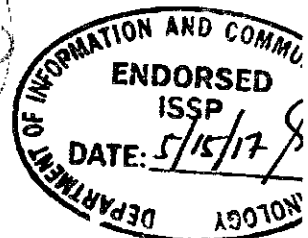




Figure 6: Philippine Health Information Exchange Architecture

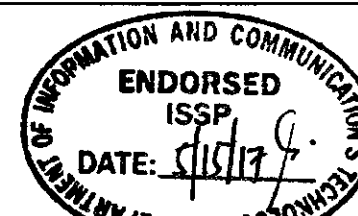
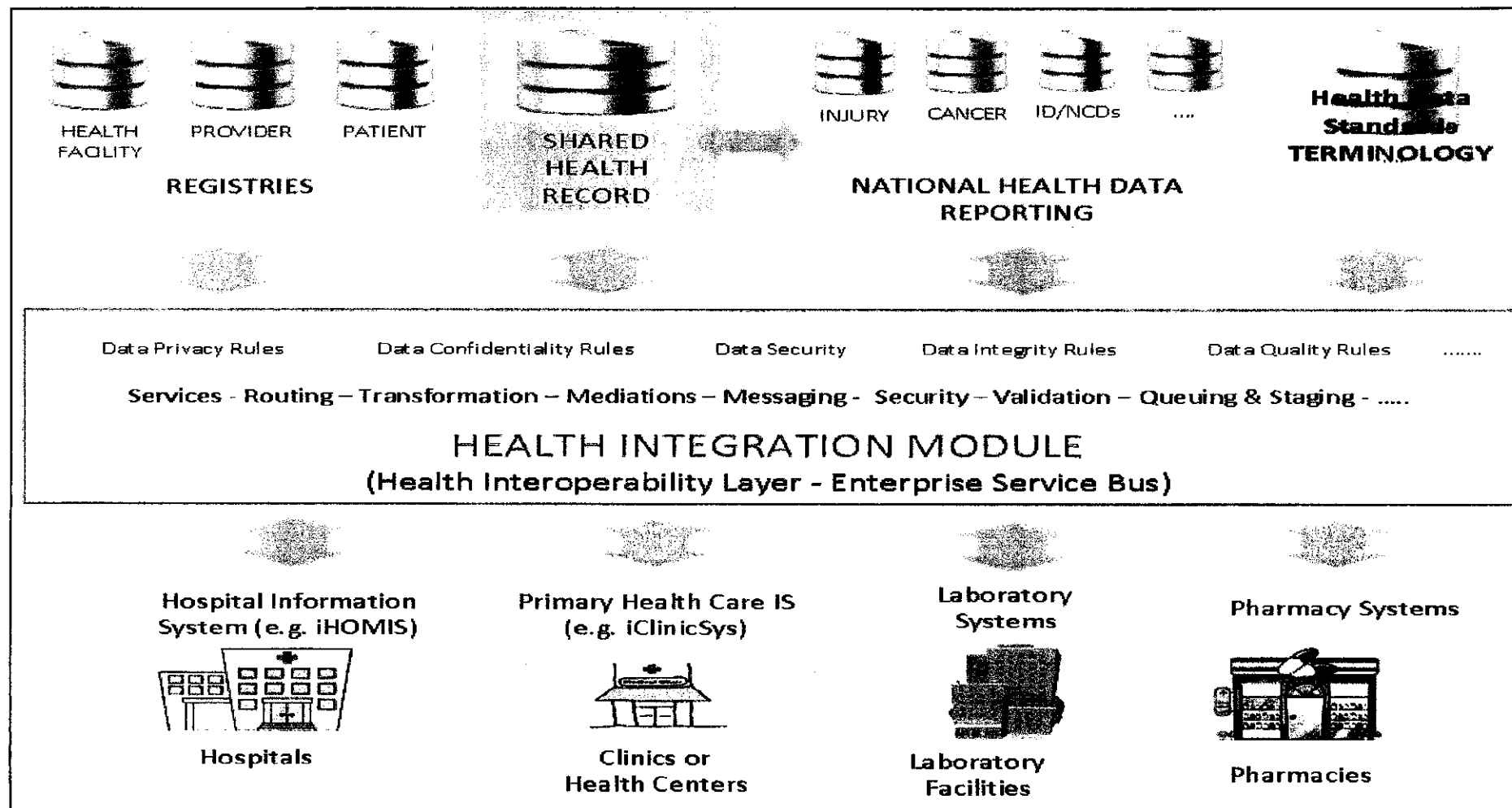
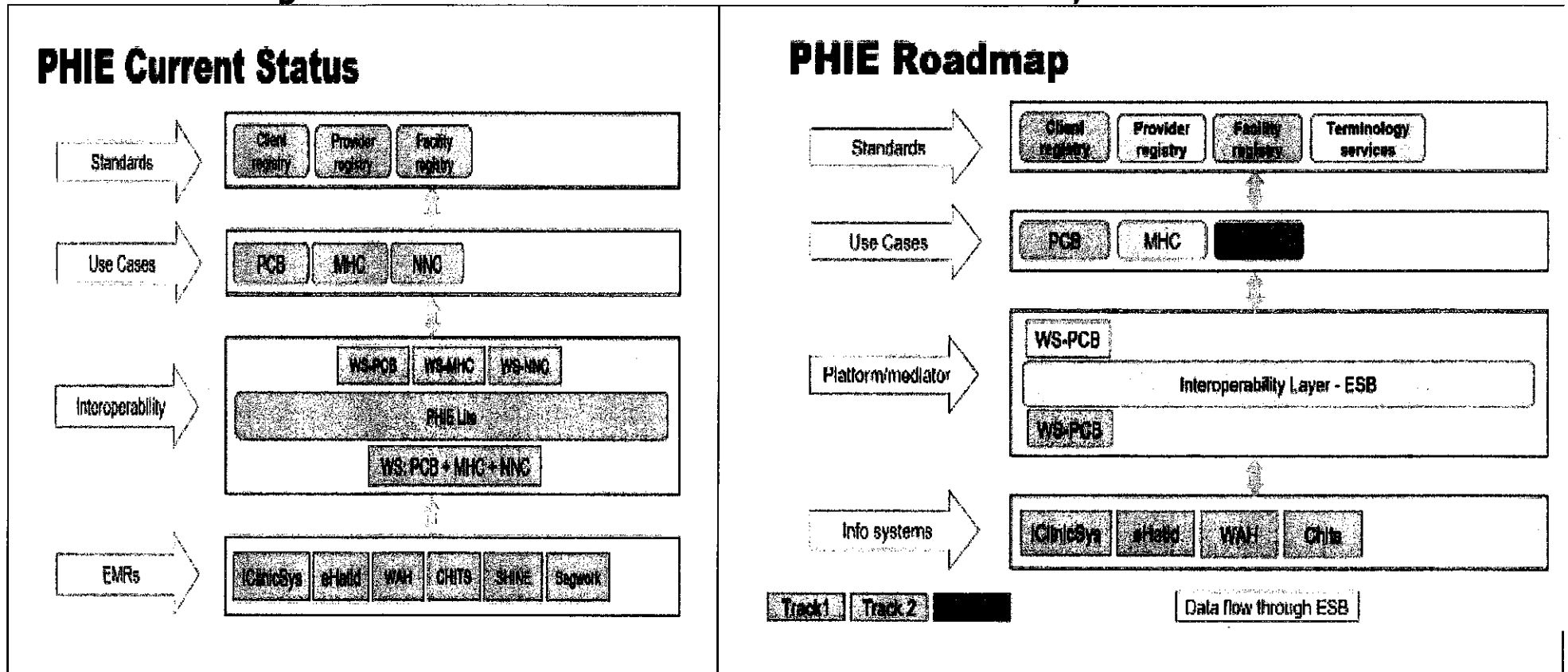




Figure 7: PHIE CURRENT STATUS AND ROAD MAP, 2017-2020



Legend: PCB (Primary Care Benefits), MHC (Maternal Health Care), SHR (Shared Health Record, WS (Web Service). The current edition of PHIE is a key reason why PhilHealth's & DOH's national primary care program (requiring EMR automation) is now underway targeting ~2,500 Rural Health Units. The Neo Natal Care (NNC) use case was added while adding EMR providers.





B. DETAILED DESCRIPTION OF PROPOSED INFORMATION SYSTEMS

I. HEALTH SECTOR MANAGEMENT SERVICES

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		1. Philippine Health Information Exchange (PHIE)
DESCRIPTION		<p>The Philippine Health Information Exchange is a system that will provide a single unified view of the patient's data or record across and between health facilities whether a hospital or clinic through an interface that is accessible anywhere and anytime. It is an infrastructure for data sharing between health care providers and in supporting access to the patient's record among and across providers. It is envisioned to contain a range of data, i.e. demographics, medical history, alerts like allergies, immunization status, laboratory test results, vital signs, and personal status like age and weight. It will be one integrated health record for each Filipino people. Disparate information systems can be connected using health information exchange or HIE that stands between the different applications and manages the implementation of standards. The HIE allows different applications to exchange data with each other without loss of semantics. Health service delivery facilities like local health centers, hospitals, DOH and PhilHealth can communicate with each other effectively to collaborate in the care of the patients.</p> <p>PHIE Lite is the first phase of implementation which includes the initial use case for PhilHealth's Primary Care Benefit and Maternal and Neonatal Health. This is currently for nationwide implementation.</p>
STATUS		PHIE Lite- ongoing initial implementation, PHIE Full for development
DEVELOPMENT STRATEGY		Combination of in-house and outsourced-development
COMPUTING SCHEME		Web-based
USERS	INTERNAL	All DOH Offices
	EXTERNAL	General Public, Health Providers, LGUs, Academe, Other Government Agencies
OWNER		Knowledge Management and Information Technology Service (KMITS), Philhealth





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	2. Integrated Executive Information System (iEIS) <ul style="list-style-type: none">• Unified Health Management Information System (UHMIS)• Philippine Health Agenda Dashboard (PHAD)• National Health Atlas (NHA)• Health Facility Profiling System (HFPS)• Sub-national Integrated Health Information Systems (SIHIS)
DESCRIPTION	<p>The Integrated Executive Information System is a system that provides aggregate or summarized data for those who need it. UHMIS helps facilitate and support the information and decision-making needs of DOH Management and program managers by providing access to data/information from different information systems or data sources. Data warehousing has been used to establish it and data mining/farming to enhance it further. It is actually a portal that has links to the different information systems being implemented by DOH. This is also the initial phase of the data warehouse for health.</p> <p>The iEIS shall be developed to integrate the UHMIS, PHAD, NHA and Health Facility Profiling System to provide a single portal for the DOH management.</p> <p>PHAD previously called the KP Dashboard is a data visualization system for the Secretary of Health and Executive Committee, PhilHealth, policy makers, program managers, and other key stakeholders on key indicators to gauge progress on the implementation for Universal Health Care. This shall also monitor national objectives for health targets, Sustainable Development Goals (SDGs) commitment and other health score cards.</p> <p>NHA is a collection of interactive online maps and materials depicting a variety of health indicators including provincial health profile, health facilities, disease surveillance, social determinants of health and disaster management. The NHA will expand to include mapping of the GIDA and is updated when data visualization is required for a certain data set for a specific group of people.</p> <p>The Health Facility Profiling System includes the general information, catchment area and referral facility, services offered or capacities, utilities, health human resources and functional equipment. The system was initially developed as a repository of the health facility profile survey</p>



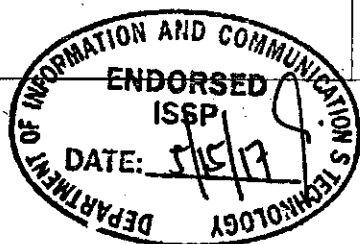


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	2. Integrated Executive Information System (iEIS) <ul style="list-style-type: none"> • Unified Health Management Information System (UHMIS) • Philippine Health Agenda Dashboard (PHAD) • National Health Atlas (NHA) • Health Facility Profiling System (HFPS) • Sub-national Integrated Health Information Systems (SIHIS)
	<p>conducted in 2012. The database will be updated through another round of health facility survey.</p> <p>The SIHIS shall gather relevant systems requirements needed at provincial and regional levels. It will integrate primary care facility and hospital systems' input, process, output and income indicators and specific data sets</p>
STATUS	<ul style="list-style-type: none"> • iEIS for development • UHMIS is operational but being enhanced and updated; • PHAD is revision to include the new and updated indicators for the current administration. • NHA, is operational – for further updating given that there is an on-going data collection and validation for geographic coordinates, with integration to Philippine Geoportal and development of spatial data infrastructure. • HFPS is operational but needs enhancement, database needs to be updated • SIHIS for development & enhancement of existing tools used in one regional office
DEVELOPMENT STRATEGY	Combination of In-House and Outsourcing
COMPUTING SCHEME	Web-Based
USERS	INTERNAL All DOH Units, Regional Health Offices and Hospitals
	EXTERNAL General Public, DOH Attached Agencies ; Other Government Agencies Health Facilities, Local Government Units, Health Partners, Academe, Researchers
OWNER	HPDPB, BLHD & KMITS



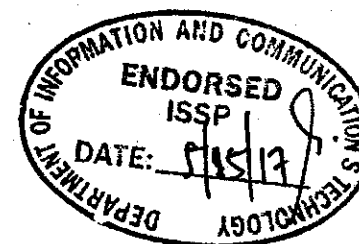


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	3. Health Information Technology/Data Standard Terminology Registry (HITDSTR) <ul style="list-style-type: none">• National Health Data Dictionary System (NHDDS)• National Health Facility Registry (NHFR)• Health Data Standards Terminology Registry Service(HDSTRS)
DESCRIPTION	<p>This is an on-line searchable web-services of nationally and internationally endorsed data definitions and specifications and health information technology standards reference system.</p> <p>The Health Data Standards Terminology Registry Service (HDSTRS) is a collection of concepts, relationships, terms, and metadata defining concepts, all mapped to standards. The existence of a terminology service application within the PHIE is highly critical and mandatory especially with the current complexities in the national health system environments, particularly among reporting health facilities where various end-users and/or stakeholders assign different meanings to the same terms and where discrepancies in reports result because of incongruent assignments of meanings to those terms. The TS aims to publish and impose agreed definitions of terms and their hierarchies of meanings. It is envisioned to serve as the canonical database of concepts and terms used in the PHIE and their ontological relationships. It forms the semantic backbone for the standardization and integration of disparate health data terminologies and concepts, and data sources across the entire health sector.</p> <p>National Health Data Dictionary establishes a core set of uniform definitions to promote uniformity, availability, reliability, validity, consistency and completeness in data; accord with agreed protocols and standards; promote national standard definitions and formats; and facilitate and promote the development of good data definitions.</p> <p>The National Health Facility Registry is a listing of health facilities or places that provide health care services, details of their location and unique ID. These may include hospitals, clinics, outpatient care department and specialized care centers, e.g. birthing home and psychiatric care centers. For effective health information systems, a complete and reliable</p>



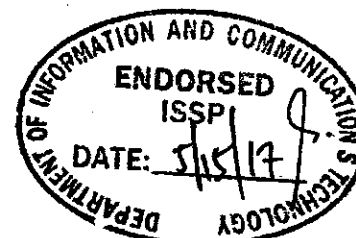


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	3. Health Information Technology/Data Standard Terminology Registry (HITDSTR) <ul style="list-style-type: none"> • National Health Data Dictionary System (NHDDS) • National Health Facility Registry (NHFR) • Health Data Standards Terminology Registry Service(HDSTRS)
	<p>inventory of health facilities is critical. The Health Facility Registry/System establishes a central database that geographically references all health care facilities in the country. All licensed health facilities approved by the Health Facilities and Services Regulation Bureau, data submitted by rural health units and barangay health stations are provided with unique codes. To expand its usefulness, here is a provision to enter the different services provided by a health facility, facilities and equipment available. Also, it has to cover all other health facility.</p>
STATUS	<p>Operational, on-going enhancement, NHDD and Standards Terminology for QA and database build-up</p> <p>NHFR is under continuous maintenance and updating of the list of health facilities to include all licensed health facilities of DOH.</p> <p>HDSTRS operational but need to be expanded in terms of functionality</p>
DEVELOPMENT STRATEGY	Combination of in-house development and outsourcing
COMPUTING SCHEME	Web-Based
USERS	INTERNAL All DOH units, regional health offices and hospitals
	EXTERNAL General public, attached agencies ; other government agencies health facilities, local government units, DOH partneracademe, researchers all DOH units, regional offices and hospitals; systems developers
OWNER	Knowledge Management And Information Technology Service





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		4. Philippine Health Enterprise Data Warehouse (PHEDW) <ul style="list-style-type: none">- DOH – Philhealth Data Harmonization- Establishment of the DOH Dashboard and M&E
DESCRIPTION		<p>This brings together data from different data sources or health information systems that need to be shared and disseminated to all possible users. It is large system for health data reporting from a wide range of data sources and data analysis.</p> <p>A preliminary DOH data warehouse has been tried that only includes available data and databases from existing information systems and other external data sources that the DOH needs. This system will be towards a health sector data warehouse and will incorporate other data sources such as from PhilHealth and new registries based on agreed health data standards and what can be permitted to be exchanged. It will include what is existing in the DOH datawarehouse and is being expanded to include DOH and Philhealth Data Harmonization</p>
STATUS		On -going design; For Development
DEVELOPMENT STRATEGY		Combination of In-House Development and Outsourcing
COMPUTING SCHEME		Web-based
USERS	INTERNAL	All DOH Units, Regional Health Offices And Hospitals
	EXTERNAL	General Public, DOH Attached Agencies ; Other Government Agencies Health Facilities, Local Government Units, DOH Partners, Academe, Researchers
OWNER		Knowledge Management and Information Technology Service





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		5. Local Health Systems (LHS) <ul style="list-style-type: none">• Political Profiling System (PPS)• Performance monitoring system or LGU Scorecard, Health Human Resources Augmentation(Barangay Health Workers, Doctors to the Barrios, Community Health Teams, Nurses etc)• Local Health Information System (LHIS)
DESCRIPTION		The system is a collection of data on the LGU as an implementor of and a partner in delivering health services in their own catchment area and in service delivery network between two or among several LGUs. . The system will maintain and provide access to exemplary practices documentation relevant to local health implementation including demographics, relevant political,socio-econonmic data, and gaps; registry of all government elected officials and the health related requests for technical assistance and status of request if pending or provided, health human resource management deployment or augmentations, including performance or service level agreements monitoring through a LGU scorecard
STATUS		<ul style="list-style-type: none">• LGU Scorecard System for implementation/for expansion – some databases exist like LGU performance;• National BHW Registry – ongoing data buildup• PPS & LHIS – for development and integration with existing modules
DEVELOPMENT STRATEGY		Combination of Outsourced and In-house
COMPUTING SCHEME		Web-based
USERS	INTERNAL	All DOH offices
	EXTERNAL	Local Government Units, General Public
OWNER		Bureau of Local Health Systems Development





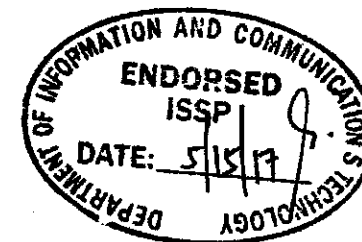
II. HOSPITAL SERVICES

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	1. Hospital Information Systems iHOMIS - Hospital Operations and Management Information System & Interoperable Health Information System (IHIS)
DESCRIPTION	<p>These are electronic medical record system and hospital information system. It automates the operation of a government hospital. It reinforces standard operating procedures to systematically collect, process, generate and share data/information to facilitate and improve patient delivery services. The IHOMIS includes the following modules:</p> <p>Module 1: Admitting, Emergency Room, Outpatient, Billing, Cashier, PhilHealth, Medical Records, Medical Social Service</p> <p>Module 2: Wards, Laboratory, Pharmacy, Radiology, Revenue Centers, Dietary and Other Ancillaries</p> <p>Module 3: Personnel Information System, Integrated Logistics Management System, Financial Management, Health Care Equipment System</p> <p>Included in this integrated HOMIS in particular Module 1 is PhilHealth's requirements for electronic claims submission</p> <p>The Interoperable Health Information System (IHIS) is a project which aims to establish an integrated Electronic Health Record (iEHR) at the curative and preventive service points which are separately located and managed. Generally, the hospital system has two sub-systems: Inpatient Care and Outpatient Care (OPD) with ancillary services modules. The OPD module will also be used by the primary care facilities. The focus of the subsystem are more of clinical care.</p> <p>It also facilitate the submission of service statistics of public health programs included in the Field Health Services Information system such as maternal care (Prenatal, Post Partum), child care, family planning, tuberculosis, malaria among others. The IHIS will include</p>



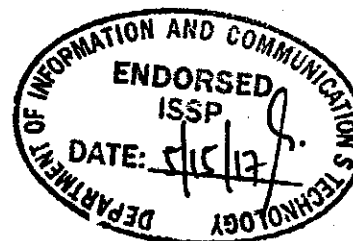


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		1. Hospital Information Systems iHOMIS - Hospital Operations and Management Information System & Interoperable Health Information System (IHIS)
		requirements for Service Delivery Network (SDN); improve reporting in the disease registries; to improve efficiency and effectiveness of hospitals operations as well in rural health units towards providing better health services and will incorporate eclaims of Philhealth for hospitals and PCB for primary care facilities.
STATUS		<p>For iHOMIS:</p> <ul style="list-style-type: none"> • At least Module 1 operational in 104 government (50 DOH & 54 LGU) hospitals. Replication is going on in another 25 hospitals • Module 2 is in at least 10 hospitals; For further deployment scale up in remaining hospitals with module 1. • Module 3 Some modules operational; waiting for GIFMIS if not will implement by 2017 • Module 3 with existing logistics management, Personnel, Financial management modules. • Under continuous system maintenance and enhancement <p>The IHIS is ongoing development - for pilot implementation in Region 4A (CALABARZON) by 3rd quarter of 2017. Currently, the developer is incorporating eclaims and Primary Care Benefit (PCB) Package of Philhealth for hospitals and PCB and eClaims for primary health care facilities.</p>
DEVELOPMENT STRATEGY		Combination of in-House & Outsourced development
COMPUTING SCHEME		Client - Server To Web-Based
USERS	INTERNAL	Hospitals DOH Program Managers
	EXTERNAL	General Public in particular patients, Other Government Agencies like Philhealth
OWNER		Health Facility Development Bureau and KMITS





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		2. National Blood Bank Networking System (NBBNets)
DESCRIPTION		A system that supports the operations of a network of modernized national and regional blood centers operating on a full voluntary and non-remunerated blood donation system to ensure safe, adequate, accessible and rationally used blood supply. The system includes donor registration, blood management, inventory and networking among blood centers that includes sharing of inventories and exchanges of blood products.
STATUS		Implemented in 13 Blood Centers nationwide and Philippine Blood Center Undergoing continuous system maintenance
DEVELOPMENT STRATEGY		Combination of In-House & Outsourced development
COMPUTING SCHEME		Web-Based
USERS	INTERNAL	National Voluntary Blood Program, Phil. Blood Center & DOH Hospitals' Blood Centers
	EXTERNAL	Philippine National Red Cross; Others Government And Private Hospitals and Blood Centers/Facilities ; General Public
OWNER		National Voluntary Blood Services Program, Philippine Blood Center





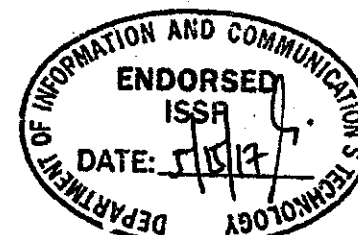
NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		3. Drug abuse treatment and rehabilitation center operations system (DATRCOS)
DESCRIPTION		<p>A system that supports the operations Drug Abuse Treatment and Rehabilitation Centers which are mandated to rehabilitate patients primarily. The system includes an electronic medical record that includes results of drug dependency examination, monitoring of illnesses and accidents, monitoring of after-care and follow-up treatment of drug abuse dependents.</p> <p>Since this is also a patient-based system and will use an electronic medical record (EMR) module, the EMR portion of iHOMIS or iClinicSys which are tested and implemented in several health facilities will be used depending on the need and fit to the DTRC requirements.</p>
STATUS		For development or customization of EMR system for DATRCs and Pilot Implementation; May use EMR portion of iHOMIS or iClinicSys
DEVELOPMENT STRATEGY		Combination of In-House and Outsourcing
COMPUTING SCHEME		Web-based
USERS	INTERNAL	Dangerous Drug Abuse Prevention and Treatment Program; Drug Abuse Treatment and Rehabilitation Centers under DOH
	EXTERNAL	Dangerous Drug Board; Private Treatment And Rehabilitation Centers, Government agencies involved in drug-abuse control and management
OWNER		Dangerous Drug Abuse Prevention and Treatment Program





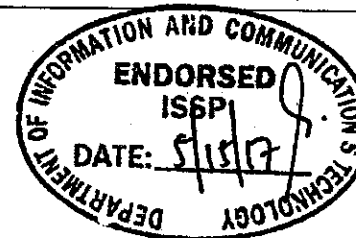
III. HEALTH SECTOR REGULATORY SERVICES

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		1. Integrated Licensing Information System (ILIS) [for Health Facilities and Services]
DESCRIPTION		<p>Supports the integration, harmonization and integration of the systems and procedures for licensing and accreditation of health facilities and institution, and accreditation to provide a particular service. This is to help to make the DOH health related regulation systems more objective, transparent, rational and client-responsive. It includes activities from application, inspection, certification and compliance monitoring.</p> <p>Systems included are as follows: Licensing and accreditation of health facilities (hospitals, clinics, laboratories, and other health service establishments) and services which will require both document review and actual site inspection.</p> <p>The system interfaces with the Integrated Food and Drug Administration Information System on hospital licensing which includes the pharmacy and X-ray and radiation emitting equipment/facility of the hospital that the FDA regulate.</p>
STATUS		<p>ILIS - For System Enhancement, Expansion and later integration</p> <p>Permit To Construct (PTC) Module – ready for implementation</p> <p>Ongoing development of other Licensing Modules</p> <p>The database of old legacy system is being migrated and integrated to the new systems.</p>
DEVELOPMENT STRATEGY		Outsourced & In house development
COMPUTING SCHEME		Web-based
USERS	INTERNAL	Health Facilities and Services Regulation Bureau; Food And Drug Administration(Pharmacy and x-ray /radiation emitting facilities)
	EXTERNAL	Regional Health Offices
OWNER		Health Facility Owners, General Public
		Health Facilities and Services Regulation Bureau



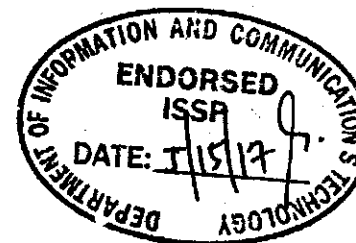


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		2. Integrated Drug Test Operations and Management Information System (IDTOMIS)
DESCRIPTION		<p>Supports the "The Comprehensive Dangerous Drug Act of 2002" (RA 9165) which impels government to "safeguard the well-being- of its citizenry particularly the youth from the harmful effects of dangerous drugs on their physical and mental well-being and to defend the same against acts or omissions detrimental to their development and preservation." DOH is mandated to supervise and monitor the integration, establishment and operations of drug rehabilitation, drug testing networks and laboratories in cooperation with other agencies. This is an integrated system for efficient and effective accreditation of drug testing laboratories and related facilities; operations, monitoring and quality assurance drug test operations; integration with rehabilitation centers; sharing and retrieval of relevant information for decision-making and policy formulation of various agencies using drug testing data. Major outputs are: Report on the number of clients with positive and negative results; Number of accredited drug testing laboratories and rehabilitation centers; Number of clients with confirmed positive results. Systems included are as follows:</p> <ol style="list-style-type: none">Licensing and accreditation of drug testing laboratories and rehabilitationOperations of drug testing laboratories and rehabilitation centersQuality Assurance Monitoring (Proficiency Testing, Drug Test Kits Registration and Validation, Monitoring of Drug Testing Laboratories and Rehab Operations)Agency Data Beneficiary Data ExchangeExecutive Information System
STATUS		Operational and Continuing Maintenance; For System Enhancement or Redesign
DEVELOPMENT STRATEGY		Outsourced
COMPUTING SCHEME		Web Based/Client/Server
USERS	INTERNAL	Health Facilities and Services Regulation Bureau Dangerous Drug Abuse Prevention And Treatment Program, Special Concerns Cluster
	EXTERNAL	Dangerous Drugs Board ; Department Of Transportation and Communication, Land Transportation Office ; Philippine Drug Enforcement Agency, Phil. National Police, Department of Education, Schools, Employers, Drug Test Laboratories
OWNER		Health Facilities and Services Regulatory Bureau and Dangerous Drug Abuse Treatment and Rehabilitation Program



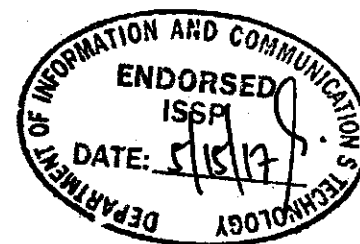


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		3. Electronic Drug Price Management Systems (EDPMS)
DESCRIPTION		<p>The system enables hospitals, pharmacies, outlets and establishments to upload data on current drug prices and inventories. This supports Republic Act 9502 – Universally Accessible Cheaper and Quality Medicines Act of 2008. The major output of this system is a Drug Price Report where the lowest and highest prices per drug can be generated which is used to monitor and basis for regulating drug prices, basis for procurement etc.</p> <p>Developed additional modules are: Drug Price Watch – a web- based system available to the general public where they can search and compare drug prices of different drug stores</p> <p>Drug Price Reference Index- (DPRI) was established to provide a guide for efficient sourcing of essential medicines to benefit both national government and local government health facilities. The DPRI is used as reference for estimating the budget when government buys drugs and medicines or in checking exorbitant prices in the market</p>
STATUS		Need to Scale Up Implementation and Cover More Institutions For Enhancement to include additional requirements of Pharmaceutical Division
DEVELOPMENT STRATEGY		Combination of In-House and Out-Sourced
COMPUTING SCHEME		Web-Based With Off-Line Version
USERS	INTERNAL	Pharmaceutical Division All DOH Procuring Units, FDA
	EXTERNAL	General Public, DTI, Pharmaceutical Establishments Consumer Groups, LGUs ; Pharmaceutical Companies
OWNER		Pharmaceutical Division



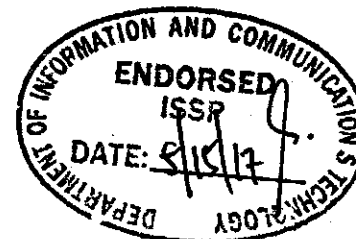


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		4. Quarantine Services and International Health Regulation (QSIHR)
DESCRIPTION		<p>A system that will provide access to relevant information of outbreak verification list, disease outbreak news, weekly epidemiological records of cases or outbreaks of diseases under the IHR (yellow fever, plague, cholera)and other disease surveillance information and knowledge products. It includes data and information management and dissemination of relevant data and information to the public and other health facilities and providers and even traveling citizens, transport crews.</p> <p>The system will also record services done by the BOQ on individuals that are vaccinated for diseases under international regulation and other services provided for ports, airports, aircrafts and sea vessels to prevent spread diseases</p>
STATUS		<p>System to be enhanced/expanded to include Surveillance (Phase 2) and the Vaccination for internationally regulated diseases (Phase 3)</p> <p>Phase 1 of the system was developed and launched – Ongoing initial implementation for reporting systems for quarantine stations all over the country</p>
DEVELOPMENT STRATEGY		Combination in-house development and outsourced
COMPUTING SCHEME		Web-based
USERS	INTERNAL	Bureau Of Quarantine; Epidemiology Bureau
	EXTERNAL	Bureau Of Immigration; Department of Transportation and Communication ; Airports, General Public
OWNER		Bureau Of Quarantine (BOQ)





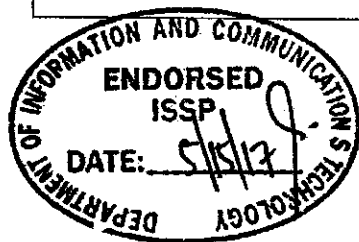
NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		FDA Health Regulation System (excluded in this ISSP; in the FDA ISSP)
DESCRIPTION		To improve the processing of registration of health products and licensing of establishments. By systematizing the process, to reduce manual processing of applications, which tend to increase the productivity of the FDA Employees to be able to meet deadlines. FDA Health Regulation System to be integrated to the DOH ILIS on the regulation of pharmacies in hospitals and other health facilities
STATUS		For expansion/integration with the DOH Licensing Database
DEVELOPMENT STRATEGY		In-House & Outsourced
COMPUTING SCHEME		Client-Server, web-based
USERS	INTERNAL	FDA & HFSRB Inspectors, Evaluators
	EXTERNAL	General Public, other GAs, Stakeholders
OWNER		Information and Communication Technology Management Division (ICTMD) FDA





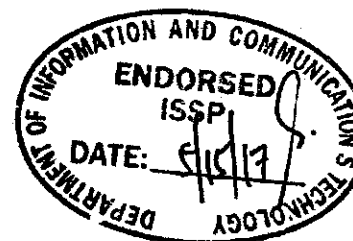
IV. TECHNICAL ADVISORY AND SUPPORT SERVICES

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	1. iClinicSys - Integrated Clinic System <ul style="list-style-type: none">• eField Health Service Information System (FHSIS)• Integrated TB Information System• Maternal And Neonatal Death Reporting System• Schistosomiasis Information System• Filariasis Information System• National Rabies Information System• Watching Over Mothers And Babies (WOMB)• Leprosy Information System/Leprosy Alert Response And Surveillance Network• Family Planning (FP) Registry• Philippine Integrated Disease Surveillance Reporting System (PIDSR)• Other Vertical Health Programs Info/Reporting Systems like Malaria And Other Infectious Diseases (ID), and also Non-Communicable Diseases (NCD)
DESCRIPTION	<p>This is an EMR and a health information system for primary health care facilities (PHCF) . It enables entry and management of the patient's medical histories, diagnoses, treatments, medications, immunizations, alerts like allergies and drug reactions, laboratory and other test examinations and results. The primary objective is to efficiently and effectively support the functions of a clinic/primary health facility which are the rural health units, health center and barangay health stations. It systematically collect, process, store and present information on public health programs services such as those required by FHSIS. The FHSIS requires data on service delivery selected health programs like Maternal and Child Health, Expanded Program on Immunization, Control of Diarrheal Diseases, Nutrition, Family Planning, Tuberculosis, Malaria, Schistosomiasis, Leprosy, Dental Health, Rabies, and Environmental Health. Other data requirements of the other health programs can be</p>



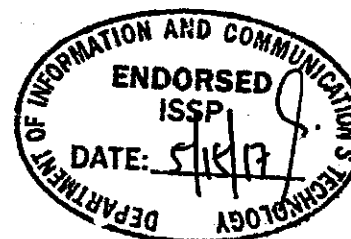


		produced as well. Primary Care Benefit (PCB) module of PhilHealth is also included, to be submitted to PHIE Lite.
STATUS		Operational in 810 sites in 2016 out of the 2,500 RHUs; For nationwide implementation; Undergoing continuous maintenance – the system is enhanced and updated regularly to accommodate additional requirements of DOH and Philhealth
DEVELOPMENT STRATEGY		Combination of in-house development & outsourced development
COMPUTING SCHEME		Web-based with off-line version
USERS	INTERNAL	Epidemiology Bureau, DPCB, DOH Program Managers, Regional Health Offices, BOQ
	EXTERNAL	Health Centers, Rural Health Units and Barangay Health Stations; Local Government Units, General Public in particular patients, Other Government Agencies such as DSWD, DILG, Philhealth, DepEd, BJMP in their clinics
OWNER		Epidemiology Bureau (EB), KMITS



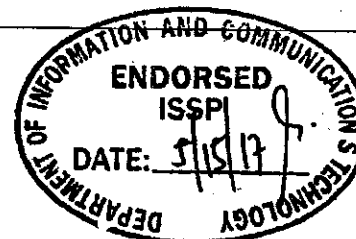


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		2. Verbal Autopsy System (SmartVA) for Enhancing Civil Registration and Vital Statistics (CRVS) [for mortality statistics]
DESCRIPTION		A verbal autopsy is a process that documents the process for diagnosing causes of death based on responses of family members to series of structured questions regarding signs and symptoms experienced by the decedent before his/her death. This system will automate the process and incorporate the algorithm for an easier decision-making process to determine cause of death in cases when the cause of death is not known or not written
STATUS		For implementation and enhancement Piloting of Smart Verbal Autopsy in selected health facilities provinces
DEVELOPMENT STRATEGY		Outsourced development
COMPUTING SCHEME		Web-based, with off-line version
USERS	INTERNAL	All DOH Offices
	EXTERNAL	Health Providers, Policy Makers Academe, Other Government Agencies
OWNER		EB, KMITS and Phil. Statistics Administration



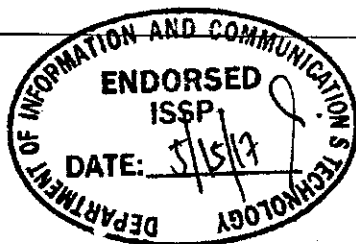


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	3. Unified Disease Registry System (UDRS)
	<ul style="list-style-type: none">- Online National Electronic Injury Surveillance System (ONEISS)- Violence against Women and Children Registry System (VAWCRS)- Philippine Registry for Persons with Disabilities (PRPWD)- Integrated Philippine Network for Injury Data Management System (IPNIDMS)- Integrated Chronic Non-Communicable Disease Registry System (ICNCDRS)<ul style="list-style-type: none">• Cancer Registry• Diabetes Mellitus Registry• Stroke Registry• Coronary Artery Disease Registry• Prevention of Blindness Registry and Cataract Surgical Outcome Monitoring Tool• Integrated Chronic Obstructive Pulmonary Disease and Occupational Disease Registry• Renal disease Registry• Mental Health Registry• Occupational Health Disease Registry• Renal Disease Registry• Mental Health Registry• Occupational Disease Registry- Firework Related Respiratory Illness Surveillance System (FRRISS)- Integrated Neglected Tropical Diseases (INTD) (lymphatic filariasis, schistosomiasis, soil-transmitted helminthiasis, food and waterborne diseases, leprosy and rabies)-Integrated Tuberculosis Information System (ITIS)





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	3. Unified Disease Registry System (UDRS)
DESCRIPTION	<p>The Unified Disease Registry System (UDRS) serves as a tool and mechanism to collect information on reportable cases on chronic non-communicable diseases, injuries, violence, and disabilities that have been diagnosed or confirmed as such in the country as basis for sound and rational planning, implementation, monitoring and evaluation of health programs; development of health services, health policies and programs, and inputs to studies and other related undertakings. It is composed of the following information systems:</p> <ol style="list-style-type: none">1) ONEISS - A system that establishes a database registry for the systematic collection, analysis, interpretation and dissemination of injury and injury-related information for epidemiologic studies, policy formulation and development of injury prevention programs. It records injuries, patterns and factors that may have cause the injury as well as the available services, health status needs and circumstances of the injured person. Likewise, it also includes the Aksyon Paputok: Injury Reduction Registry2) VAWCRS - A national registry for women and children who are victims of violence. The system enables health facilities to encode or upload VAWC-related data in order to improve data collection, processing, validation, analysis and dissemination of VAWC-related information.3) PRPWD - A national registry and reporting system for specific types of disabilities and the issuance of unique identification numbers for discounts and other benefits. It supports the implementation of Republic Act 9442 otherwise known as Magna Carta for Disabled Persons. It is implemented by the DOH in coordination with the National Council on Disability Affairs of the Department and



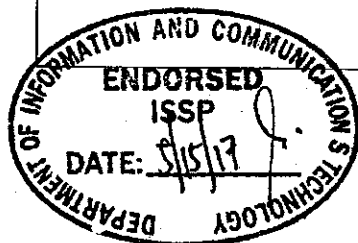


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	3. Unified Disease Registry System (UDRS)
	<p>Social Welfare and Development. The system was developed mainly to facilitate coordination and networking among stakeholders in the issuance of discounts and other benefits; improve efficiency in the workflow processes; and facilitate integration of data.</p> <p>4) IPNIDMS - Quality injury data is needed for efficient and effective planning, development of interventions, implementation and monitoring of programs/projects. An integrated injury database and analysis system for the country has to be established to serve as the principal source of quality information. IPNIDMS is composed of government and non-government agencies or organizations, tasked to maintain a coordinated data management system that links, integrates, or combines injury data from various sources or systems to provide an overall picture of injury cases at the national, regional, and local levels.</p> <p>5) ICNCDRS - An integrated system solution that resulted from the Assessment of Existing Chronic Non-Communicable Disease Registry Systems and Design for Potential Linkage and Accessibility by the DOH for Effective Policy Directions projects. It is an online reporting of Cancer, Diabetes Mellitus, Chronic Respiratory Diseases, Stroke, Blindness/low vision, mental and coronary artery disease data from health facilities. It also includes uploading of data from the Philippine Renal Disease Registry System. One important feature of the system is the centralized issuance of patient identification code or number for better analysis of the risk factors and program interventions to be done by the DOH. The following are the subregistries of ICNCDRS:</p> <p>a. Cancer Registry, Diabetes Mellitus Registry, Stroke Registry, Coronary Artery</p>



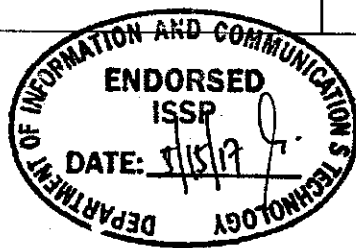


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	3. Unified Disease Registry System (UDRS)
	<p>Disease Registry</p> <p>b. Prevention of Blindness Registry- captures confirmed cases of blindness and low vision</p> <ul style="list-style-type: none">• Cataract Surgical Outcome Monitoring (CSOM) Tool – it includes monitoring of patients/cases who undergone Cataract Surgeries. The tool measures the visual acuity of the patients post-operatively and documents any complications brought about by the surgery. <p>c. Integrated Chronic Obstructive Pulmonary Disease (COPD) – captures confirmed cases of chronic respiratory diseases which includes Chronic Bronchitis, Emphysema and Bronchiectasis.</p> <p>d. Renal Disease Registry – composed of two (2) subregistries which is the Hemodialysis and Peritoneal Dialysis. Data will be sourced from the Philippine Renal Disease Registry System being managed by the Renal Disease Control Program (REDCOP) of the National Kidney and Transplant Institute (NKTi).</p> <p>e. Mental Health Registry - database of information on mental health cases which can be accessed by hospitals</p> <p>6) Occupational Disease Registry - The current registry captures cases of Occupational Lung Diseases like Asbestosis, Silicosis, Coal worker's Pneumoconiosis, and Asbestosis related malignancies - for enhancement to include other occupational related diseases.</p> <p>7) FRRISS - System for Respiratory Related Illness which is implemented simultaneous with APIR in three (3) selected hospitals in Metro Manila namely, East Avenue Medical Center, Lung Center of the Philippines and Jose Reyes Memorial Medical Center</p> <p>8) Integrated Infectious Diseases Registry will include the following:</p>



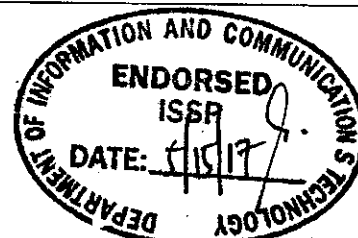


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	3. Unified Disease Registry System (UDRS)
	<ul style="list-style-type: none">• INTD – The aim of the Neglected Tropical Disease Information Sstem (NTDIS) is to provide programs with accurate, timely, verified and quality data and information for the effective integration and management of NTD programs. The diseases included are as follows: Lymphatic Filariasis (LF), soil transmitted helminthiasis and schistosomiasis.• Integrated Leprosy Information System (ILIS) - is a web-based data management system that enables DOH to gather, process, and analyze patient data provided electronically by health providers and leprosy coordinators.• National Rabies Information System (NARIS) - a system that allows each Animal Bite Treatment Centers (ABTC) to capture bite patient records and generate reports, at the same time make this data available to program managers at national, regional and provincial levels. It serves as the online bite and rabies registry and inventory card where trained animal bite treatment center personnel will input patient-based data ideally at the point of care.• ITIS – This system harmonizes all the electronic TB systems such as the Philippine Electronic Tuberculosis Registry (Phil-ETR) and Electronic Tuberculosis Manager (e-TB Manager). The system includes individual Tuberculosis patients records and case management; medicines supply and stock control; and epidemiologic surveillance information.• Other infectious diseases
STATUS	UDRS – undergoing continuous maintenance, enhancement and expansion to accommodate changes in reporting forms UDRS – Being implemented nationwide; Operational in selected public and private hospitals identified as sentinel sites; 1643 government and private hospitals trained in UDRS; 83 provinces (including cities in NCRS) reporting for



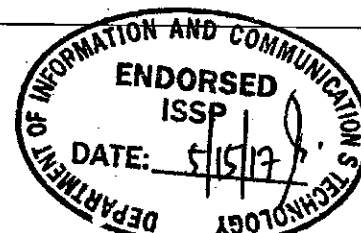


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		3. Unified Disease Registry System (UDRS)
		<p>both ONEISS and ICNCDRS</p> <ul style="list-style-type: none"> - ONEISS - 545 government and private hospitals reporting from Q1-Q3 2016 - VAWCRS - 22 DOH hospitals reporting from Q1-Q3 2016 (21 provinces including cities in NCR) <p>PRPWD - Operational in 197 C/MSWDOs</p> <p>iPNIDMS - non-operational; have to renew MOA between the different network members</p> <ul style="list-style-type: none"> - ICNCDRS - 547 government and private hospitals reporting from Q1-Q3 2016 - Occupational Disease Registry - for enhancement/expansion <p>Leprosy and Rabies - being rolled-out nationwide</p> <p>FRRISS - operational but being enhanced annually to address new requirements</p> <p>INTD-for implementation</p> <p>ITIS - being implemented nationwide; the Drug-Susceptible TB Module is operational in 2,997 RHUs, Hospitals, Jails, and Public-private mixed DOTS; Drug-Resistant TB Module is operational in 153 Programmatic Management on Drug Resistant (PMDT) Facilities nationwide (100% implementation)</p>
DEVELOPMENT STRATEGY		Combination of in-house and outsourced development
COMPUTING SCHEME		Web-based, some modules with offline version
USERS	INTERNAL	Disease Prevention and Control Bureau; Epidemiology Bureau, Regional Health Offices, Government and private hospitals
	EXTERNAL	General public and other Departments, health facilities, institutions and individuals involved in disease prevention and control
OWNER		National Council on Disability Affairs, PNP, MMDA, LTO, DPWH, NGOs, Academe, OGAs
		Disease Prevention and Control Bureau (DPCB)



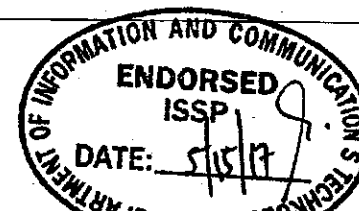


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	4. Disease Surveillance System <ul style="list-style-type: none"> • Phil. Integrated Disease Surveillance Reporting System (PIDSR) • Event Based Surveillance and Reporting System(ESR) • International Health Disease surveillance
DESCRIPTION	<p>Using various information and communication technologies, the system supports epidemiological work on disease occurrence and case reporting. This monitors spread of notifiable diseases to establish patterns of progression. Data collected and analysed from disease surveillance system helps predict, observe, and minimize the harm caused by epidemic, and pandemic situations. It also tries to record factors contributing to such circumstances. A key part of modern disease surveillance is the practice of disease case reporting.</p> <p>The Event-based Surveillance and Response Online Reporting System is a web based system which enables authorized users to encode or upload health event related data (Dengue, Cholera, Diarrhea, etc.), store data in a centralized and secured location, process, consolidate, and transform data to meaningful and actionable information.</p>
STATUS	<ul style="list-style-type: none"> • Disease Surveillance System – PIDSR for enhancement to a web- based system and for implementation • ESR is being rolled-out nationwide; • International Health Disease surveillance is for development and integration with international health regulation of BOQ
DEVELOPMENT STRATEGY	In-House
COMPUTING SCHEME	PIDSR - Initially offline to be converted to Web-Based ESR – Web-based International Health Disease Surveillance - web-based
USERS	INTERNAL Epidemiology Bureau, Regional Epidemiology Surveillance Units ; BOQ
	EXTERNAL Provincial Epidemiology Surveillance Units; Municipal Epidemiology Surveillance Units; LGUs Health Centers and Rural Health Units
OWNER	Epidemiology Bureau ; Bureau of Quarantine



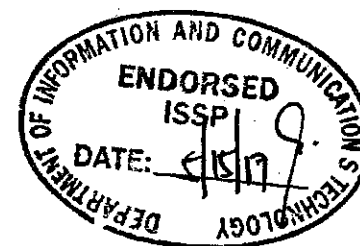


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		5. Telehealth/Telemedicine System
DESCRIPTION		<p>It assists the Doctor usually an interested Municipal Health Officers to manage patients using tehealth device for patient usually in need of specialty care or in case of unconfirmed diagnosis may refer to a specialty doctor or hospital using SMS/MMS. Telereferrals are sent and received through mobile phones and internet technologies or telehealth device. Remote doctors, when unsure about diagnosis of their patients, use SMS and email to send clinical questions or image to the referral hospitals. The clinical staff reviews this and when needed triages the messages to the specific expert consultants of the Referral Hospital or other Medical Centers, who give their opinion on the cases referred. Telereferrals are sent and received through mobile phones and internet technologies.</p> <p>One such device is Rxbox for Service Delivery Network, a DOST-& UP developed telehealth device that enable remote consultations between patients, community health workers, and experts in urban areas. It gathers medical information of the patients, stores them, and process them at the community. Telemedicine to be used to expand access to specialized care (e.g. tele-radiology, dermatology, pathology or psychiatry). Some pilot projects include Telehealth project funded by Foreign Assisted Projects for Regional Office 4A</p>
STATUS		RXbox is Operational in around 200 Pilot Sites; For Enhancement and testing of RxBox device integration to iClinicSys; for expansion to cover 750 more sites Study/pilot on other telemedicine device
DEVELOPMENT STRATEGY		Outsourced
COMPUTING SCHEME		Web-based; SMS/Mobile Application
USERS	INTERNAL	Bureau Of Local Health Systems Development Disease Prevention And Control Bureau Epidemiology Bureau Health Human Resource Development Bureau
	EXTERNAL	Government Hospitals Local Government Units in particular Rural Health Units
OWNER		KMITS (interim in DOH); UP-NTHC with DOST



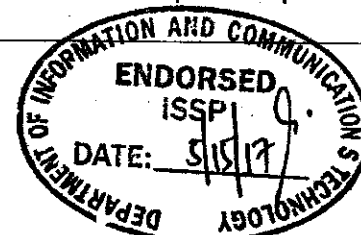


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		6. Philippine Organ Donor and Recipient Registry System (PODRRS)
DESCRIPTION		An online system of collecting data from kidney organ donors and transplant candidates, and automatic matching of donors to kidney transplant candidates. The system supports the policy on organ donation and transplantation as well as the integration of donor and transplant candidate data from different sources.
STATUS		For Implementation after some enhancement; For system revision due to changes in policy
DEVELOPMENT STRATEGY		In-House & Outsourced
COMPUTING SCHEME		Client Server; Web-Based
USERS	INTERNAL	Non-Communicable Diseases Division, DPCB, NKT
	EXTERNAL	Inter-Agency Committee on Organ Donation ; Medical Ethics Committee, Hospitals ; Prospective Recipients
OWNER		DPCB



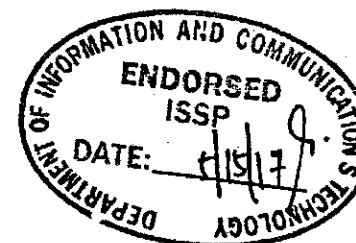


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	<p>7. Integrated Health Human Resource Development Information Systems (IHHRDIS)</p> <ul style="list-style-type: none">• Integrated Human Resource for Health (HRH) Management Information System (IHRHMIS)• National Database on HRH (NDHRH)• International . Database on HRH (IDHRH) – integrated data among partner agencies• Training Information System• eLearning System for DOH Academy
DESCRIPTION	<p>The system will integrate related HRH systems and databases that provides an annual statistical report on the distribution of health providers by certain demographic, employment or deployment characteristics or by place of practice. These statistical reports are available for different levels-- health facility, municipality, province, region and national.</p> <p>Training system is where training data can be stored and accessed by authorized users, promote timely generation of reports, strengthen monitoring of training plan, and improve the quality of training data or report being submitted, i.e. accuracy, reliability and others. The system also have an on-line registration for participants as well as conduct of e-learning courses.</p> <p>HHR System creates and maintains a database of health human resources and their skills, training attended and educational background. Matching is done between the required competencies of the person's position and the current skill level of the individual. Individual, organizational and sectoral training needs and requirements can be identified to support health human resource development planning , training and continuing education.</p>



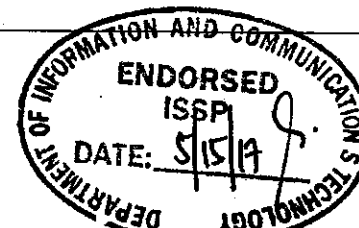


		eLearning or Learning Management System (LMS) shall manage open distance learning, online courses and blended learning. This system shall be lodged under the HHRDB which will implement and manage e-Learning/online courses and training programs of the DOH Academy
STATUS		Integrated system is currently ongoing development; a HHRIS is operational but for enhancement and data build-up; Training Information System developed and used at KMITS for ICT training and if for expansion to include HHRDB requirements; eLearning system is for outsourcing (software as a service)
DEVELOPMENT STRATEGY		Outsourced
COMPUTING SCHEME		Web-Based
USERS	INTERNAL	All DOH units, RHOs, Hospitals
	EXTERNAL	General Public, Researchers, Partners, Academe, LGUs, COA
OWNER		Health Human Resource Development Bureau





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		8. Health Emergency Management Service Integrated Information System (HEMS IIS)
DESCRIPTION		An integrated system that supports health emergency services provided by a national network from the community to national level through coordination of efforts and sharing of resources among the hospitals and offices, other government agencies, LGUs, private sector and non-government organization and communities . It includes the following systems: a. Integration of SPEED (Surveillance in Post Extreme Emergency and Disaster) b. Health Emergency Preparedness System c. Health Emergency Response System d. HEMS Portal/Website
STATUS		For implementation; System review and enhancement and installation of the needed ICT infrastructure
DEVELOPMENT STRATEGY		Out-sourced Web-based
COMPUTING SCHEME		
USERS	INTERNAL	Health Emergency Management Service and other DOH offices involved in disaster preparedness and response especially HEMS in regional health offices and hospitals
	EXTERNAL	LGUs, hospital and disaster management teams, Other Government Agencies ; NGOs and health sector disaster teams
OWNER		Health Emergency Management Bureau





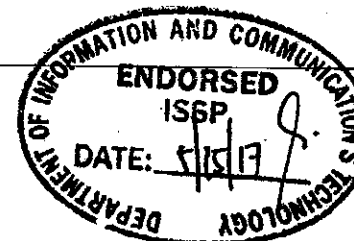
NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		9. Environmental Health Information System (EHIS) -Water and Social Hygiene (WASH) System
DESCRIPTION		<p>A system that support the data management of health hazards and risks associated with environmental and work-related factors. Using GIS and other tools used by other government and international agencies, it will help identify potential health risks related to the environment.</p> <p>Likewise, will record and help analyze occupational health data.</p>
STATUS		For review and updating of forms; system to be revised
DEVELOPMENT STRATEGY		In house development
COMPUTING SCHEME		Web-Based
USERS	INTERNAL	Disease Prevention And Control Bureau
	EXTERNAL	Local Government Units, Employers
OWNER		Disease Prevention and Control Bureau (Environment-Related Diseases Division & Occupational Diseases Division)





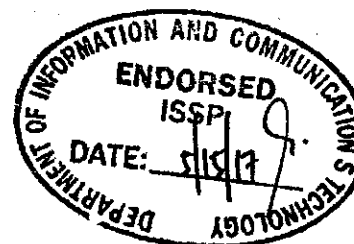
V. SUPPORT TO OPERATIONS

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	1. Health and DOH Portals <ul style="list-style-type: none">• Intranet• DOH main web-site/Portal• Regional Health Offices websites• Hospital web-sites• PITACH, TRCs BOQ website
DESCRIPTION	<p>The DOH's Intranet is an internal online communications portal of the DOH Central Offices, Regional Offices, DOH hospitals and attached agencies. It has been transformed from a static to a dynamic one that offers more functionalities and features which are suitable to the needs of the personnel within the organization.</p> <p>It is on-line communication for the DOH Central Offices and Regional Offices, DOH hospitals and attached agencies.. It has been transformed from a static to a dynamic one that offers more functionalities and features which are suitable to the needs of the personnel within the organization.</p> <p>The DOH and its individual units websites are a collection of webpages that are established as an organized gateways to facilitate access and linkages to data/information from the DOH and its units. The DOH website serves as repository for disseminating/sharing of health related knowledge, information needs and services offered by the Department. It fosters a close tie with the public through accessible and updated health information, contents/data being easily published and public documents posted and made readily available. Public interaction may also be possible through web-based forums, comments, and other modes of online interaction. The DOH website was revised and re-designed in 2014 in compliance with the directive from the Office of the President through Administrative Order 39, mandating all national government agencies to transfer websites to the Government Website Hosting Services (GWHS)</p>





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		1. Health and DOH Portals <ul style="list-style-type: none">• Intranet• DOH main web-site/Portal• Regional Health Offices websites• Hospital web-sites• PITACH, TRCs BOQ website
STATUS		Regional Offices, most DOH hospitals websites and the DOH intranet have complied with standard government website templates. Only 1 of 70 DOH hospital has no web-site and the BOQ and TRCs websites have to be developed; New DOH portal operational – continuing maintenance DOH Website – Operational - under system maintenance
DEVELOPMENT STRATEGY		Outsourced and in-house
COMPUTING SCHEME		Web-based
USERS	INTERNAL	DOH Central Offices, RHOs, Hospitals
	EXTERNAL	General Public, Researchers, Partners, Academe
OWNER		KMITS for DOH Portal and DOH Intranet; Various central offices, Regional Health Offices and Hospitals for their own agency website and intranet site





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		2. DOH Enterprise Resource Management System
DESCRIPTION		<p>The DOH Enterprise Resource Management System is a portal that will integrate the financial, logistics, administrative and general services transactions/systems for easy access and management of DOH employees.</p> <p>It is envisioned to provide a single portal for all DOH services that shall enable DOH employees to manage and request online and responded online or manually but faster.</p>
STATUS		For development
DEVELOPMENT STRATEGY		Combined Outsourced and In-house development
COMPUTING SCHEME		Web-Based
USERS	INTERNAL	All DOH Offices
	EXTERNAL	Oversight Government Agencies on Finance, BIR, Civil Service
OWNER		Office for administration, finance and procurement, (AS, PS & FMS)





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		3. Financial Management Reporting System
DESCRIPTION		<p>The Financial Management Reporting System supports handling of financial transactions from planning, execution, settlement, and expense tracking activities.</p> <p>e-NGAS is a system developed by COA to ensure, reliability, completeness and timeliness in recording government financial transactions and to generate financial reports in accordance with the policies and procedures of the NGAS.</p> <p>Other smaller modules are existing but have to be harmonized.</p>
STATUS		<p>Financial Management Reporting System – for development to include additional requirements of Budget</p> <p>eNGAS is also operational at central office and in regional health offices and a few hospitals. The new eNGAS is currently being rolled out</p> <p>For the full financial management system, DOH is waiting for GIFMIS</p>
DEVELOPMENT STRATEGY		<p>Outsourced and In-house development</p>
COMPUTING SCHEME		<p>FMS is Web-Based; ENGAS is client-server</p>
USERS	INTERNAL	<p>All DOH Offices</p>
	EXTERNAL	<p>Oversight Government Agencies on Finance, COA</p>
OWNER		<p>Finance and Management Service</p>



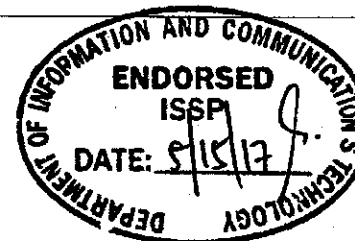


NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		4. Integrated Logistic Management System (iLMS) <ul style="list-style-type: none">• Procurement MIS (POMIS)• National On-line Inventory System (NOSIRS), & Warehousing• Fixed Assets/Property accountability system
DESCRIPTION		An integrated system that will push data from procurement, delivery, warehousing, distribution and payment to issuance of memorandum receipt to property to avoid multiple encoding and to make the process more efficient from procurement to payment of a particular transaction
STATUS		Being implemented ; For enhancement/expansion to include additional functionality requirements especially for procurement
DEVELOPMENT STRATEGY		Combination, Outsourced and In-house
COMPUTING SCHEME		Web-based
USERS	INTERNAL	All offices with procurement activities, Procurement Service, Logistics Management Division, Finance Management Service and Administrative Service
	EXTERNAL	COA
OWNER		Procurement Service, Finance & Management Service and Administrative Service





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		5. Integrated Personnel Transaction Information System <ul style="list-style-type: none">• Personnel Information System (PIS)• eJobs• Payroll System (to be replaced by the National payroll system when available)• DOH Time and Attendance (Biometrics)
DESCRIPTION		<p>The system will integrate related systems and databases related to health personnel management. It is envisioned to simplify personnel transactions and integrate various databases and organize reporting for personnel and access to personnel information.</p> <p>PIS is recording data on personnel on personal information, education, training, services or employment, and eligibility data. It is also support updating of profiles, management and monitoring, and generation of service records and other statistical reports.</p> <p>Payroll System facilitates and simplifies the monthly and annual preparation of general payrolls, reports to the Bureau of Internal Revenue, Government Service Insurance System, PAG-IBIG, and other requesting parties.</p> <p>eJobs Posting is a centralized venue for electronic posting of job vacancies in the DOH, other government agencies, local government units, and private facilities/organizations involved in health care.</p>
STATUS		Ongoing development and or updating of sub-systems with integration but most modules are operational like payroll, eJobs, PIS.
DEVELOPMENT STRATEGY		Combination , outsourced and in house
COMPUTING SCHEME		Web-based
USERS	INTERNAL	DOH Central Office, Rho, Hospitals
	EXTERNAL	General Public, Researchers, Partners, Academe, COA
OWNER		Administrative Service





NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		6. International Health Coordination Information System (IHCIS) <ul style="list-style-type: none"> - Foreign Medical Mission - Foreign donations - Foreign Travels - Foreign Visits - Foreign fellowship and training
DESCRIPTION		This is a system of monitoring goods, articles and other items donated to all DOH offices; for monitoring visits coming from various organizations and institutions most notably from WHO and other partner agencies and countries with whom the Philippines has bilateral relations and commitment; record of international fellowships and visits granted to or meeting attended by personnel; and physicians' data who have undergone certain specialized training, foreign medical missions, donations etc.
STATUS		IHCIS for Development & Integration of Existing Modules; Foreign Travel Monitoring System for implementation – Foreign Medical Medical Mission And Foreign Fellowships/Visits are Operational
DEVELOPMENT STRATEGY		Outsourced, Integration-in-house
COMPUTING SCHEME		Web-based
USERS	INTERNAL	Bureau Of International Health Cooperation
	EXTERNAL	Development Partners, International Community, General Public, LGUs/LHAs
OWNER		Bureau of International Health Cooperation

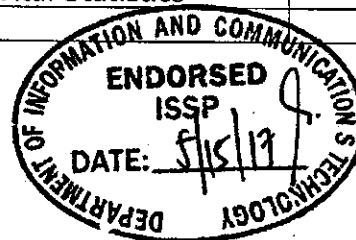




Rank by Order of Priority

* Since this is a Department-Wide ISSP, the development prioritization is by Office or major MFOs which is being handled by specific Offices composed of various Bureaus, Services or several units within the DOH organizational structure. This means there is simultaneous development and implementation based on Offices' priorities and work and financial plan and funding support by government and also development partners. Same ranking means equally important for development or implementation or is required by a national plan or an agency commitment locally or internationally or by law. Over-all ranking is also indicated based on what is agreed upon as priority and existing system's status.

Information System	Ranking	
	By sub-group	Over-All*
A. HEALTH SECTOR MANAGEMENT		
1. Philippine Health Information Exchange	1	1
2. Integrated Executive Information System	4	4
3. Health Information Technology/Data Standard Terminology Registry	2	1
4. Philippine Health Enterprise Data Warehouse	3	3
5. Local Health Systems	5	6
B. HOSPITAL SERVICES		
1. Integrated Hospital Operations and Management Information System & Interoperable Health Information System	1	1
2. National Blood Bank Networking System	3	6
3. Drug Abuse Treatment and Rehabilitation Center Operations System	2	2
C. HEALTH REGULATION		
1. Integrated Licensing Information System	2	3
2. Integrated Drug Test Operations and Management Information System	1	1
3. Electronic Drug Price Management System	4	9
4. Quarantine Services and International Health Regulation System	3	2
D. TECHNICAL ADVISORY & SUPPORT SERVICES		
1. iClinicSys - Integrated Clinic System	1	1
2. Verbal Autopsy System for Enhancing Civil Registration and Vital Statistics	8	10
3. Unified Disease Registry System	3	3





Information System	Ranking	
	By sub-group	Over-All*
4. Disease Surveillance System	4	5
5. Telehealth/Telemedicine System	5	4
6. Philippine Organ Donor and Recipient Registry System	7	9
7. Integrated Health Human Resources Development IS	6	6
8. Health Emergency Management Service Integrated Information System	2	4
9. Environmental Health Information System	9	8
E. SUPPORT TO OPERATION		
1. Health & DOH Portals	1	1
2. DOH Enterprise Resource Management	2	6
3. Financial Management Reporting System	4	5
4. Integrated Logistic Management System	3	4
5. Integrated Personnel Transaction Information System	5	9
6. International Health Coordination Information System (IHCIS)	6	8

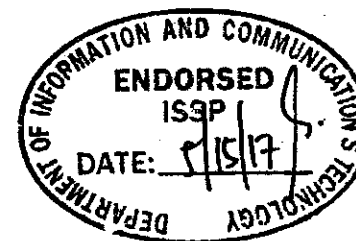




C. DATABASES REQUIRED

Refer to matrix provided in the pages 74-77- which show use of the listed databases of the various information systems.

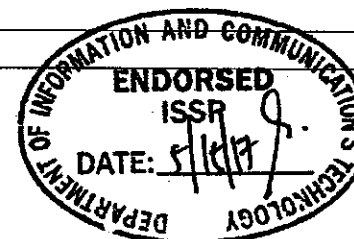
NAME OF DATABASE		1. Health Data Standards
GENERAL CONTENTS/ DESCRIPTION		Common terminologies, its definition, formats, syntax etc to facilitate interoperability and integration, creation of structured information models for data structure and interchange and enhance privacy & security. Contents includes among others: Data Element, Definition, Use Component Group(s) or sub-data elements, Example, Formula/Computation, Type, Maximum Size, Decimal Number, Link, Table Structure, Owner. Metadata - structured information about the characteristics of health information data
STATUS		For enhancement and implementation/ build-up
INFORMATION SYSTEMS SERVED		All information Systems
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	Epidemiology Bureau; Disease Prevention and Control Bureau; DOH Program Managers; Hospitals; Regional Health Offices
	EXTERNAL	Local Government Units; Health Facilities; General Public; System Developers; PhilHealth; other departments providing health services
OWNER		Knowledge Management and Information Technology Service (KMITS)





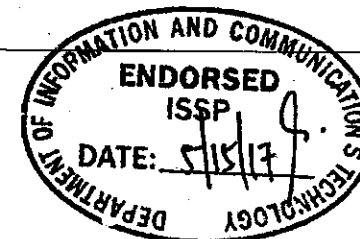
NAME OF DATABASE		2. Health Facility
GENERAL CONTENTS/ DESCRIPTION		All health facilities, which includes facility name, address, geographic location and services and other demographic, social-economic characteristics, including service level capacities and gaps
STATUS		Operational- Ongoing validation, updates and build-up for hospitals and RHUs/HCs only. Will include other health facilities when integration with licensing information system.
INFORMATION SYSTEMS SERVED		All information Systems
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	All DOH Offices
	EXTERNAL	All Health Facilities, Government Agencies, General Public
OWNER		KMITS

NAME OF DATABASE		3. Shared Health Record
GENERAL CONTENTS/ DESCRIPTION		The database is a subset of the health record of an individual and includes data relating to patient personal demographics, medical history and result of consultations and laboratory test and other ancillary services which are defined and permitted to be exchanged or accessed by patient and his/her authorized health providers
STATUS		For development, build-up
INFORMATION SYSTEMS SERVED		Philippine Health Information Exchange System; iClinicSys/Electronic Medical Record System; iHOMIS, Philippine Health Enterprise Data Warehouse, iDTOMIS, Unified Disease Registry Systems
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	Hospitals, RHU/HCs, Doctors, Rehab Centers
	EXTERNAL	Health Providers; PhilHealth; Patient
OWNER		KMITS & PhilHealth





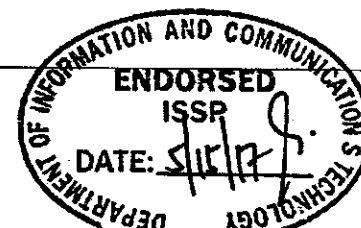
NAME OF DATABASES		Other Health Sector Policy Services databases
GENERAL CONTENTS/ DESCRIPTION		<p>4. UHMIS - selected input, process, output and outcome indicators and selected dataset at national and sub-national levels that will input of the M & E and dashboard systems</p> <p>5. SIHIS - selected input, process, output and outcome indicators and selected data at sub-national levels that will input of the M & E and dashboard systems</p> <p>6. Health Atlas - maps of health facilities, geographic coordinates, demographics, services provided, contact details, facilities enhancement status, historical pictures of facility, budget provided, year when first started and budget provided, etc</p> <p>7. Local Health - Exemplary practices' subject matter, and documentation relevant to local health implementation, coverage, health problem addressed, sponsors, developers, recipients, implementation sites,</p> <p>8. Political Profile - Data of all government elected, appointed officials and their sphere/area, of influence, programs and demographics. Includes name, designation, province, district, municipality, etc</p>
STATUS		<p>For Harmonization/updating/for build-up</p> <p>UHMIS/SIHIS - continuous build-up; initial build-up for almost all regions</p> <p>Health Atlas - continuous build-up</p> <p>Local Health - build-up</p> <p>Political Profile - build-up</p>
INFORMATION SYSTEMS SERVED		<p>UHMIS/SIHIS - Integrated Executive Information System, PHA dashboard, UHMIS,SIHIS</p> <p>Health Atlas - Integrated Executive Information System, National Health Atlas, PHEDW</p> <p>Local Health - Local Health System</p> <p>Political Profile - Local health systems, Political Profiling System, Health Emerg Mgmt Service Integ IS</p>
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	UHMIS/SIHIS - All Offices





NAME OF DATABASES		Other Health Sector Policy Services databases
		Health Atlas – All Offices Local Health - All Offices Political Profile – All Offices
	EXTERNAL	Hospitals, Health Professionals, Academe
OWNER		Health Atlas – KMITS Local Health - Bureau of Local Health Systems Development (BLHSD) Political Profile – BLHSD with DOH Legislative Liason Office

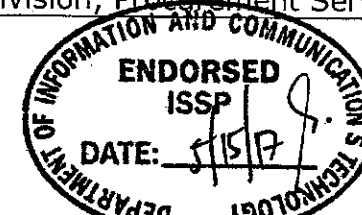
NAME OF DATABASE	9. Licensing
GENERAL CONTENTS/ DESCRIPTION	Data on licensing and accreditation of health facilities namely, hospitals, clinics, laboratories, and other health service establishments, and services; licensing and accreditation of radiation facilities, devices and technology; licensing and accreditation of medical non-radiation devices, technology and device production facilities; licensing and accreditation of non-medical and non-radiation health related devices, technology, and device production facilities; accreditation of Oversees Foreign Workers Clinic System; Dialysis Clinic Licensing Information System. Provided are details on health facility, service capacities and compliance to licensing standards, status of licensing or accreditation whichever is applicable
STATUS	Ongoing System Development
INFORMATION SYSTEMS SERVED	Integrated DOH Licensing Information System Integrated Drug Test Operation and Management Information System Integrated Food and Drug Administration Information System Quarantine Services and International Health Regulation National Health Facility Registry National Database on Human Resource for Health (NDHRH) IS
DATA ARCHIVING/ STORAGE MEDIA	Network Attached Storage/Server/ External Disk





USERS	INTERNAL	Health Facilities and Service Regulatory Bureau (HFSRB); Bureau of Quarantine; Food and Drug Administration (FDA); Other DOH Offices Regional Health Offices
	EXTERNAL	Health or health Related Facility/Establishments Owners/Applicants, General Public
OWNER		HFSRB; FDA

NAME OF DATABASES		10. Health Commodities [Drugs; Food; Cosmetics; Hazardous Household Substances; Medical Equipment; Medical Devices; Other related health commodities like insecticides, laboratory supplies, medical supplies]
GENERAL CONTENTS/ DESCRIPTION		Data on health commodities' specification, status of registration application, status of testing, and details such as for drugs: generic name, active ingredients, manufacturer, distributor, packaging, dosage, shelf life; storage requirements etc; For food, cosmetics and household substances: name, active ingredients, manufacturer, distributor, packaging, shelf life; for devices, equipment, medical and laboratory supplies, etc: manufacturer, distributors and details of make and specifications, etc
STATUS		Continuous data-build up and migration to new system
INFORMATION SYSTEMS SERVED		Electronic Drug Price Monitoring System Integrated Logistics Management System iClinicSys iHOMIS DOH enterprise resource management system IHCIS
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	Food and Drug Administration; Regional Offices, Hospitals
	EXTERNAL	Health or health Related Facility/Establishments Owners/Applicants, General Public
OWNER		Food and Drug Administration, Pharmaceutical Division, Procurement Service



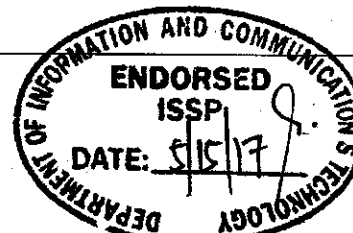


NAME OF DATABASES		11. Suppliers [Manufacturers; Distributors; Vendors, Traders; Outlets; Sellers of Drug, Food, Cosmetics, Hazardous Household substances, medical equipment, medical devices, toys and other related health commodities]
GENERAL CONTENTS/ DESCRIPTION		Data on health commodities' manufacturers, distributors, vendors, traders, outlets which includes among others status of license to operate and good manufacturing practice applications , legal and technical status, facility inspection data, good manufactured or distributed etc
STATUS		Continuous data-build up and migration to new systems
INFORMATION SYSTEMS SERVED		Integrated Food and Drug Administration Information System; Integrated Licensing Information System; eDPMS; ILMS
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	Food and Drug Administration; Regional Offices
	EXTERNAL	Health or health Related Facility, Establishments Owners, Applicants, General Public
OWNER		Food and Drug Administration, Procurement Service



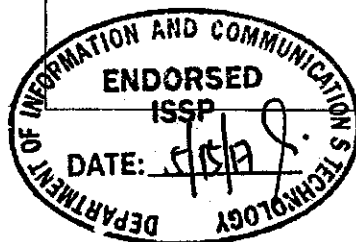


NAME OF DATABASE		Other Health Regulation Databases (DBs)
GENERAL CONTENTS/ DESCRIPTION		<p>12. Drug Prices - National data on drugs, on selling prices and inventories in various outlets and health facilities</p> <p>13. Ports and Airports Health - Data on international diseases under the international health regulation (IHR), services provided to travellers to countries with disease under IHR, Filipino travellers details with vaccination under IHR, travellers coming from countries/areas with emerging disease that are under surveillance</p>
STATUS		<p>Drug Prices - For harmonization and continuous build-up</p> <p>Ports and Airports Health - For build-up</p>
INFORMATION SYSTEMS SERVED		<p>Drug Prices - Essential Drug Price Monitoring System, Integrated Logistics Management System</p> <p>Ports and Airports Health - Quarantine Services and International Health Regulation System, International Health Coordination Information System & Disease Surveillance Systems</p>
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	<p>Drug Prices - Pharmaceutical Division, Central Offices with procurements, Procurement Service, RHOS and Hospitals</p> <p>Ports & Airports Health - Bureau of Quarantine, National Epidemiology Center, Communicable Disease Office</p>
	EXTERNAL	<p>Drug Prices - General Public, Pharmaceuticals and Pharmacies</p> <p>Ports & Airports Health - General Public, Other government agencies</p>
OWNER		<p>Drug Prices- Pharmaceutical Division</p> <p>Ports & Airports Health - Bureau of Quarantine</p>



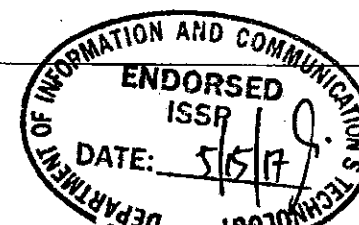


NAME OF DATABASES	Other Technical Advisory & Support Services DBs
GENERAL CONTENTS/ DESCRIPTION	<p>14. Health Emergency Management - National emergency network from the community to national level; health preparedness and response related circumstances or data/information, sources and inventories of health related goods and supplies, result of responses, status of affected areas and individual and response details</p> <p>15. Electronic Medical Record/ Integrated ClinicSys - Patient Transaction Data, Master Patient Data, Demographic, Medical History/Profile, Consultations/Visits, Diagnosis, Laboratories, Public Health Data, and others.</p> <p>16. Disease Registry - Data or Information on the occurrence; service provided on communicable and non-communicable disease; emerging and re-emerging diseases; hospital reported data; demographic details on de-identified patients including risk factors</p> <p>17. Disease Surveillance - disease type, affected area/population/individuals, patterns, risk factors</p> <p>18. Field Health Services- Aggregated data submitted by the different health facilities on health service statistics various disease control and prevention program in RHU/HCs which can be consolidated by region, and city/municipality</p> <p>19. Hospital Statistics - Data on hospital services delivered by disease/cases</p> <p>20. Health Equipment - Data on health equipment by type, use, brand/model, minimum specification, utilization, warranties, maintenance histories</p> <p>21. Health Facility Enhancement - Data on the upgrading of health facilities, capacities upgrading and related equipment. It includes data on the facility being enhanced, budget, details on civil works and equipment to provided and being provided. With details on LGU</p>





NAME OF DATABASES	Other Technical Advisory & Support Services DBs
	<p>and health facility recipients, status of procurement, and on equipment, when delivered, status of installation and commissioning. For civil works on scope of work, status, contractor etc.</p> <p>22. Public Assistance - Releases and utilizations of funds; access to availability of health services by patient; and other data/information on assistance provided to the general public by Public Assistance Units and hospitals</p> <p>23. Organ Donor and Recipients - Registry of organ donors and recipients demographics and health data including transplantation details in term of location, service providers</p> <p>24. Health Human Resource – data on various medical and para-medical professionals by type, expertise, competencies, location, affiliations, demographics</p> <p>25. Births - sex, place of occurrence, attendance by medical personnel, etc</p> <p>26. Deaths – sex, age, cause of death, location, attendance by medical personnel, and other specific information related to specific concerns such as on maternal and infant deaths</p>
STATUS	<p>Most are for harmonization and integration and migration to integrated systems</p> <ul style="list-style-type: none">• Health Emergency Management-build-up, migration, SPEED (Surveillance in Post Extreme Emergency and Disaster) – operational• Electronic Medical Record (EMR) - operational – under maintenance• Disease Registry – operational – under maintenance, some for database build-up• Health Facility - operational – under maintenance• Disease Surveillance - for conversion - build-up• Field Health Services- migration• Hospital Statistics – operational• Health Equipment – development, build-up





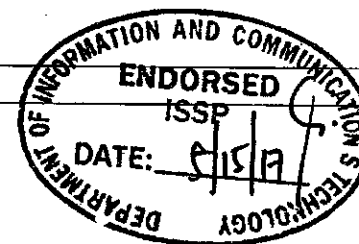
NAME OF DATABASES	Other Technical Advisory & Support Services DBs
	<ul style="list-style-type: none">• Health Facilities Enhancement - operational, Build-up• Public Assistance - operational – under maintenance• Organ Donors and Recipients - for conversion• Environmental Health – development, build-up• Health Human Resource – operational – under maintenance• Telehealth – development, build-up• Births - build -up• Deaths – build up
INFORMATION SYSTEMS SERVED	<ul style="list-style-type: none">• Health Emergency Management- Health Emergency Management Integrated Information System• EMR - Integrated ClinicSys, Phil. Health Information Exchange, Unified Disease Registry System, Disease Surveillance Systems, iHOMIS• Disease Registry - Integrated Chronic Non-Communicable Disease Registry System, Disease Surveillance, PHIE, Phil. Health Enterprise Data Warehouse (PHEDW)• Health Facility - All Information systems• Disease Surveillance - Disease Surveillance System, iHOMIS, iClinicSys, PHIE, PHEDW• Field Health Services - PHIE, Integrated Executive Information System (iEIS), PHEDW• Disease Registry- Unified Disease Registry System, iHOMIS, iClinicSys, PHEDW, PHIE• Hospital Statistics - PHEDW, iHOMIS• Health Equipment- Integrated Logistics Management System, PHEDW• Health Facilities Enhancement - PHEDW• Public Assistance - PHEWD, DOH Health Portal, iHOMIS• Organ Donor and Recipients - Phil. Organ Donor and Recipient Registry System• Environmental Health - Environmental Health Information System, iClinicSys, iHOMIS, PHIE, UDRS• Health Human Resource - Integrate Health Human Resource Development System, PHEDW• Telehealth – Telehealth (Telemedicine) System, PHEDW





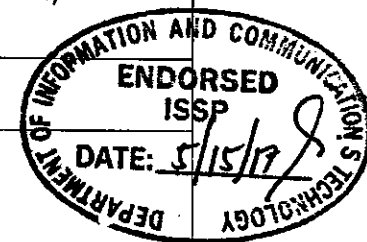
NAME OF DATABASES		Other Technical Advisory & Support Services DBs
		<ul style="list-style-type: none"> • Births – Verbal Autopsy for Enhancing Civil Registration and Vital Statistics System , PHEDW • Deaths – Verbal Autopsy for Enhancing Civil Registration and Vital Statistics System, PHEDW
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	All DOH units in particular National Epidemiology Center; National Center for Disease Prevention and Control; Hospitals; Regional Health Offices
	EXTERNAL	Local Government Units; Health Facilities/Establishments; General Public
OWNER		<ul style="list-style-type: none"> • Health Emergency Management Integrated Information System – Health Emergency Managemnet Bureau (HEMB), Surveillance in Post Extreme Emergency and Disaster – HEMB • Electronic Medical Record/ Integrated ClinicSys - RHU/HC; EB • Disease Registry – Disease Prevention and Control Bureau (DPCB) • Health Facility - KMITS • Disease Surveillance - Epidemiology Bureau (EB) • Field Health Services- EB • Hospital Statistical Reporting – Health Facility Development Bureau (HFDB) • Health Care Equipment – Regional Office, Hospital • Health Facilities Enhancement - HFDB • Web-Based Public Assistance - Public Assistance Unit, OSEC • Phillippine Organ Donor and Recipient Registry - NKTi with inter-agency Committee • Environmental Health – DPCB • Health Human Resource – HHRDB • Telehealth - Hospital, Clinic concerned • Births – KMITS, EB • Deaths – KMITS,EB

NAME OF DATABASE	Hospital Services Database
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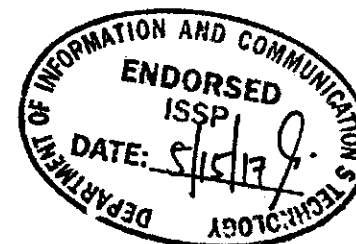


NAME OF DATABASE		Hospital Services Database
GENERAL CONTENTS/DESCRIPTION		<p>25. Hospital Electronic Medical Record (EMR) - Patient OPD/ER/Admission Transaction Data - Master Patient Data, Demographic, Medical History/Profile, Consultations/Visits, Diagnosis, Laboratories, Public Health Data, PhilHealth membership and others.</p> <p>26. Hospital Services – medical care available by type, ancillary services by type, provider fees, providers, cost involved</p> <p>27. Blood Banks Networking - Data on blood type and its availability/inventories in various blood centers in terms of blood product, volume, expiry etc.</p> <p>28. Drug Abuse Treatment Centers – Patient demographics, treatment and rehabilitation details and status</p>
STATUS		<ul style="list-style-type: none">• Hospital Electronic Medical Record – Continuous data build-up in each hospitals where iHOMIS is implemented• Hospital Services - Continuous data build-up in hospitals where iHOMIS is implemented• Blood Banks Networking - Build-up• Drug Abuse Treatment Centers – Build-up
INFORMATION SYSTEMS SERVED		<ul style="list-style-type: none">• Hospital EMR -Integrated Hospital Operation Management Information System, PHIE, PHEDW, Disease Registry• Hospital Services - Integrated Hospital Operation Management Information System• Blood Banks Networking - National Blood Banks Networking System, iHOMIS• Drug Abuse Treatment Centers Drug Abuse and Relative Center Operations System, IDTOMIS
DATA ARCHIVING/STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	<ul style="list-style-type: none">• Hospital EMR - Hospitals, HFDB• Hospital Services – Hospitals, HFDB, HFSRB• Blood Banks Networking –Hospitals, Philippine Blood Center• Drug Abuse Treatment Centers -Drug Abuse Treatment and Rehabilitation Centers, Drug



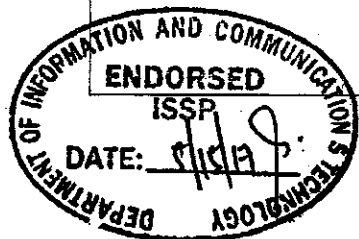


NAME OF DATABASE		Hospital Services Database
		abuse prevention and Control Program
	EXTERNAL	<ul style="list-style-type: none">• Hospital EMR – Patient• Hospital services – Patient• Blood Banks Networking - General Public, Hospitals• Drug abuse Treatment Centers - Philippine National Police, Dangerous Drugs Board and other government agencies involved in drug abuse prevention and control
OWNER		<ul style="list-style-type: none">• Hospital EMR - Hospital concerned• Hospital Services - Hospital concerned• Blood banks Networking - Hospitals, Phil. Blood Center• Drug abuse treatment centers - Drug Abuse Treatment and Rehabilitation Centers



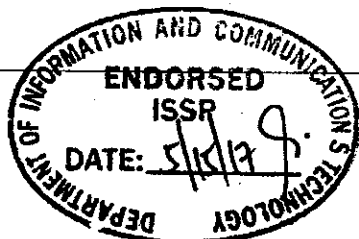


NAME OF DATABASE	Support to Operations DBs
GENERAL CONTENTS/ DESCRIPTION	<p>29. Financial – database of financial transactions and its tracking/processing status</p> <p>30. Goods Inventory –data on various goods available in warehouse, stock on hand, quantity available, name, packaging, owners, distribution list</p> <p>31. Procurement – Data goods, services and works to be procured in terms of specification, ABC, CAF, end-user units quantities, when needed; prospective bidders, lowest/highest calculated and responsive bidder, details on procurement specifications, schedule of requirements, terms of reference, bill of quantities, etc</p> <p>32. Logistics – data on goods procurement or donations, distribution details including schedules, requesting office, recipients, payment details for preparation of vouchers etc.</p> <p>33. Warehouse - Data on deliveries, and expiries storage location, allocation by facility/recipients, distribution list & dates, expiries</p> <p>34. InfobookPHTL/FAQs - Database of health policies, standards, programs, SOPs, manual, handbooks, technical supports sources and other reports that Provincial Health Teams need, FAQs, health programs, officials, laws, regulation, publications, procurement, budget, services and resources available, health facilities, announcements, DOH offices including attached agencies, links, etc that the public should know</p> <p>35. Training - Data on trainings conducted and participants who are invited and have attended, feedback on conduct of training</p> <p>36. Job Posting - Posted job vacancies with details by position vacant, number, minimum qualification standard, and applicants</p> <p>37. Personnel - Data on personnel profile, services and appointments, leaves, attendance, and benefits, compensation other related personnel data</p> <p>38. Payroll – Data on payroll transactions, such salary and compensation details, deductions, salary grade, office, etc.</p> <p>39. Document Tracking – documents routed by type, originating office, date released type of document, subject, recipient, action required, due date, action officer,</p>



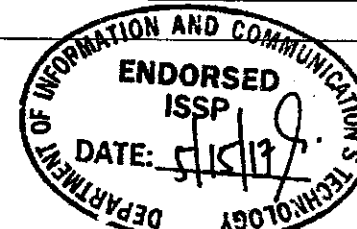


NAME OF DATABASE	Support to Operations DBs
	<p>document history from origin to final destination, data of receipt and release, action taken, status and aging</p> <p>40. Document Archiving - Scanned documents details including indexing data elements like subject, dates, originating office, approving authority, etc.</p> <p>41. International Health Coordination - Goods, articles and other items donated to all DOH offices; Visits coming from various organizations and institutions most notably from WHO and other partner agencies with whom the Philippines has bilateral relations and commitments; International fellowships granted to employees; Physicians who have undergone certain specialization training</p>
STATUS	<p>Existing, For Harmonization</p> <ul style="list-style-type: none">• Financial – for development and build up• Goods Inventory – continuous build up• Procurement – build up• Logistics – build up, migration• Warehousing Management - build up• Infobook/FAQs - continuous build up• Training - continuous build up• Job Posting – continuous build up• Personnel – continuous build up• Payroll – continuous build up• Document Tracking – continuous build up• Document Archiving - continuous build up• International Health Coordination – continuous build up and some for development
INFORMATION SYSTEMS SERVED	<ul style="list-style-type: none">• Financial – eNGAS, Payroll, FMRS• Goods Inventory - National Online Supplies Inventory Reporting System, Integrated Logistics Management System• Procurement –iPLIS• Warehouse Management –Warehousing System• Infobook/FAQ - Customer Relations Management System



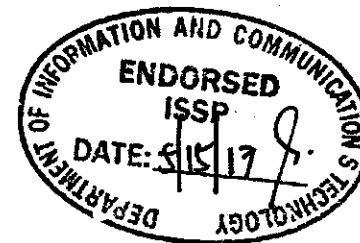


NAME OF DATABASE		Support to Operations DBs
		<ul style="list-style-type: none">• Training - National Health Human Resource Development Information System (NHHRDIS)• Job posting - Training System, NHHRDIS, PTIS• Personnel - E-Job system, PTIS, NHHRDIS• Payroll - PTIS, NHHRDIS, eNGAS• Document Tracking - Document Tracking System, Document Archiving system• Document Archiving - Document archiving System• International Health Coordination - International Health Coordination Information System
DATA ARCHIVING/ STORAGE MEDIA		Network Attached Storage/Server/ External Disk
USERS	INTERNAL	<ul style="list-style-type: none">• Financial - All offices• Goods Inventory - All offices• Procurement - All offices• Logistics - All Offices• Warehousing Management - Material Management Division• Infobook /FAQ -All Offices• Health Human Resource - All offices• Training - All offices• Job Posting - Personnel Division• Personnel -Personnel Division• Payroll - Personnel Division.• Document Tracking - All Offices• Document Archiving - All Offices• InternationalHealth Coordination - International Health Coordination - Bureau of International Health Cooperation (BIHC)
		General public and other government agencies
	EXTERNAL	<ul style="list-style-type: none">• Financial - Finance and Management Service





NAME OF DATABASE	Support to Operations DBs
OWNER	<ul style="list-style-type: none">• Goods Inventory – Logistics Management Division, Administrative Service; Pharmaceutical Division; Hospital, Regional Office• Procurement – Procurement Service• Logistics – All Offices• Warehousing Management - LMD, Regional Health Office, Hospitals• Infobook/FAQ - KMITS, Regional Health Office, Hospitals• Health Human Resources – Health Human Resource Development Bureau (HHRDB), Regional Health Office, Hospitals• Training – HHRDB, Regional Health Office, Hospitals• Job Posting – HHRDB• Personnel –HHRDB, Regional Health Office, Hospitals• Payroll – HHRDB, Regional Health Office, Hospitals• Document Tracking – KMITS, Regional Health Office, Hospitals• Document Archiving – KMITS, Regional Health Office, Hospitals• International Health Coordination – BIHC

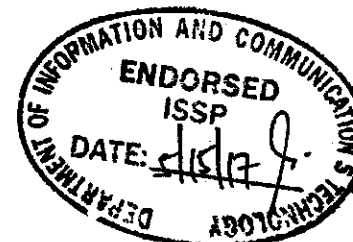




PART III. DETAILED DESCRIPTION OF ICT PROJECTS

A. INTERNAL ICT PROJECTS

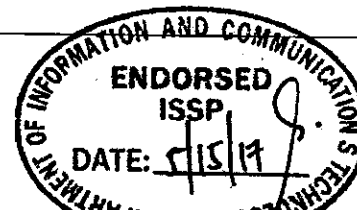
A.1 NAME/TITLE	1. Phase 2: Integrated Executive Information System
A.2 OBJECTIVES	<ul style="list-style-type: none">• To broaden, update and harmonize more the existing EIS for easy access and analysis of new health indicators from different databases or data sources• To provide business analytics and more data visualization to facilitate appreciation and enable better decision making• To consolidate all data presentations and visualization (dashboard, maps, reports) systems• To foster DOH and Philhealth data analytics harmonization
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ol style="list-style-type: none">1. iEIS developed and implemented in DOH Central Office and ROs with special access for local health facilities and executives2. Almost complete harmonization or integration implemented among sub-systems (Unified HMIS, Health Atlas, PHA Dashboard, Health Facility Profiling System)3. Business analytics4. Manual of Operation (MoP)





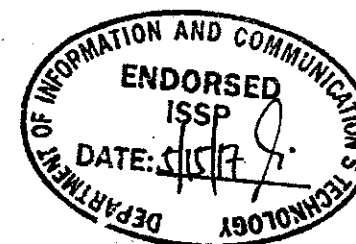
A.1 NAME/TITLE	2. Phase 2: Updating of the Philippine Health Enterprise Architecture
A.2 OBJECTIVES	<ul style="list-style-type: none">• To further update and synchronize the Philippine Health Enterprise Architecture (PHEA) with the Philippine eHealth Strategic Framework and Plan, Philippine Health Agenda priorities and the organizational rationalization of DOH• To develop a Segment Enterprise Architectures to cover various levels of health care delivery and management namely central office, regional health office, hospitals and primary care facilities
A.3. DURATION	2019 (On-going updating in 2017 for PHEA)
A.4 DELIVERABLES	<ul style="list-style-type: none">• Health Enterprise Architecture Updated• Segment EAs for DOH Central Office, DOH Regional Office, Hospitals and Health Center/Rural Health Unit• Orientation Conducted• Publication & Dissemination of EAs

A.1 NAME/TITLE	3.Phase 1: DOH Enterprise Resource Management System
A.2 OBJECTIVES	<ul style="list-style-type: none">• To develop a portal that integrates the financial, logistics, administrative and general services for DOH for easy access and management of DOH resources.• To provide self-service portal to empower DOH employees to manage their records• To efficiently manage requests for DOH services• To consolidate all systems for DOH resources
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ul style="list-style-type: none">• DOH ERM developed and implemented in DOH Central Office• Integration/interface implemented among sub-systems (Finance, IPLS, PTIS)• Manual of Operation (MoP)



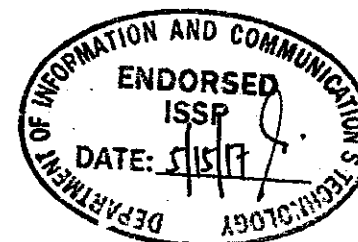


A.1 NAME/TITLE	4. Local Health Systems Project
A.2 OBJECTIVES	<ul style="list-style-type: none">• To further provide a comprehensive data on sub-national profiles, local health facilities, health status and problems, health services and gaps, good practices and initiatives done at local level that can be imitated and customized for the communities by local health agencies and LGUs• With recorded gaps and needs, facilitate DOH assistance as well as identification and provision of support from the DOH, development partners and the private sector.• To monitor service level agreements and LGU performance on certain national health programs targets.
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ul style="list-style-type: none">• Local health System developed• Monitoring of Local health systems in GIDA sites• Database on BHWs to expand to include Health NGOs• Adoption or implementation of the LGU score card• MoP for system updating and access• Training conducted





A.1 NAME/TITLE	5. Phase 2: Expanded Electronic Drug Price Monitoring System Project
A.2 OBJECTIVES	<ul style="list-style-type: none">• To continuously provide better and more comprehensive data on approved by the national therapeutic committee and FDA registered drug and medicines and updated drug price index. This will be done by expanding the implementation of EDPMS and maintenance of the the Philippine Medicine Online and Drug Price Monitoring Index• To include module on monitoring of patient safety relevant to Anti Microbial Drug resistance
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ul style="list-style-type: none">• Enhanced and expanded EDPMS• Monitoring module for Anti Microbial Drug resistance



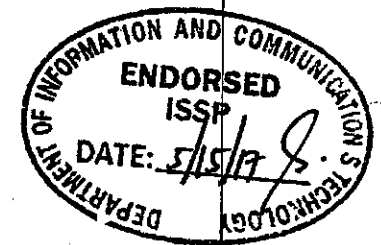


A.1 NAME/TITLE	6.Phase 2 : Implementation of the Integrated Licensing Information System (ILIS)
A.2 OBJECTIVES	<ul style="list-style-type: none">• To support the harmonization and integration of systems and procedures for licensing and accreditation of health facilities and institution.• To help make the DOH health related regulations more objective, rational and client-responsive.• To automate and make more efficient the licensing activities from application, inspection, certification and compliance monitoring. The system will include licensing and accreditation of health facilities namely hospitals, clinics, laboratories, and other health service establishments, and services• To provide interface or data for the Philhealth requirement for their health service provider accredittaiion, Food and Drug Administration Information System for licensing of pharmacies in hospitals and the Integrated Drug Test Operations and Management Information System for accreditation of drug testing laboratories and treatment and rehabilitation centers.
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ul style="list-style-type: none">• Enhanced, harmonizd and broadened integrated software for ILIS• ICT systems to implement in HFSRB and Regional Health office regulation officers• Policies and Manual of Procedures• Training conducted among Health Regulatory Officers (HROs)• Computer System to implement system• Mobile application for HROs



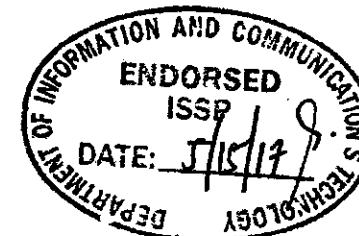


A.1 NAME/TITLE	7. Phase 2 & 3: Expansion of the Quarantine Services & International Health Regulation Automation Project
A.2 OBJECTIVES	<ul style="list-style-type: none">• To expand the implementation to include access to relevant information of outbreak verification list, disease outbreak news, weekly epidemiological records of cases or outbreaks of diseases under the International Health Regulation(yellow fever, plague, cholera)and other disease surveillance information and knowledge products on emerging and re-emerging diseases occurring transnationally.• To help strengthen information management especially and dissemination of relevant data and information to the public and other health facilities and providers including traveling citizens, transport crews in the event of emerging or re-emerging diseases.• To support monitoring of arriving travellers that might have come from affected areas of new or re-emerging diseases.• To completely systematize data management of vaccination services of disease under IHR and other services provided to ports, airports and their personnel
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ul style="list-style-type: none">• Passenger registry for monitoring and treatment in case of infection• Dashboard for IHR cases/circumstances• Enhanced BoQ website• Training Conducted• Updated computer systems for all quarantine stations• Mobile Apps for Quarantine Officers• Quarantine Services and International Health Regulation System• International Port and Airport Health Information System (IPAHIS)• BOQ clinic system EMR/EHR for vaccination clinics



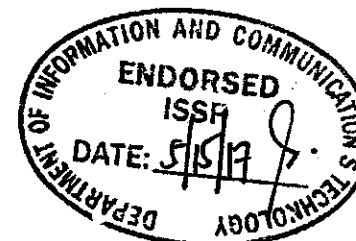


A.1 NAME/TITLE	8. Phase 2: Expansion of the Integrated Logistics Management System
A.2 OBJECTIVES	<ul style="list-style-type: none">• To expand systems functionalities and harmonize developed systems to minimize data entry of same data that feeds into various logistics and financial management systems to facilitate transactions in particular Procurement Operation and Management Information System (POMIS)• To facilitate reporting of procurements, deliveries, inventories and distribution of health goods
A.3. DURATION	2018
A.4 DELIVERABLES	<ul style="list-style-type: none">• ILMS functionalities enhanced and expanded• Integrated system for ILMS and Finance• Trainings Conducted• Computer Systems to implement• MoP, Guidelines• Database build-up• Dashboard





A.1 NAME/TITLE	9. Phase 1: Sub-national Integration of Health Information System (SIHIS)
A.2 OBJECTIVES	<ul style="list-style-type: none">• To develop a system that will consolidate governance and program indicators collected at the provincial and regional level for monitoring progress of the UHC and PHA at sub-national level• To harmonize and ensure capture, and visualization of ad-hoc and routine data from various routine Information Systems databases
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ul style="list-style-type: none">• Sub National Health Information Systems Integrated• Piloted at least in 3 Regions• Assessment and data processing/analytics tools• Operational framework for the integrated health information systems



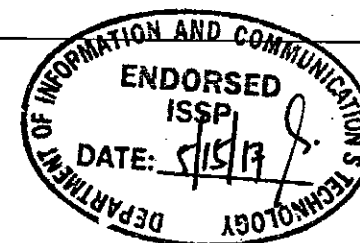


A.1 NAME/TITLE	10. International Health Coordination Information Systems Integration (IHCIS)
A.2 OBJECTIVES	<p>To help systematize the systems for the monitoring of donated goods, articles and other items all DOH offices;</p> <p>To support monitoring visits coming from various organizations and institutions most notably from WHO and other partner agencies with whom the Philippines has bilateral relations and commitment;</p> <p>To support monitoring international fellowships and travels granted to employees; and</p> <p>To help monitor medical practitioners who have undergone specialized training, and foreign medical mission</p>
A.3. DURATION	2018-2019
A.4 DELIVERABLES	<ul style="list-style-type: none">• IHCIS Systems enhanced or developed and integrated• Trainings conducted• MoP



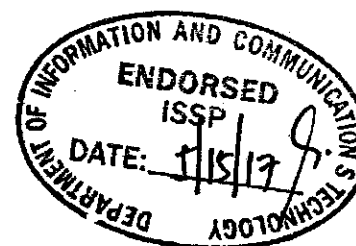


A.1 NAME/TITLE	11. ICT Infrastructure Development and Maintenance for Central Office
A.2 OBJECTIVES -A	<p>A. Maintenance Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals</p> <p>To make the DOH communication system more efficient and effective using available technologies for day-to-day operation and for disaster management</p> <ol style="list-style-type: none">1. Expand implementation and integrate the IP-PBX System in remaining 59 DOH hospitals and set up DOH Centralized FAX OVER IP (FOIP):<ol style="list-style-type: none">a. To replace existing end-of-life IPPBX and VOIP equipmentb. To maximize capabilities of DOH IP-PBX/VOIP unified communication systemc. To connect all DOH Hospitals to Regional Offices and DOH Central Office by IPPHONE through the use of internet, to lessen long distance call costsd. To enable DOH hospital to use the internet as transmission medium for telephone calls by sending voice data2. Fax over IP implementation in all regional offices, 11 hospitals and DOH-ARMM.<ol style="list-style-type: none">a. To establish and integrate DOH Centralized Fax over IP (FOIP) to the existing DOH Unified Communicationb. To consider Cloud based telephony for more efficient implementation3. To upgrade the system to enable system to accommodate the call center requirements of DOH



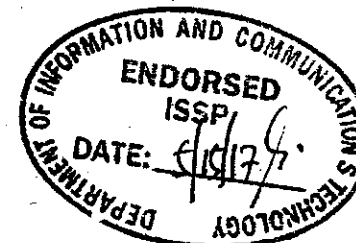


A.1 NAME/TITLE	11. ICT Infrastructure Development and Maintenance for Central Office
A.2 OBJECTIVES - B	B. Migration of DOH Existing Video Conferencing equipment to Cloud based Video Conferencing solution <ol style="list-style-type: none">1. To integrate DOH existing Video Conference (VCON) equipment to Cloud base VCON solution2. To ensure interoperability of DOH Hybrid VCON solution to any VCON software and devices3. To ensure easy to set up, administer and use of single central management and reporting of VCON infrastructure4. To integrate DOH existing Video Conference (VCON) equipment to Cloud base VCON solution5. To ensure interoperability of DOH Hybrid VCON solution to any VCON software and devices6. To ensure easy to set up, administer and use of single central management and reporting of VCON infrastructure7. To replace all end-of-life and obsolete video conferencing equipment with new technology8. To reduce risk, time and cost of travel and communication9. To reduce management overhead, maintenance cost and power consumption in the data center



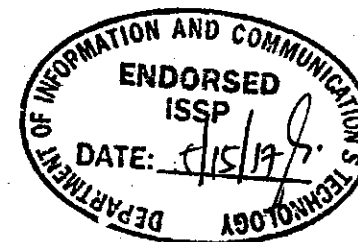


A.1 NAME/TITLE	11. ICT Infrastructure Development and Maintenance for Central Office
A.2 OBJECTIVES - C	C. Cloud Based Centralized Wireless LAN Infrastructure <ol style="list-style-type: none">1. To replace DOH existing legacy wireless LAN infrastructure that are end-of-life and end-of-support with Cloud based wireless LAN solution.2. To provide DOH quality, robust and faster wireless LAN infrastructure3. To secure access of all DOH wireless devices including BYOD4. To secure DOH enterprise network from BYOD, rouge WAPs, and other unsafe wireless devices.5. To ensure easy to set up, administer and use of single central management and reporting of wireless LAN infrastructure6. To reduce management overhead and power consumption in the data center7. To reduced the number of physical wireless equipment, number of license and maintenance cost
A.2 OBJECTIVES - D	D. Consolidation of DOH Security Infrastructure for DOH Public Servers <ol style="list-style-type: none">1. To provide DOH a scalable, flexible, robust and reliable infrastructure security model to cope with changing threat landscape2. To Provide DOH broader set of countermeasures and related security capabilities for the protection of DOH public Servers3. To secure DOH public servers more efficiently and effectively4. To ensure easy to set up, administer and use of single central management and reporting5. To reduce management overhead and power consumption in the data center6. To reduced the number of physical security appliances, number of license and maintenance cost7. To replace end-of-life and obsolete Firewall equipment



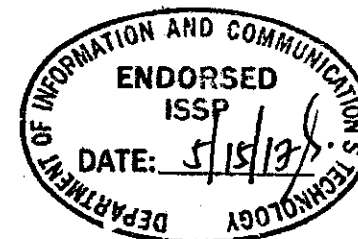


A.1 NAME/TITLE	11. ICT Infrastructure Development and Maintenance for Central Office
A.2 OBJECTIVES - E	<p data-bbox="589 397 2016 469">E. Consolidation of Integrated Drug Test Operation and Managamnet Information System (IDTOMIS) Security Infrastructure</p> <ul data-bbox="589 509 2016 992" style="list-style-type: none"><li data-bbox="589 509 2016 580">a. To provide IDTOMIS a scalable, flexible, robust and reliable infrastructure security model to cope with changing threat landscape<li data-bbox="589 620 2016 692">b. To Provide IDTOMIS broader set of countermeasures and related security capabilities for the protection of DOH public Servers<li data-bbox="589 692 2016 732">c. To secure IDTOMIS public servers more efficiently and effectively<li data-bbox="589 732 2016 780">d. To ensure easy to set up, administer and use of single central management and reporting<li data-bbox="589 812 2016 852">e. To reduce management overhead and power consumption<li data-bbox="589 884 2016 956">f. To reduced the number of physical security appliances, number of license and maintenance cost<li data-bbox="589 956 2016 992">g. To replace end-of-life and obsolete Firewall equipment



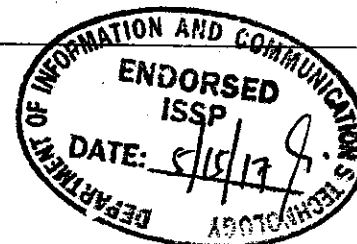


A.1 NAME/TITLE	11. ICT Infrastructure Development and Maintenance for Central Office
A.2 OBJECTIVES -F	F. DOH Disaster Recovery Site Upgrade <ol style="list-style-type: none">1. To prevent either man-made or natural disasters from causing any DOH ICT service disruptions.2. To sustain effective public services in case of DOH Central Office Data Center Un-availability / breakdown3. Further implement a virtualization environment in the DR site that will host DOH external DNS, Web enabled applications, Intranet and other DOH mission critical servers4. To incorporate recovery site requirements of Central Office databases in the newly-built Data Center at Region 4A.
A.3. DURATION	2018-2020



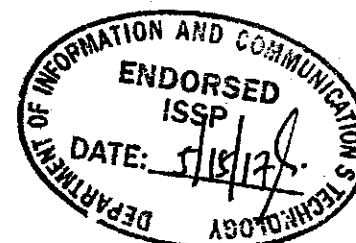


A.1 NAME/TITLE	11. ICT Infrastructure Development and Maintenance for Central Office
A.4 DELIVERABLES	<p>A. Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals</p> <ul style="list-style-type: none">• Fully functional DOH-Wide IP-PBX and VOIP interconnection with all DOH hospitals• New network switches and voice router in replacement for all the existing end-of-life IPPBX and VOIP equipment• Fax over IP Implementation in all regional offices, 11 hospitals and DOH-ARMM• Enhanced sub-systems and expanded coverage of the initial implementation at central office, regional offices and 11 hospitals• Upgraded system at central office for CRM/call center management <p>B. Migration of DOH Existing Video Conferencing equipment to Cloud based Video Conferencing solution</p> <p>Fully functional Hybrid Cloud Video Conferencing System with:</p> <ol style="list-style-type: none">a. Subscription to Cloud based video conferencingb. Deployment of High Definition cameras and directional microphones/speakers to DOH execom and Regional Offices <p>C. Cloud Based Centralized Wireless LAN Infrastructure</p> <p>Fully functional and secured DOH campus wide Cloud based Wireless LAN Infrastructure with:</p> <ol style="list-style-type: none">a. Eighty Five (85) Wireless Access Point (WAP)b. 30 pcs Power over Ethernetc. Cloud based WIFI Subscription



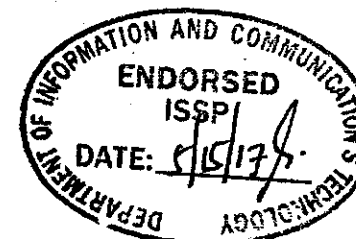


A.1 NAME/TITLE	11. ICT Infrastructure Development and Maintenance for Central Office
	D. Consolidation of Integrated Drug Test Operation and Management Information System (IDTOMIS) Security Infrastructure Fully functional IDTOMIS Consolidated Security Infrastructure that will protect IDTOMIS Servers and Data from different type of attacks. a. Next Generation Security Firewall b. Web Application Firewall c. Intrusion Prevention System
A.4 DELIVERABLES	E. DOH Disaster Recovery Site Upgrade <ul style="list-style-type: none">• Fully functional Disaster Recovery Site• Hyper Converged Virtualization Infrastructure• Updated MoP• Cloud Computing/Data Center Service• Increased computing & storage capacities





A.1 NAME/TITLE	12. ICT Infrastructure Development and Maintenance for Regional Offices
A.2 OBJECTIVES	To provide a maintained, enhanced, or upgraded ICT infrastructure to DOH that are generally are shared by various offices, and used by application systems
	<p>A. Cloud Based Centralize WIFI Infrastructure for DOH Regional Offices (ROs)</p> <p>To replace RO's existing legacy wireless LAN infrastructure that are end-of-life and end-of-supprt with Cloud based wireless LAN solution</p> <ol style="list-style-type: none">1. To replace RO's existing legacy wireless LAN infrastructure that are end-of-life and end-of-supprt with Cloud based wireless LAN solution.2. To provide RO's quality, robust and faster wireless LAN infratracture3. To secure access of all RO's wireless devices including BYOD4. To secure RO's enterprise network from BYOD, rouge WAPs, and other unsafe wireless devices.5. To ensure easy to set up, administer and use of single central management and reporting of wireless LAN infratracture6. To reduce management overhead and power consumption in RO's7. To reduced the number of physical wireless equipment, number of license and maintenance cost



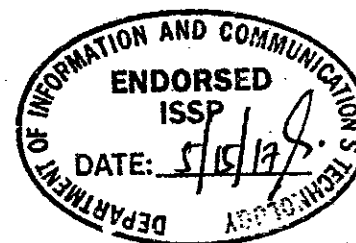


A.2 OBJECTIVES	B. Hyper Converged Virtualization Infrastructure To establish virtualization infrastructure to Regional Offices (RO's) that will; <ol style="list-style-type: none">1. Maximise utilization of their local servers and storage2. Provide faster deployment of DOH developed and in-house developed system and application such as local DNS, DHCP, Active Directory, Web enabled applications, Intranet and other interagency applications like eNGAS and etc.3. Provide less application downtime and recovery time4. To reduce management overhead and power consumption in RO's5. To reduced the number of physical servers, number of license and maintenance cost6. Sustain RO's effective public services
A.2 OBJECTIVES	C. Enterprise Antivirus To establish Centrally Managed Antivirus that will; <ol style="list-style-type: none">1. Protect all RO's workstations and servers from virus, malware, trojan, spyware and other harmful threats2. Minimize RO's internet bandwidth by downloading the virus signatures/definitions and software updates to a single server3. To ensure easy to set up, administer and use of single central management and reporting4. Provide faster deployment of virus signatures/definitions to workstations and servers
A.3. DURATION	2018-2020





A.4. DELIVERABLES	<p>I. Cloud Based Centralize WIFI Infrastructure for DOH Regional Offices (RO's) and ARMM</p> <p>Fully functional and secured Regional Offices campus wide Cloud based Wireless LAN Infrastructure with:</p> <ul style="list-style-type: none">a. 1st Phase Eight (8) RO's<ul style="list-style-type: none">• 8 Wireless Access Points• 3 Power over Ethernet Switchesb. 2nd Phase Eight (8) RO's<ul style="list-style-type: none">• 8 Wireless Access Points• 3 Power over Ethernet Switches <p>II. Enterprise Antivirus</p> <p>Fully functional and Enterprise Antivirus that will protect Regional Offices servers, computers, laptop and other devices from malware, ransomware, trojan, spywar, virus and other threats.</p>
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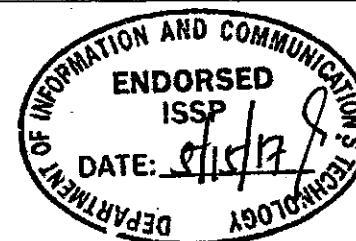


A.4 DELIVERABLES	<p>III. Hyper Converged Virtualization Infrastructure</p> <p>Fully functional and secured Regional Offices Virtualization Infrastructure</p> <p>a. 1st Phase Eight (8) RO's</p> <ul style="list-style-type: none">hyper-converged Virtualization infrastructure (HCVI) appliances and Hypervisor Software and Licenses <p>b. 2nd Phase Eight (8) RO's</p> <ul style="list-style-type: none">hyper-converged Virtualization infrastructure (HCVI) appliances and Hypervisor Software and Licenses <p>IV. Enterprise Antivirus</p> <p>Fully functional and Enterprise Antivirus that will protect Regional Offices servers, computers, laptop and other devices from malware, ransomware, trojan, spywar, virus and other threats.</p>
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A.1 NAME/TITLE	13. ICT Infrastructure Development and Maintenance for DOH Hospitals and Drug Abuse Treatment & Rehabilitation Centers
A.2 OBJECTIVES	To provide a maintained, enhanced, or upgraded ICT infrastructure to DOH Hospitals that are generally are shared by various offices, and used by application systems
	I. Next Generation Firewall for DOH Hospitals <ul style="list-style-type: none">a. To protect DOH hospitals enterprise network from different security risk and threats and overcome the deficiencies and challenges of their existing conventional firewalls.b. To protect DOH hospitals enterprise servers, hospital system and patients datac. To implement Data Loss Protectiond. In compliance with Data Privacy Acte. To give DOH hospitals an effective way of analyzing what application to allow and what to prevent and to control on the applications being used on the network, how they are being used, and knowing who are using them while also preventing associated threatsf. To avert the proliferation of evasive techniques such as the use of non-standard ports, protocol tunneling, SSL encryption, and port-hopping.g. The Next Generation Firewall, DOH should achieve network transparency, reduce vulnerabilities, and conserve network performanceh. To provide easy to set up, administer and use of single central management and reporting



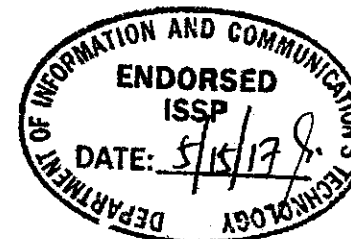


A.1 NAME/TITLE	13. ICT Infrastructure Development and Maintenance for DOH Hospitals and Drug Abuse Treatment & Rehabilitation Centers
A.2 OBJECTIVES	II. Hyper Converged Virtualization Infrastructure To establish virtualization infrastructure to DOH Hospitals that will; a. Maximise utilization of their local servers and storage b. To ensure high availability of Hospital servers and applications c. Provide faster deployment of DOH developed and in-house developed system and application such as iHOMIS, Payroll system, Personnel information system, Medical equipment information system, DNS, DHCP, Active Directory, Web enabled applications, Intranet d. Provide less application downtime, recovery time and to prevent loss of data e. Lower infrastructure and operating costs f. Sustain Hospitals effective public services



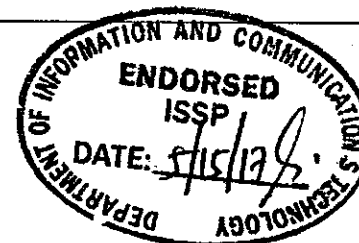


A.1 NAME/TITLE	13. ICT Infrastructure Development and Maintenance for DOH Hospitals and Drug Abuse Treatment & Rehabilitation Centers
A.2 OBJECTIVES	<p>III. Structured Local Area Network (LAN) Cabling & Increasing computing & storage capacity</p> <p>To establish Structured LAN Cabling to DOH Hospitals that will connect different sections, co-centers and stations and that will:</p> <ul style="list-style-type: none">a. simplify their hospital network by making it consistent and flexibleb. Support multi vendor equipmentc. Support future applications and ICT trendsd. Give Hospital ICT administration ease of trouble shootinge. To ensure electronic medical record and hospital information system is sustained
A.3 DURATION	2018-2020



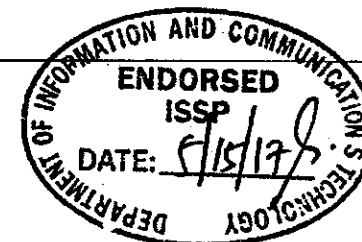


A.1 NAME/TITLE	13. ICT Infrastructure Development and Maintenance for DOH Hospitals and Drug Abuse Treatment & Rehabilitation Centers
A.4 DELIVERABLES	<p data-bbox="586 395 1391 432">I. Next Generation Firewall for DOH Hospitals</p> <p data-bbox="586 472 2002 544">Fully functional and secured Next Generation Firewall to DOH Hospitals that will protect Hospitals Servers, System and Application, patients data from loss and unauthorized access.</p> <p data-bbox="586 584 1435 620">II. Hyper Converged Virtualization Infrastructure</p> <p data-bbox="586 660 1655 697">Fully functional and secured Regional Offices Virtualization Infrastructure</p> <p data-bbox="586 697 1016 732">a. 1st Phase Seven (7) RO's</p> <ul data-bbox="636 732 1984 804" style="list-style-type: none">• hyper-converged Virtualization infrastructure (HCVI) appliances and Hypervisor Software and Licenses <p data-bbox="586 844 1010 879">b. 2nd Phase Eight (8) RO's</p> <ul data-bbox="636 879 1984 951" style="list-style-type: none">• hyper-converged Virtualization infrastructure (HCVI) appliances and Hypervisor Software and Licenses <p data-bbox="586 991 2002 1062">III. Structured Local Area Network (LAN) Cabling & increasing storage and computing capacity</p> <p data-bbox="586 1102 2002 1206">Fully functional, stable, flexible and secured Structured LAN Cabling to DOH Hospitals that will connect different sections, co-centers and stations' acceptable storage and computing capacity to run EMR and hospital information system</p>



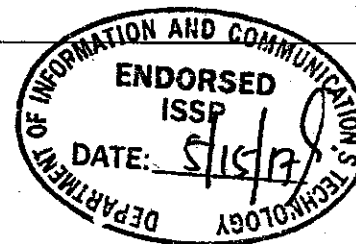


A.1 NAME/TITLE	14. Phase IV: Communications Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting
A.2 OBJECTIVES	<ol style="list-style-type: none">1. Improve the over-all design and system of communication for disaster management and response<ol style="list-style-type: none">a. To define and design the required communication system for disaster management based on the Health Emergency Management Strategic Plan and in-coordination with the over-all communication systems of government for this purposeb. To provide the necessary communication systems for central offices and field offices command centers and responders2. To facilitate data/info exchange especially during disease outbreaks, emergencies, disasters for better response and mitigation
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ul style="list-style-type: none">• Unified SMS/MMS facility for public inquiries on health information, uploading data or following up licensing application and monitoring and inspection, reporting• Upgraded Health Emergency Operations Centers or DOH War Room at central office, Command Centers in Luzon, Visayas and Mindanao, and regional health offices and strategically located hospitals and quarantine stations• Increased storage and processing capacities





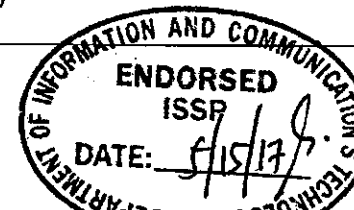
A.1 NAME/TITLE	15. PHASE 3: Document Management
A.2 OBJECTIVES	<ul style="list-style-type: none">• To systematize document management and archiving systems of administrative issuances, personnel files, financial documents, regulatory documents• To digitize permanent records to preserve integrity and authenticity of original copy in selected regions and hospitals• To expand and enhance system implementation of monitoring and tracking status and flow of documents from one office to the other
A.3. DURATION	2018-2020
A.4 DELIVERABLES	<ul style="list-style-type: none">• Document tracking system implemented in Regional health office and Hospitals• Completed Document archiving in at least 10 regions and 20 hospitals• MoP for continuous document archiving• Upgrading of storage and archiving facilities and servers including scanning stations and system for storage and access of documents





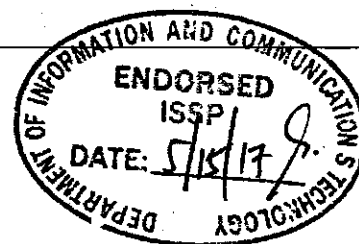
B. CROSS-AGENCY ICT PROJECTS

B.1 NAME/TITLE	1. Phase 2: Philippine Health Information Exchange
B.2 OBJECTIVES	<ul style="list-style-type: none">• To fully develop the PHIE and expand use cases• To enhance the existing data integration model and implement an information exchange that will bring together health data from different point of service applications into a unified patients' electronic health record that can be shared securely. Specifically, it will help provide reliable and timely head data; minimize or eliminate redundant or duplicate processes in reporting; promote data access and data sharing and interoperability with other health information systems and application system as well as other national system such as the citizens' registry.
B.3. DURATION	2018-2020
B.4 DELIVERABLES	<ul style="list-style-type: none">• Continuous Maintenance of the PHIE• Enterprise Service Bus/Health Interoperability Layer/ Health Integration Module• Health Facility, Patient and Provider Registries• Shared Health Record• Health Data Standards Terminology Registry• Disease Registries• PHIE Databases build up• Training conducted• System Evaluation of PHIE
B.5 LEAD AGENCY	Department of Health
B.6 IMPLEMENTING AGENCIES	Philippine Health Insurance Corporation Department of Science and Technology Department of Information and Communication Technology Department of Social Welfare and Development





B.1 NAME/TITLE	2. Phase 4: Enhancement & Expanding Implementation of iHOMIS/Integrated Health Information System
B.2 OBJECTIVES	<p>To help establish or install an electronic medical record and a hospital information system in all public hospitals</p> <p>To expand implementation of iHOMIS from Module 1 to Module 2 and 3 in DOH and government hospitals taht are already using the system;</p> <p>To fulfil requirements of the Philippine Health Information Exchange, Philhealth's eClaims System; to facilitate reimbursements and member verification;</p> <p>To improve reporting in the disease registries; to improve efficiency and effectiveness of hospitals operations as well in providing better health services.</p> <p>To scale up implementation of a modular computerized systems in hospitals in support to IHOMP (Integrated Hospital Operation and Management Program) and Health Facilities Enhancement Program</p> <p>To revise and improve the iHOMIS, the Integrated Health Information System (IHIS) for Region 4A (CALABARZON) is to be developed to include requirements for Service Delivery Network (SDN); improve reporting of the disease registries; to improve efficiency and effectiveness of hospitals operations as well in rural health units towards providing better health services.</p> <p>To establish the governance structure to implement an EMR & HIS is hospitals</p>
B.3. DURATION	2018-2020



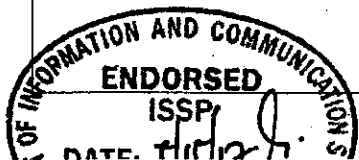


B.1 NAME/TITLE	2. Phase 4: Enhancement & Expanding Implementation of iHOMIS/Integrated Health Information System
B.4 DELIVERABLES	<ul style="list-style-type: none">• Enhanced iHOMIS• Electronic Health Record• iHOMIS Module 1 in at least 40 hospitals• iHOMIS Module 2 implemented in at least 100 hospitals• iHOMIS Module 3 implemented in at least 100 hospitals• IHIS developed and piloted in selected Hospitals• System training conducted
B.4 LEAD AGENCY	Department of Health
B.5 IMPLEMENTING AGENCY	DOH Hospitals LGU Hospitals Phil Health Insurance Corporation for E-Claims and membership verification



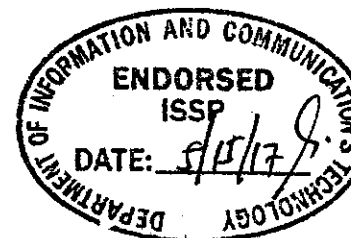


B.1 NAME/TITLE	3. Phase 3: Enhancement & Expanding Implementation of iClinicSys
B.2 OBJECTIVES	<ul style="list-style-type: none">• To help establish an electronic medical record and health information system in all primary care facilities to help improve the management and delivery of health services at the rural health units, health centers and/or barangay health stations by automating the basic processes in the facility and establishing electronic medical record nad to comply with Philhealth requirements Specifically, the project aims to• support the availability of reliable and timely data/information that are crucial to accurate and timely decisions; Shorten the recording and retrieval of patient data, as well as data consolidation; Facilitate and minimize or eliminate process/record duplication; Improve data/information accessibility by various providers and users to perform their functions; Promote faster and easier generation of reports and data sharing and interoperability; Help facilitate compliance to Phil health requirements in terms of primary health benefit; and to support better management of the resources of the facility; Shorten patient waiting time for services; better streamline work-flow of health center transactions; help estimate patient loads.• To minimize burden of data management at the service delivery level in order to allow more time for patient care• To facilitate provision of data on health service delivery and selected program accomplishment indicators at the barangay, municipality/city, and district, provincial, regional and national levels.• To provide data which when combined with data from other sources, can be used for program monitoring and evaluation purposes.• To monitor occurrence of disease• To integrate different health information systems implemented at the Local Level• To facilitate to patient referral from one facility to the other





B.1 NAME/TITLE	4. Philippine Health Data Standards Adoption and Institutionalization
B.2 OBJECTIVES	<ul style="list-style-type: none">• To ensure use and adoption by a critical number of concerned health human resources, developers, health facilities of the initial set mandatory health data standards. It will further engage a significant number of ehealth standard advocates to ensure its sustainability. Specifically, it will:• Develop the capacity of health facilities and health human resources to adopt the agreed upon Health Information Systems Standards/ Health Information Technology Standards/ Health Data Standards (HISS/HITS/HDS) and comply with the national health data reporting and implementation of the Philippine Health Information Exchange; and• Define or validate new sets of applicable health data standards, promote consensus building, and institutionalize other HISS/HITS/HDSs.
B.3. DURATION	2018-2020
B.4 DELIVERABLES	<ul style="list-style-type: none">• Updated of HISS/HITS/HDS• Trained personnel• Policies/rules on adoption• Licenses
B.4 LEAD AGENCY	DOH
B.5 IMPLEMENTING AGENCY	<ul style="list-style-type: none">• PhilHealth; DOST; DICT; UP Manila or any Health Academic Institution; All Hospitals; Regional Offices; All RHUs/HCs; Private health Facilities; EMR/HIS Developers



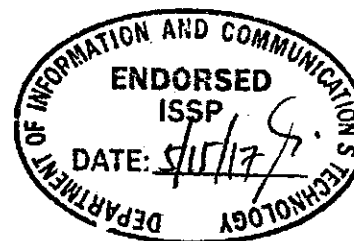


B.1 NAME/TITLE	5. Philippine Health Enterprise Data Warehouse
B.2 OBJECTIVES	<p>To enhance strengthen the existing Database Administration and Management System (DAMS) and work towards establishing the country's health enterprise data warehouse. Specifically, to:</p> <ul style="list-style-type: none">• align service value with the direction of the Philippine Health Enterprise Architecture and Philippine Health Information Exchange;• efficiently manage the increasing growth of quality health data and to comply with applicable or mandatory regulatory requirements and;• improve availability and access to quality and more complete health and health related data for policy and standards development and service delivery;
B.3. DURATION	2018-2020
B.4 DELIVERABLES	Health Data warehouse expanded and harmonized with Philhealth Database build-up Policies and rules on security, access, updating
B.4 LEAD AGENCY	Department of Health
B.5 IMPLEMENTING AGENCY	DOH Hospitals LGU Hospitals Phil Health Insurance Corporation



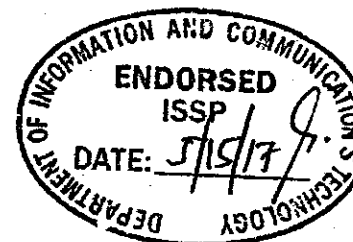


B.1 NAME/TITLE	6. Interconnecting Primary Health Care Facilities Health, Hospitals and TRCs
B.2 OBJECTIVES	<p>To support the provision of internet connection to hospitals and HCs/RHUs for on-line reporting, PhilHealth's eClaims, membership verification and primary health care benefit</p> <p>To help provide interconnection to different Primary Health Care Facilities, Hospitals using different DICT-DOST-iGOV projects such as Government Network (Fiber to the Building); Free WiFi; TV White Space or National Broadband Network</p> <p>To assist local health facilities and to implement the reporting requirements of PhilHealth and DOH and to implement the PHIE and disease registries</p>
B.3. DURATION	2018-2020
B.4 DELIVERABLES	<p>Internet connection</p> <p>Interconnection among Primary Health Care Facilities and Hospitals to PHIC and other Government Agencies through the the secured, resilient, stable, flexible and reliable National Government initiative projects</p> <p>Interconnection among TRCs and oversight agencies</p> <p>Stable and acceptable internet connection</p>
B.5 LEAD AGENCY	Department of Health
B.6 IMPLEMENTING AGENCIES	<p>Department of Information and Communication Technology</p> <p>Department of Science and Technology</p> <p>Hospitals, Health Centers, Rural Health Units, BHS</p>



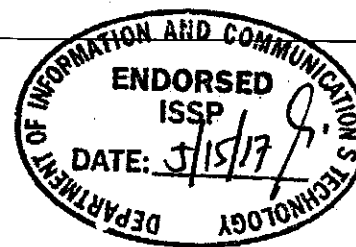


B.1 NAME/TITLE	7. Phase 1: Drug Abuse Treatment and Rehabilitation Automation Project (DATROS)
B.2 OBJECTIVES	Support the "The Comprehensive Dangerous Drug Act of 2002" (RA 9165) which impels government to "safeguard the well-being- of its citizenry particularly the youth from the harmful effects of dangerous drugs on their physical and mental well-being and to defend the same against acts or omissions detrimental to their development and preservation." DOH is mandated to supervise and monitor the <i>integration, establishment and operations of drug rehabilitation, drug testing networks and laboratories</i> in cooperation with other agencies.
B.3. DURATION	2018-2020
B.4 DELIVERABLES	<ul style="list-style-type: none">• EMR used in DATRCs• Training conducted for drug testing centers and in treatment and rehabilitation centers• MoP developed or revised including guidelines in special guidelines in data security and confidentiality• Database build-up
B.5 LEAD AGENCY	Department of Health
B.6 IMPLEMENTING AGENCIES	Dangerous Drug Board Drug Abuse Treatment and Rehabilitation Centers



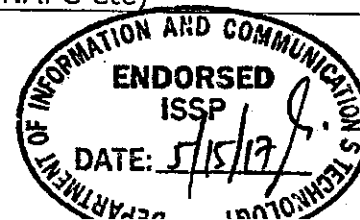


B.1 NAME/TITLE	8. Phase 2: Unified Disease Registry Systems
B.2 OBJECTIVES	<p>To reinforce the implementation of the National Disease Registry and promote data sources integration and build-up support and meet the requirements of the PHIE and need for quality data for policy and standards development and in improving health care services and health facility management. Specifically, it seeks to align service value of the NDR with the direction and objectives of the Philippine Health Enterprise Architecture and Philippine Health Information Exchange and eventually Universal Health Care; efficiently and effectively improve processes and procedures in more health facilities to ensure completeness of data/reports; institute quality standards in the collection, processing, and utilization of data.</p> <ul style="list-style-type: none">• To minimize burden of data management at the service delivery level in order to allow more time for patient care• To facilitate provision of data on health service delivery and selected program accomplishment indicators at the barangay, municipality/city, and district, provincial, regional and national levels.• To provide data which when combined with data from other sources, can be used for program monitoring and evaluation purposes.• To better monitor occurrence of disease
B.3. DURATION	2018-2020
B.4 DELIVERABLES	<ul style="list-style-type: none">• Establishment of Unified Disease Registry System for Infectious, Non Communicable Diseases and Environment Health Related Diseases• Updated Policies on IDs/NCDs reporting• Integration with PHIE• Integrated and implementation with Disease surveillance system
B.5 LEAD AGENCY	Department of Health
B.6 IMPLEMENTING AGENCIES	Philippine Health Insurance Corporation Local Health Facilities Private Health Facilities





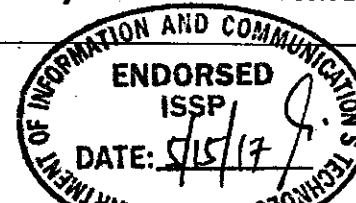
B.1 NAME/TITLE	9. Phase 3: National Health Atlas & Integration with the Philippine Geoportal
B.2 OBJECTIVES	<ul style="list-style-type: none">• To better appreciate or visualize data through maps. NHA contains health facilities and provide their profiles in terms of service delivery capacities, demography, and related other information is made available to the public. The location of each facility at the level of the region, province and municipality presents demographic characteristics and selected health indicators which are useful for policy and standard development and planning and monitoring• To avoid duplication of work with other agencies• To share NHA with other agencies that need the data
B.3. DURATION	2018-2020
B.4 DELIVERABLES	<ul style="list-style-type: none">• Up-to-date and more accessible National Health Atlas• NHA integrated with Phil Geoportal• Policies and SOPs for implementation, updating by RHOS and Local Health Agencies, access and sharing• Completed/validated all health facilities' geographic coordinates
B.5 LEAD AGENCY	Department of Health
B.6 IMPLEMENTING AGENCIES	National Mapping and Resource Information Authority Cabinet Human Development Cluster (DSWD, DEPED, NAPC etc)





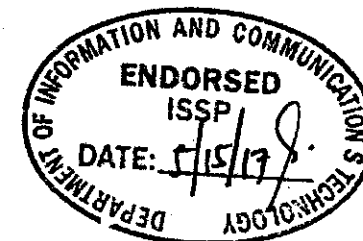
B.1 NAME/TITLE	10. Phase 3: Telehealth/Telemedicine System
B.2 OBJECTIVES	<ul style="list-style-type: none">• To deploy telehealth services in selected sites where medical expertise is limited• To connect doctors assigned geographically difficult areas to medical experts• To support the Maternal Neonatal and Child Health and Nutrition Program to lower maternal and neonatal mortality
B.3. DURATION	2018-2020
B.4 DELIVERABLES	Telehealth –mentoring system deployed Telehealth-referral developed Telehealth application expanded Expanded adoption of integrated mhealth applications Integration and adoption of RXBox(telemedicine device) with various EMR systems in 1,000 primary care facilities
B.5 LEAD AGENCY	Department of Health
B.6 IMPLEMENTING AGENCIES	DOST UP Manila, National Telehealth Center Local Health Facilities

B.1 NAME/TITLE	11. Phase 2: Health Emergency Management Service System Enhancement Project
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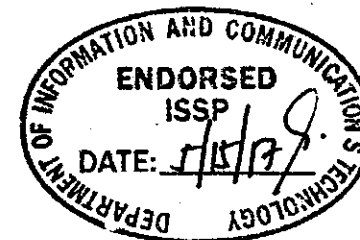
B.2 OBJECTIVES	<ul style="list-style-type: none">• To implement the HEMS IIS and make the system accessible and integrated with the member agencies of the National Disaster Risk Reduction Management Council• To harmonize system with the government-wide disaster reporting and communication systems for coordinated response and mitigation
B.3. DURATION	<ul style="list-style-type: none">• 2018-2020
B.4 DELIVERABLES	<ul style="list-style-type: none">• Implemented HEMIIS in HEMS, RHOs and hospitals• Trainings conducted with DOH and NDRRMC member agencies• Enhanced and integrated communication systems at central and regional offices• Fully equipped operations center/War Room
B.5 LEAD AGENCY	Department of Health
B.6 IMPLEMENTING AGENCIES	DOH Hospitals Regional Health Office NDRRMC member agencies





B.1 NAME/TITLE	12. Verbal Autopsy (SmartVA) for Enhancing Civil Registration and Vital Statistics (CRVS) [for Mortality Statistics]
B.2 OBJECTIVES	<ol style="list-style-type: none">1.To help improve the proportion and quality of death certification2.To help in improving the availability and accessibility of quality Vital Statistics for use on policy development, health development, health planning, and program management across all levels3.To help improve timeliness of Vital Registration to 1.5 years, increasing awareness and utilization of Vital Statistics
B.3. DURATION	2018-2019
B.4 DELIVERABLES	<ul style="list-style-type: none">• Institutionalized training on ICD 10 and Certification of Death for Municipal/City Health Officer, Local Civil Registrar and Medical Records Officers• Verbal autopsy system• Training on enhanced CRVS system• MoP, Guidelines
B.5 LEAD AGENCY	Department of Health
B.6 IMPLEMENTING AGENCIES	Local Civil Registration Office Hospitals Health Centers/RHUs Philippine Statistics Administration (PSA)

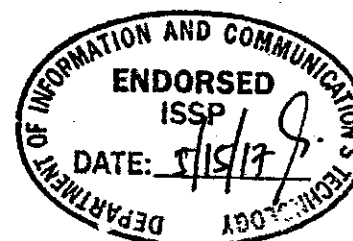
C. PERFORMANCE MEASUREMENT FRAMEWORK





INTERNAL ICT PROJECTS

1. Phase 2: Integrated Executive Information System (EIS)					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <ul style="list-style-type: none"> Immediate access to quality health data information for the policy and standards development Improved monitoring of health outcomes and outputs Improved scientific evidence -based approached to health care/systems' decision 	<i>Satisfaction rate in data access by DOH management</i> <i>% completeness of health data needed</i> <i>% of data used for business analytics and business intelligence</i>	0 40% 5%	Increase to 40% Increase to 60% Increase to 50%	CSS SS, Project Implementation Reviews (PIR)	KMITS, with Health Policy Development and Planning Bureau
IMMEDIATE OUTCOMES <ul style="list-style-type: none"> Improved health data management Improved data presentation and visualization Better demand/utilization of health data Less time spent in creating special presentations for management 	<i>Number of days in locating health data</i> <i>% of officials using IEIS</i>	5 days 0	Decrease to 1 day Increase to 50%	Special survey or CSS System log ins	



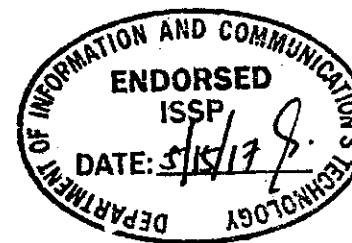


1. Phase 2: Integrated Executive Information System (EIS)					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <i>Integrated Executive Information System developed and adopted</i> <i>Interfaces or integration modules implemented among Unified HMIS, Health Atlas and PHA Dashboard</i>	<i>Number of health status and health systems indicators available & monitored</i>	19	Increase to 40	<i>Actual inspection, PIR, Actual count</i>	
	<i>Number of Central and Regional Officials with access to iEIS</i>	0	25		
	<i>Number of policies, guidelines manual of operations developed and issued</i>	0	3		
	<i>Number of orientation undertaken</i>	0	17		





2. Phase 2: Updating the Philippine Health Enterprise Architecture					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>More responsive plans on the use of ICT that supports critical business processes</i>	<i>Number of reviews to update EA based on eHealth Framework and plan and health sector reform priorities/PHA Road map</i>	<i>Once each year</i>	<i>At least twice a year</i>	<i>Minutes of meeting Actual Count (AC)</i>	KMITS
IMMEDIATE OUTCOMES <i>Improved investment and use of ICT for health entities' business process</i>	<i>% increase in ICT budget</i>	<i>10%</i>	<i>Increase to 50%</i>	<i>GAA, WFP</i>	
OUTPUTS <i>Updated Health Enterprise Architecture</i> <i>Segment EAs for a Regional Health Office, Hospital and Primary Health Care Facility</i>	<i>Number of EAs formulated/updated</i> <i>Number of orientation workshop conducted</i> <i>Number of copies EAs published and disseminated</i>	<i>1</i> <i>1</i> <i>0</i>	<i>5</i> <i>5</i> <i>500</i>	<i>Actual count</i>	



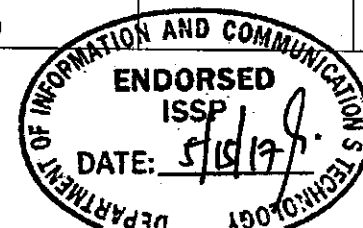


3. Phase 1: DOH Enterprise Resource Management System					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Enhanced access to DOH services for offices and personnel</i>	<i>Number of DOH services (finance, procurement, supplies, general services, information management, ICT services) request filed on-line</i> <i>Number of DOH services (finance, procurement, supplies, general services, information management, ICT services) request responded on-line within acceptable period</i>	<i>5</i> <i>5, 2 weeks</i>	<i>20</i> <i>20, 3 days maximum</i>	<i>System generated</i>	<i>Each office</i>
IMMEDIATE OUTCOMES <i>Faster access to services</i>	<i>% decrease in response time for request for services</i>	<i>10%</i>	<i>5%</i>	<i>System generated</i>	
OUTPUTS <i>ERM system developed and used</i> <i>MoP of system</i> <i>Training conducted</i>	<i>Number of databases included</i> <i>Number of guidelines, manual of operations (MoPs) developed and issued</i> <i>Number of Central and Regional Offices adopting system</i> <i>Number of staff trained</i>	<i>1</i> <i>1</i> <i>24</i> <i>50</i>	<i>1</i> <i>1</i> <i>40</i> <i>150</i>		



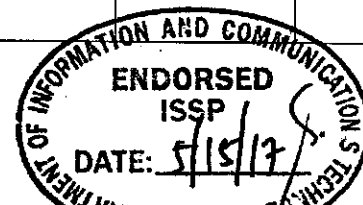


4. Local Health Systems Project					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <ul style="list-style-type: none"> More responsive technical support provided to local health facilities/LGUs Faster provision of financial and good augmentation or technical assistance Faster production of reports for monitoring service agreements 	<i>Number of LGUs provided better technical and financial assistance based on PIPH within standard time period</i> <i>% of Local Health Units provided health goods and services on time</i>	< 82 20%	82 provinces 70%	CSS/SS/AC and records	Bureau of Local Health System Development Bureau of International Health Cooperation; Regional Offices
IMMEDIATE OUTCOMES <ul style="list-style-type: none"> Easier access to local facilities data Less duplication in data collection Less cost in system development and ICT infrastructure Improved identification of needs that have to provide to local health facilities/LGUs Easier monitoring of service level agreements Improved access to and sharing of good practices 	<i>Number of service agreements processed and monitored on time</i> <i>Length of time to process and monitor a PIPH & AWFP</i> <i>Number of documented and shared good practices</i>	< 82 > 6 months <12 projects	82 < 3 months >30 projects	Actual count, PIR, Minutes of reviews	
OUTPUTS <ul style="list-style-type: none"> Local health System developed MoPs made available Trainin conducted 	<i>Number of databases included</i> <i>Number of guidelines, manual of operations (MoPs) developed and issued</i> <i>Number of Regional Office adopting system</i> <i>Number of staff trained</i>	3 1 1 0	Increase to 6 3 16 40	Actual count, Walkthroughs	





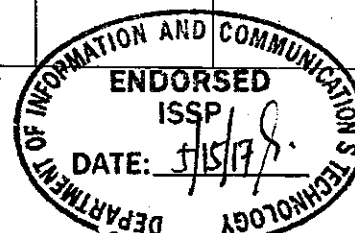
5. Phase 2: Expanded Electronic Drug Price Monitoring System					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Better access to and utilization of prices of drug</i> <i>Improved access to information on availability of drugs</i>	<i>Number of days in accessing drug prices data</i>	>1 day	< 1 day	Actual count, Reports, records	Pharmaceutical Division
	<i>Number of DOH agencies/LGUs using database as reference</i>	5	25		
	<i>Number of drugs given maximum retail price</i>	20	As needed		
IMMEDIATE OUTCOMES <i>Improved drug price and inventory collection</i> <i>Better access to information on regulated drug prices, computation of ABC for procurement</i>	<i>Number of days for collecting drug prices and inventories</i>	>5 days	<3 days	Records, system log-ins	
	<i>Number of days for computing for average drug price</i>	>1 day	<1 day		
	<i>% completeness of drug outlets uploading drug price</i>	40%	80%		
	<i>Number of users of enhanced Website</i>	-	>80		
OUTPUTS • <i>Expanded EDPMS System with Philippine medicine Online and Drug Price Monitoring Index maintained and implemented</i>	<i>Number of trainings conducted</i> <i>Number Databases built</i> <i>Number of guidelines & MoPs developed & issued</i> <i>Number of drug outlets adopting system</i>	2 1 1 50	6 3 3 At least 80	Records, AC, walkthroughs	





6. Phase 2: Implementation of the Integrated Licensing Information System (ILIS)

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES					
<i>Better access to health facility licensing and accreditation requirements by hospitals, clinic, laboratories, radiation facilities</i>	<i>Number of minutes of getting information on requirements for regulation</i>	<i>>1 day</i>	<i>< 1 day</i>	<i>Call register, reports, records, system log-ins, actual counts</i>	<i>Health Facilities and Services Regulatory Bureau, Food & Drug Administration</i>
<i>Faster application for licensing and accreditation</i>	<i>Number of applicants filing on-line</i>	<i>0</i>	<i>> 1250 facilities</i>		
<i>Immediate access to information on health facilities with license to operate</i>	<i>Number of days spent following up status of application</i>	<i>>1 day</i>	<i>< 1 day</i>		
	<i>Number of calls to complaints or get information on application status</i>	<i>At least 20 calls/day</i>	<i>< 5 calls /day</i>		
IMMEDIATE OUTCOMES					
<i>Improved processes of health facility and services licensing and accreditation</i>	<i>Number of days in generating status reports/statistics</i>	<i>> 20 days</i>	<i><5 days</i>	<i>Call register, reports, records, system log-ins, actual counts</i>	
<i>Enhanced recording and analysis of health facility inspection, certification and compliance monitoring of health facilities</i>	<i>% of applicants provided an License to Operate within prescribed period</i>	<i>At least 50%</i>	<i>At least 80%</i>		
<i>Enhanced dissemination to the public of health facilities and services with license and accreditation</i>	<i>% of applicants provided accreditation within prescribed period</i>	<i>At least 60%</i>	<i>At least 85%</i>		





6. Phase 2: Implementation of the Integrated Licensing Information System (ILIS)

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS					
Integrated Licensing Information System Developed	Number of regional offices using system	0	16	Actual Count, Reports, Minutes	
Mobile applications for licensing officers	Number of policies and Manual of Procedures developed and issued	0	3		
MoP made available	Number of trainings conducted among Health Regulatory Officers (HROs)	0	3		
Training conducted	Number of computer system and mobile system for HROs	0	120		





7. Phase 2 & 3: Expansion of the Quarantine Services & International Health Regulation Automation Project

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES					
Improved access to quarantine services specifically on vaccination of travellers against disease under international health regulation	% of travellers obtaining vaccination under international health regulation with ease	-	80%	CSS, Clinical reports/records, system log ins, calls register	Bureau of Quarantine
Reduced waiting time for travellers for services and when monitored for emerging disease	Waiting time (days) before quarantine services are obtained	> 5 days	<2 days		
Improved prevention & control of emerging & reemerging diseases through ports & airports	Number of calls on where to obtain quarantine services	At least 5 calls	< 2 calls		
	Number of quarantine stations submitting surveillance report on time	2	29		





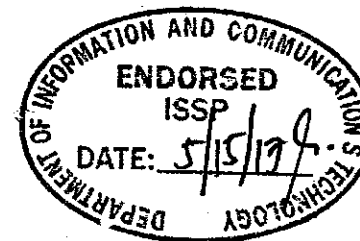
7. Phase 2 & 3: Expansion of the Quarantine Services & International Health Regulation Automation Project					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES <i>Simplified process of monitoring travellers</i> <i>Better access to quarantine data</i> <i>Better information access by travellers</i> <i>Better recording of inspection reports in ports, airports, aircrafts and sea vessels to prevent disease</i> <i>Enhanced information dissemination on international health regulation</i>	<i>Average minutes in checking passengers for emerging disease in the airports</i> <i>Number of communication channels available to travellers and ports and airport personnel</i> <i>Number of FAQs/guidelines indicated in the website</i> <i>Number of days in preparing inspection reports</i>	<i>>30 minutes</i> <i>2</i> <i>0</i> <i>> 5 days</i>	<i><15 minutes</i> <i>At least 5</i> <i>>100</i> <i>Within a day</i>	<i>AC, reports, SS, system logs</i>	





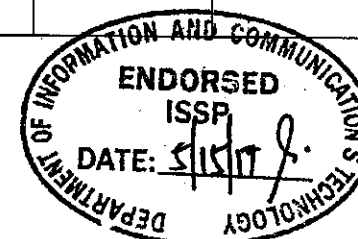
7. Phase 2 & 3: Expansion of the Quarantine Services & International Health Regulation Automation Project

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none"> Developed Quarantine Services and International Health (IHR) Regulation System Developed International Ports & Airports Health Information System Passenger registry for monitoring purposes and treatment in case of infection Dashboard for IHR cases/circumstances Bureau of Quarantine clinic system Enhanced BoQ website Updated computer systems for all quarantine stations 	<i>Number of quarantine stations implementing systems</i> <i>% completeness of the BOQ website</i> <i>Number of trainings conducted</i> <i>Number of guidelines & MoPs formulated and issued</i>	0 10% 0 0	At least 17 90% 3 3	AC, reports, system logs	



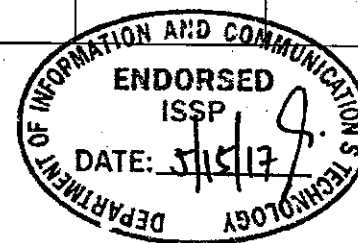


8. Phase 2: Expansion of the Integrated Logistics Management System					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Reduced waiting time for payment of procurement transaction</i> <i>Improved availability of health goods in health facilities</i>	<i>Number of days in processing payment of suppliers</i> <i>Number of days in replenishing essential public health commodities</i>	<i>>35 day</i> <i>>20days</i>	<i><10 days</i> <i><5 days</i>	Document tracking system, records,	Finance & Management Service; Procurement Service; Administrative Service (Logistics Management Division)
IMMEDIATE OUTCOMES <ul style="list-style-type: none"> • Reduced processing time • Better recording and monitoring of available health goods • Improved sharing of data among 3 offices • Less time spend for locating data • Easier and faster to know stock outs and location of replenishments 	<i>Number of days in preparing procurement documents and deliveries & inspections ++</i> <i>Number of days gathering documents to process payment</i> <i>Average number of hours of recording transactions</i> <i>Average number of hours of preparing documents for delivery and distribution to regional offices</i>	<i>>20days</i> <i>> 5 days</i> <i>48 hours</i> <i>12 hours</i>	<i><5 days</i> <i>< 2 days</i> <i>8 hours</i> <i>6 hours</i>		
OUTPUTS <ul style="list-style-type: none"> • Integrated system developed and adopted • Supplies registry • MoP made available • Training conducted 	<i>Number of health facility using system</i> <i>Number of trainings conducted</i> <i>Number of policies and guidelines issued</i> <i>Number of database built</i>	5 2 2 2	At least 83 6 5 5		



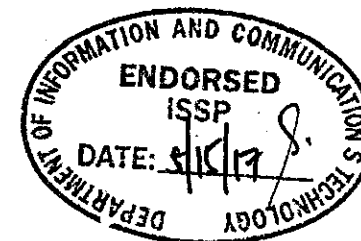


9. Sub-national Integration of Health Informations Systems					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES Reduced time in operating and using various system <i>Faciliated access to various rport generated by variou HIS</i>					Health facility
IMMEDIATE OUTCOMES <i>Simplified process of implementing various HIS</i> <i>Better access to generation of reports from various HIS</i>	% decrease opening and operating various HIS Number of HISs systems implemented reduced % time reduced in generating reports	2hours 20 1 hour	<30 minutes 5 30 mins		Health Facility
OUTPUTS <ul style="list-style-type: none"> System developed and implemented MoP made available Training Conducted 	System operational Number of MoPs reproduced Number of training conducted	1 sub-system - -	3 sub-systems 50 50	AC, reports, system logs	



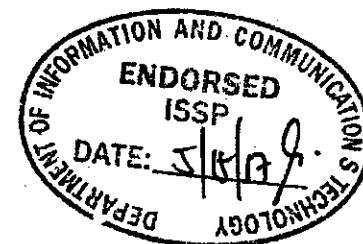


10. International Health Coordination Information System Integration					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <ul style="list-style-type: none"> • More transparent distribution of foreign fellowship • Enhanced registration and faster attainment of permit to undertake to foreign medical and surgical mission, donate health and health related goods, undertake specialized medical training abroad, undertake study visit to the DOH and the country's health systems • Better monitoring of international country commitments • Acceptable representation of DOH technical health meetings 	<i>Number of days to process approval of foreign fellowships</i>	>15 days	<6 days	Actual requests, document tracking system	Bureau of International Health Cooperation
	<i>Number of days to process bilateral meetings</i>	>60 days	<20 days		
	<i>Number of days in obtaining permit to undergo or extend foreign specialized training</i>	>10 days	<5 days		
	<i>Number of days to get permit to donate and or conduct a foreign surgical and medical mission</i>	>20 days	5 days		





10. International Health Coordination Information System Integration					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES <ul style="list-style-type: none"> Improved access to and allocation of foreign fellowships Enhanced preparation to foreign visits and monitoring of commitments Improved assignment and monitoring of foreign medical and surgical missions Better monitoring of medical doctors on foreign specialized training Better coordination, facilitation, recording and allocation of foreign donated goods 	<i>Number of DOH units with access to foreign fellowship</i> <i>Number of doctors monitored who came back after foreign fellowship</i> <i>% of foreign medical and surgical mission recorded and given permit of medical and surgical missions by location</i> <i>% of foreign medical visitors processed by purpose</i> <i>% of foreign donations processed by type and recipient</i>	- - - - -	<i>>93 units</i> <i>All</i> <i>80%</i> <i>80%</i> <i>80%</i>	<i>Actual requests, document tracking system, system logs</i>	



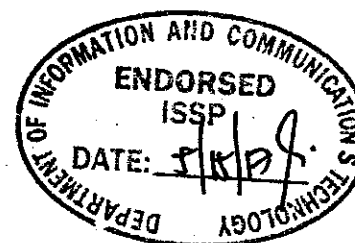


10. International Health Coordination Information System Integration					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none">• <i>Systems enhanced or developed and integrated</i>• <i>Trainings conducted</i>• <i>Policy, Guidelines, MoP made available</i>	<i>Number of sub-modules reviewed, enhanced and integrated</i>	1	4	<i>Actual requests, document tracking system, Actual count</i>	
	<i>Number of training conducted</i>	1	4		
	<i>Number of policies and guidelines issued</i>	2	4		





11. ICT Infrastructure Development and Maintenance for Central Offices					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES					
<i>Reduced waiting time for DOH call response</i>	<i>Number of minutes before a call is responded to</i>	<i>> 30 minutes</i>	<i><10 minutes</i>	<i>Special survey, regular report, CSS</i>	<i>KMITS</i>
<i>Improved database and applications security</i>	<i>Number of database or application systems security breach</i>	<i>0 breach</i>	<i>0 breach</i>		
<i>Improved ICT support to critical DOH processes and systems</i>	<i>Number of critical business process application systems acceptably operational and accessed by the public</i>	<i>10</i>	<i>20</i>		
<i>Ensured availability of ICT services</i>	<i>% DOH personnel satisfied with corporate ICT services</i>	<i>70%</i>	<i>95%</i>		





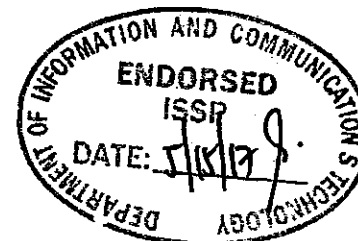
11. ICT Infrastructure Development and Maintenance for Central Offices

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES					
• Reduced long distance call cost	Cost of long distance calls	>1 peso/call	No cost	Regular report, Special survey	
• Reduced travelling cost to attend meetings	Cost of travel of Execom and RDs	0	0		
• Improved intra and inter communications	Number of minutes in being able to contact someone within DOH	>30 minutes	<10 minutes		
	Number of minutes in being able to contact someone within & outside San Lazaro Compound	>10 minutes	< 5 minutes		
• Improved communication using the internet	Number of seconds to download an article from the internet	20	10		
	Number of seconds to open an application system	20	10		
• Improved ICT infrastructure up-time	Number of downtime	95%	98%		
• Minimum disruption in work that uses ICT	% system available	95%	98%		
• Corporate data available to all concerned clients.	% availability of corporate data for intended users	95%	98%		
		95%	98%		



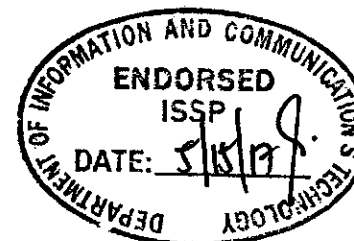


11. ICT Infrastructure Development and Maintenance for Central Offices					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none"> Functional DOH-Wide IP-PBX and VOIP interconnection with ROs & hospitals Operational video conferencing system Secured ICT and application systems in central offices Operational data center and disaster recovery site Operational WIFI system in San Lazaro Compound 	<ul style="list-style-type: none"> Number of DOH units connected to IPPX with added functionalities Number of ROs with video conferencing connection during Executive Committee meetings % availability % availability % availability 	<ul style="list-style-type: none"> 28 0 0 80% available 95% available 80% available 	<ul style="list-style-type: none"> 42 >93 At least for 2 seats 99% At least 95% At least 95% available 	Actual reports	KMITS





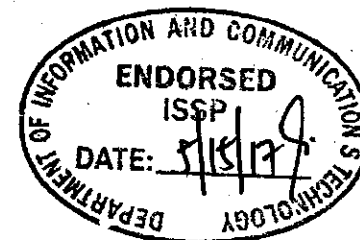
12. ICT Infrastructure Development & Maintenance for Regional Offices					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES					
Ensured availability of ICT services	% satisfaction rate on ICT services	20%	80%	CSS, Special and regular report	Hospital & TRCs
High system availability and efficient service to the concerned client	% online application services availability	80%	95%		
IMMEDIATE OUTCOMES					
<ul style="list-style-type: none">Improved ICT infrastructure up-time/ reduced downtimeMinimum disruption in work that uses ICTCorporate data available to all concerned clients.Available storage and processing capacities in central office, regional office and hospital; Increase in database and pertinent data that are properly backed-up and may located remotelyLoss of pertinent data that may lead to difficulty in retrieving mission critical applications is avoided	% up time of major ICT services	80%	95%	Regular report, System report	
	% availability of corporate data for intended users	80%	95%		
	Number of times DOH units' system is hacked	0	0		
	Number of times back-up is made	Not daily	Daily		





12. ICT Infrastructure Development & Maintenance for Regional Offices

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none"> Fully functional LAN Fully functional ICT security Fully functional ICT computing facility & services torun EMR& HIS Upgraded storage system for various application systems and databases Policies or SOPs developed and formulated Training conducted 	<p>Number of functional LAN</p> <p>Number of functional computing facility</p> <p>Number of downtime</p> <p>% increase in computing capacity based on requirements</p> <p>Number of guidelines & SOPs issued</p> <p>Number of training conducted</p>	<p>1</p> <p>1</p> <p>>1</p> <p>50%</p> <p>5</p> <p>2</p>	<p>1</p> <p>1</p> <p>No downtime</p> <p>80%</p> <p>8</p> <p>5</p>		





13. ICT Infrastructure Development & Maintenance for hospitals & TRCs					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES					
Ensured availability of ICT services	% satisfaction rate on ICT services	20%	80%	CSS, Special and regular report	Hospital & TRCs
High system availability and efficient service to the concerned client	% online application services availability	80%	95%		
IMMEDIATE OUTCOMES					
<ul style="list-style-type: none">Improved ICT infrastructure up-time/ reduced downtimeMinimum disruption in work that uses ICTCorporate data available to all concerned clients.Available storage and processing capacities in central office, regional office and hospital; Increase in f database and pertinent data that are properly backed-up and may located remotelyLoss of pertinent data that may lead to difficulty in retrieving mission critical applications is avoided	% up time of major ICT services	80%	95%	Regular report, System report	
	% availability of corporate data for intended users	80%	95%		
	Number of times DOH units' system is hacked	0	0		
	Number of times back-up is made	Not daily	Daily		





13. ICT Infrastructure Development & Maintenance for hospitals & TRCs					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none"> Fully functional LAN Fully functional ICT security Fully functional ICT computing facility & services torun EMR& HIS Upgraded storage system for various application systems and databases Policies or SOPs developed and formulated Training conducted 	Number of functional LAN	1	1		
	Number of functional computing facility	1	1		
	Number of downtime	>1	No downtime		
	% increase in computing capacity based on requirements	50%	80%		
	Number of guidelines & SOPs issued	5	8		
	Number of training conducted	2	5		





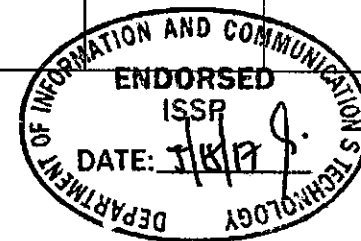
14. Phase 4: Communications Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Better response time during health emergencies and disease outbreaks</i> <i>Easier access by general public to DOH for assistance</i> <i>Easier reporting to DOH and others concerned authorities</i>	<i>Average waiting time before response or help to is provided by DOH</i> <i>Average waiting time for call/query to be responded to</i>	<i>24 hours</i> <i>60 minutes</i>	<i>5 hours</i> <i>20 mins</i>	<i>Actual count, regular reports, HERIS</i>	<i>Epidemiology Bureau; Regional Offices; Health Emergency Management Bureau</i>





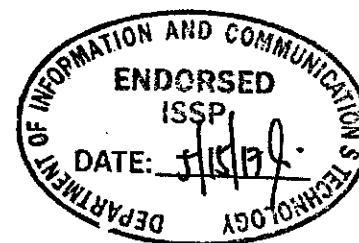
14. Phase 4: Communications Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES <i>Better and faster intra and inter communication and coordination among responders, epidemiologists and DOH management</i> <i>Enhanced on-line reporting of health service statistics, disease occurrence and disasters</i> <i>Faster determination of disease trends and determining possible outbreak</i> <i>Enhanced system of communication interconnection among DOH offices and personnel</i> <i>Better flow and frequent flow of information among people concerned</i> <i>Enhanced and rapid identification and resolution of issues and decision on response.</i> <i>Increased storage and processing capacities</i>	% reporting of health service statistics on-line	0	80%	Special Survey, Actual Count, Records, HERIS	
	% completeness of health data reported to concerned DOH units	50%	95%		
	Number of response teams deployed to disaster/outbreak sites within 24 hours	-	>1		
	Average response time for making available health goods for distribution within	24 hours	6 hours		
	Average start time for epidemiologists to investigate on in cases of disease outbreaks or possible outbreaks	12 hours	4 hours		
	Average time in preparing report on disaster or outbreak to DOH management	8 hours	5 hours		



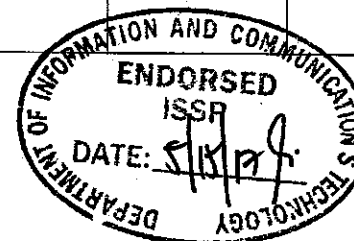


14. Phase 4: Communications Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS					
• Unified SMS/MMS facility	<i>Number of SMS/MMS number for all queries with DOH</i>	<i>More than 1</i>	<i>1</i>		
• Other alternative communication system installed for emergency and epidemic response	<i>Number of alternative communication channel/systems in place</i>	<i>3</i>	<i>>6</i>		
• Upgraded Health Emergency Operations Centers or DOH War Room at central office, Command Centers in Luzon, Visayas and Mindanao and regional health offices and in at least 4 strategically located hospitals	<i>Number of fully equipped sub-national Operations or Command centers/ war room</i>	<i>0</i>	<i>21</i>		



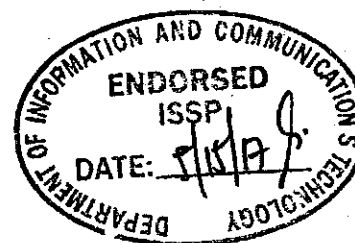


15. PHASE 3: Document Management					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Better access to documented policies, standards, procedures etc</i> <i>Speedier response to queries status on queries or action taken to request</i>	<i>Average of waiting time to get request for personal record</i> <i>Number of hours to obtain certified true copy of official issuances</i> <i>Number of minutes to know action taken or status of action of request made</i>	- >1 day More than 60 hour	1 day < half day Less than 20 minutes	Survey, System logs, regular report	KMITS, Office concerned
IMMEDIATE OUTCOMES <i>Less time spent in tracing documents or action taken to request</i> <i>More systematic filing or storage of all documents</i> <i>Reduced physical space for documents</i> <i>Less number of people assigned to file and retrieved documents</i>	<i>Number of minutes spent looking for a document</i> <i>Square meters occupied for physical documents per office</i> <i>Number of people assigned in filing and retrieving documents</i>	> 30 minutes >100 square meters At least 4 per office	<10 minutes <50 square meters < 3	Survey, System logs, regular report	



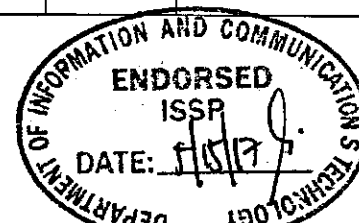


15. PHASE 3: Document Management					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none"> Document tracking in Regional health office and Hospitals adopted Completed Document archiving in at least 10 more offices Training conducted with National Archives Commission 	<ul style="list-style-type: none"> Number of regional offices implementing document tracking system Number of central offices, and regional offices implementing document archiving system Number of policies, guidelines and MoP developed and issued Number of training conducted 	3 5 1 1	16 10 2 6	Survey, System logs, regular report	



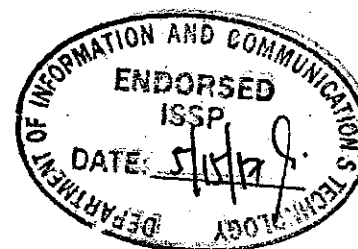
**CROSS- AGENCY ICT PROJECTS;**

1. Phase 2:Philippine Health Information Exchange					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Instantaneous access to appropriate individual health data anywhere anyone that is authorized for better and efficient provision of health care</i> <i>Better access to various registries</i>	<i>% increase in satisfaction in accessing personal health information for better, faster and cheaper services</i> <i>Number of minutes of accessing registries</i>	<i>0</i> <i>>60 minutes</i>	<i>30%</i> <i><10 minutes</i>	<i>CSS, business analytics module</i>	<i>KMITS</i>
IMMEDIATE OUTCOMES <i>Electronic sharing of clinical information among users such as health care providers, patients, administrators or policy makers across health care institutions, health data repositories, etc with ensured information protection in terms of integrity, privacy, and security</i> <i>More efficient system of sharing of patient, provider, diseases registries</i> <i>Improved dissemination health data standards</i>	<i>% of days decrease in accessing health data</i> <i>% increase in registries utilization</i> <i>Number of queries regarding in utilization of standards</i>	<i>-</i> <i>-</i> <i>< 10</i>	<i>30%</i> <i>50%</i> <i>> 10</i>	<i>CSS, business analytics module</i>	



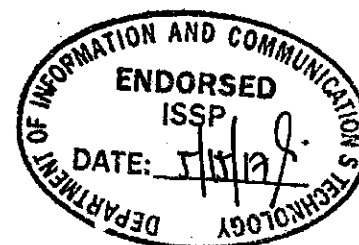


1. Phase 2:Philippine Health Information Exchange					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS					
<i>PHIE developed and is made operational</i>	<i>Number of Registries build and operational - Health facility, patient, provider, disease, shared health record</i>	1	5	<i>Actual Inspection, Project implementation Reviews (PIR), system's walkthroughs</i>	
<i>Enterprise Service bus/interoperability layer</i>	<i>Presence of a functioning ESB</i>	0	1		
<i>Policies formulated & made available</i>	<i>Number of policies formulated and issued</i>	0	6		
<i>Training conducted</i>	<i>Number of training conducted</i>	2	10		



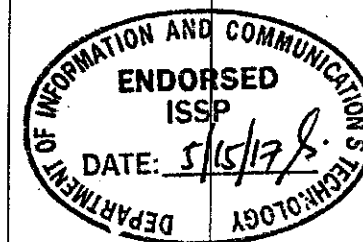


2. Phase 4: Enhancement and Expanding Implementation of IHOMIS/IHIS					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES					
<i>Reduced waiting time for accessing health services</i>	<i>Number of minutes in retrieving health record/target client list during patient consultations</i>	<i>30 minutes</i>	<i><10 minutes</i>	<i>EMR, Target client list</i>	<i>KMITS, HFDB, Hospital concerned</i>
<i>Improved access to health professionals</i>	<i>Number of minutes before patient is attended to or receives hospital services</i>	<i>>40 minutes</i>	<i>< 30 minutes</i>		
<i>Enhanced access to hospital billing and health certifications</i>	<i>Number of hours for obtaining hospital billing</i>	<i>8 hours</i>	<i>2 hours</i>		
	<i>Number of days spent for obtaining medical certification or medical abstract</i>	<i>1 day</i>	<i>< 1 day</i>		





2. Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES					
Reduced time for accessing health record	Number of minutes in recording patient data during consultations or preparing target client list	20 mins	Less than 20 minutes	Records of the HC/RHUs; walkthrough, actual counts	
Reduced patient queue in health facility	Average number of days for hospital to process and summarize hospital service for own use and for uploading	5 days	2 days		
Better recording and monitoring of facility resources	Average number of days in producing monthly and quarterly hospital statistical reports or special request reports	2 days	1 day		
Easier and complete implementation of various registries or					
Improved/better data collection/recording and production of health statistics					
Improved data collection, statistical aggregation and analysis					
Faster and more systematic PhilHealth Claims compliance	Number of hours spent in preparation data for uploading for various registries	-	5		
Faster calculation of patient bills	Average number of patient in a hospital queue at peak days	25 patients	10		
Faster monitoring of income and expense	Number of hospitals complying with PhilHealth's membership verification and eClaims	1	70		
More efficient monitoring and management hospital resources	Number of hours of computing patient bill	1	< 1		



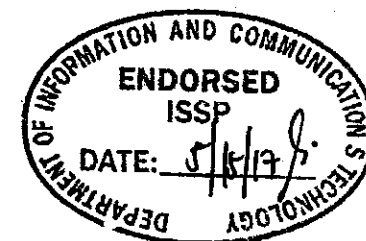


2. Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none">Enhanced iHOMISElectronic Health RecordManuals made availableTraining conducted	Number of hospitals implementing system Module 1 with PhilHealth eClaims module	104	At least 400 hospitals	Count of actual training, installation and use of system	KMITS
	Number of hospitals implementing system Modules 1 & 2	3	At least 40 hospitals		
	Number of hospitals implementing system Modules 1, 2 & 3	0	At least 40 hospitals		
	Number of training conducted	5	At least 22 trainings		
	Number of policies and guidelines developed/revised and disseminated	4			



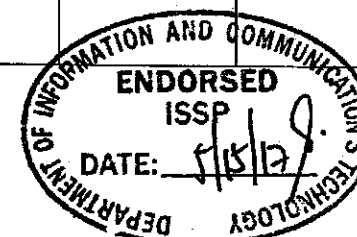


3. Phase 3: Enhancement and Expanding Implementation of iClinicSys					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <ul style="list-style-type: none">Reduced time for accessing health record during patient consultationsReduced waiting time for accessing health servicesImproved access to health professionalsEnhanced access to health facility and health certifications	<i>Number of minutes in retrieving health record/target client list during patient consultations</i> <i>Number of minutes before patient receives health services</i> <i>Number of days spent for obtaining medical certification</i>	<i>30 minutes</i> <i>Average of 40 minutes</i> <i>Average of 1 day</i>	<i><10 minutes</i> <i>< 30 minutes</i> <i>< 1 day</i>	<i>EMR, Target client list</i>	





3. Phase 3: Enhancement and Expanding Implementation of iClinicSys					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES <ul style="list-style-type: none"> Improved data management <ul style="list-style-type: none"> Enhanced recording and collection of patient data Faster processing and generation of health statistics/ Faster statistical aggregation of data on disease occurrence and health service statistics Easier and complete implementation of various registries (disease, patient, provider, shared health record..) Reduced patient queue in health facility Better recording and monitoring of facility resources Faster and more systematic PhilHealth's Primary Health Care Benefit (PCB) compliance Improved data validation and exchange with other agencies for 4Ps/CCT beneficiaries (DSWD, PhilHealth etc) Better system of monitoring deaths 	<ul style="list-style-type: none"> Number of minutes in recording patient data during consultations or preparing target client list 	20 mins	Less than 20 minutes	Records of the HC/RHUs; walkthrough, actual counts	Regional Office
	<ul style="list-style-type: none"> Average number of days for HC/RHUs to process and summarize health service statistics by program for own use and for uploading 	5 days	1 day		
	<ul style="list-style-type: none"> Average number of days in producing monthly and quarterly FHSIS reports or special request reports 	2 days	1 day		
	<ul style="list-style-type: none"> Number of years for producing an annual FHSIS reports 	2 year	1 year		
	<ul style="list-style-type: none"> Number of hours spent in preparing data for uploading for various registries 	-	< 5 hours		
	<ul style="list-style-type: none"> Average number of patient in a clinic queue at peak days 	10 patients	< 10 patients		
	<ul style="list-style-type: none"> Number of HC/RHUs complying with PhilHealth's PCB requirements 	0	2,500		
	<ul style="list-style-type: none"> Number of hours producing reports or data on CCT beneficiaries for exchanging/sharing 	5 hours	<2 hours		



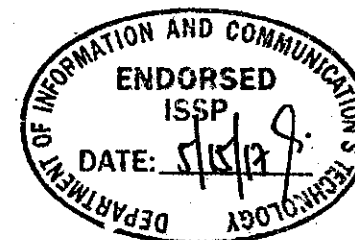


3. Phase 3: Enhancement and Expanding Implementation of iClinicSys					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS					
<i>iClinicSys adopted by Health Centers/Rural Health Units (HC/RHUs)</i>	<i>Number of HC/RHUs implementing system</i>	810	2,500	<i>Count of actual training, installation and use of system</i>	KMITS
<i>Training</i>	<i>Number of HC/RHUs implementing PhilHealth Primary Care Benefit sub-module</i>	0	2,500		
<i>Guidelines, SOP</i>		1	2,500		
<i>Advocacy materials</i>	<i>Number of revised policies, MoPs and guidelines issued on operation and on electronic medical record</i>	1	4		
	<i>Number of advocacy & marketing materials</i>	1	3		
	<i>Number of vertical health programs information systems integrated</i>	4	10		



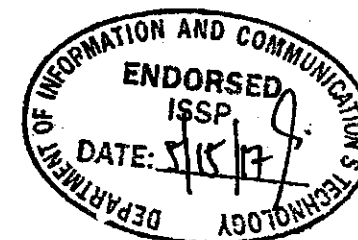


4. Phase 2: Health Data Standard Adoption and Institutionalization					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Improved health data quality</i> <i>Prevent single-vendor or developer lock-in and expensive customization</i>	<i>% health facilities reporting or complying to national health data requirements</i> <i>% timeliness of data/reports uploaded</i> <i>% of validation errors</i>	- - -	3,700 Within 5 days To nil	System logs, Actual counts Reports, Business intelligence module, Special survey	KMITS, Epidemiology Bureau, Regional Office
IMMEDIATE OUTCOMES <i>Better (faster and cheaper) statistical aggregation of health service statistics</i> <i>Facilitate/foster interoperability among information systems and data sources</i>	<i>Average number of months spent for data validation</i> <i>Number of days spent for consolidating data</i> <i>Number of systems implemented in various health facilities complying to the standards</i>	5 months 20 days 1	< 2 months < 5 days > 5		



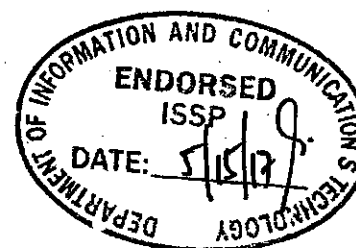


4. Phase 2: Health Data Standard Adoption and Institutionalization					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none">National Health Data Standards Registry (web service)Policy & guidelines made availableTraining conducted	Number of standards included in the registry	2	10		
	Number of additional standards reviewed and agreed on to be included	2	12		
	Number of policy and guidelines developed and issued	1	10		
	Number of advocacy activities undertaken	2	> 10 fora, publications		
	Number of type advocacy materials produced and disseminated	0	22		





5. Phase 2: Philippine Health Enterprise Data Warehouse(HEDW)					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <ul style="list-style-type: none">• Better access to or right to use quality health data information that affects ones or family members' personal health or for scientific/ technical/ management endeavours• Allows data to be related to similar data• Improved support to scientific evidence – based health care and system• Better decisions/insights based on array and more complete data• More direct data queries with lesser information technology support• Better and more advanced analysis of multiple time periods including time-period analysis, trend analysis, and trend prediction.	<ul style="list-style-type: none">• % satisfaction rate data access• Waiting time (days) in finding and accessing health data needed for a certain decision• Average waiting time for an IT staff to convert or query data for managers and users	<ul style="list-style-type: none">• -• 10 days• 2 days	<ul style="list-style-type: none">• Increase by 30%• < 2 days• To Nil	<ul style="list-style-type: none">• Client Satisfaction Survey (CSS)• Special survey(SS) or CSS	KMITS



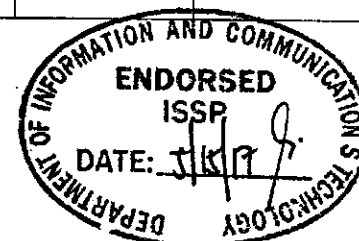


5. Phase 2: Philippine Health Enterprise Data Warehouse(HEDW)					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES <ul style="list-style-type: none"> Speedier data retrieval, data query and analysis Enhanced data quality and consistency Improved health data management from various sources <ul style="list-style-type: none"> Easier conversion of data from various data sources with format standardization Enhanced integration of existing disparate data sources and making them accessible in one repository Less burden of duplicating data gathering Allows data extractions 	<p>% of HEWD users</p> <p>Number of days in data integration/conversion</p> <p>Number of days in data processing</p>	<p>2%</p> <p>0</p> <p>3 days</p>	<p>Increase to 50%</p> <p>5 days</p> <p>≤ 1 day</p>	<p>Special survey (SS) or Customer Satisfaction Survey (CSS) or System log- ins</p>	KMITS
OUTPUTS <ul style="list-style-type: none"> More complete and accessible Health Data Enterprise Warehouse 	<p>Number of new datasets included and updated</p> <p>Number of policies or guidelines developed and issued</p> <p>Presence of a dashboard</p>	<p>3</p> <p>0</p> <p>0</p>	<p>8</p> <p>2</p> <p>1</p>	<p>Actual inspection, Project Implementation Reviews (PIR)</p>	



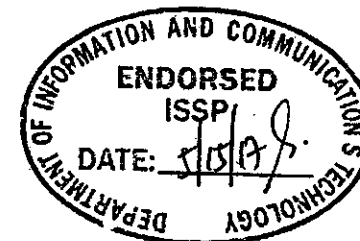


6. Interconnecting Rural Health Units, Health Centers, Hospitals and TRCs					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Improved health data quality</i> <i>Improve patient referral and service provision</i>	<i>% timeliness of data/reports uploaded</i> <i>Time of referral is made</i>	<i>>1 year</i> <i>>1 day</i>	<i>< 1 year</i> <i><1 day</i>	<i>System logs, Actual counts Reports, Business intelligence module, Special survey</i>	<i>KMITS, Epidemiology Bureau, Regional Office</i>
IMMEDIATE OUTCOMES <i>Better (faster and cheaper) statistical aggregation of health service statistics</i> <i>Improved communication</i>	<i>Average number of months spent for data validation</i> <i>Number of days spent for consolidating data</i> <i>Number of days a request for assistance is responded</i>	<i>5 months</i> <i>20 days</i> <i>1</i>	<i>< 2 months</i> <i>< 5 days</i> <i><1</i>		
OUTPUTS • <i>Stable internet connection conducted</i>	<i>Appropriate bandwidth in a number of health facilities</i>	<i>200</i>	<i>2,500</i>	<i>Actual count</i>	
OUTPUTS • <i>Stable internet connection conducted</i>	<i>Appropriate bandwidth in a number of health facilities</i>	<i>200</i>	<i>2,500</i>	<i>Actual count</i>	





7. Drug Abuse Treatment and Rehabilitation Automation Project					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <ul style="list-style-type: none"> Reduced waiting time for accessing client records Reduced waiting time for request to treatment and rehabilitation services Faster access to drugs abuse treatment and rehabilitation Enhanced access to DTLs accreditation services Enhanced drug test result reporting or uploading 	Number of hours of accessing client record in treatment and rehabilitation center	0	< 5 minutes	Walkthroughs, Center records, Systems log ins	KMITS, HFSRB
	Number of days before an application for treatment or rehabilitation is responded to	10 days	< 3 days		
	% of DTLs applying for accreditation on-line	0	50%		
	% of DTLs without difficulties in uploading drugs testing results	10%	< 5%		



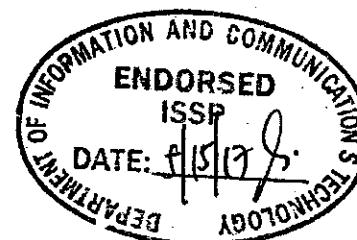


7. Drug Abuse Treatment and Rehabilitation Automation Project					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES <ul style="list-style-type: none"> Faster statistical aggregation of data on drug testing results and drugs users on treatment and rehabilitation Reduced time for accessing client record Better recording and monitoring of facility resources Reduced time in obtaining service billings and treatment and rehabilitation status certification Faster accreditation/reaccreditation of DTLs Better monitoring of drug testing quality assurance (proficiency testing, drug test kit registration etc.) Better sharing and retrieval of relevant of information by agency partners involved in drug abuse prevention 	<p>Number of hours to aggregate data and produce reports</p> <p>Number of minutes in accessing client record</p> <p>Number of hours in collecting and processing data drug testing process QA</p> <p>Number of days spent for accreditation</p> <p>Number of Agency Beneficiaries downloading reports</p>	<p>More than 72 hours</p> <p>At least 20 minutes</p> <p>More than 72 hours</p> <p>Average of 10 days</p> <p>2</p>	<p>Less than 24 hours</p> <p>< than 5 minutes</p> <p>Less than 24 hours</p> <p>Average of 3 days</p> <p>6</p>	<p>Records of operation</p> <p>Licensing officers records</p> <p>System logs</p>	<p>HFSRB, Drug Abuse Control, Treatment and Rehabilitation Program</p>





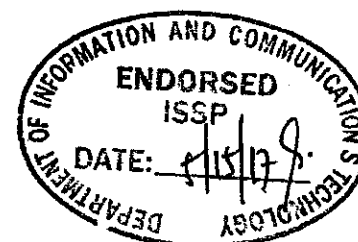
7. Drug Abuse Treatment and Rehabilitation Automation Project					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none">Enhanced IDTOMISUtilized DTRRCOS by Drug Abuse Treatment and Rehabilitation Centers	Number of Drug Testing Laboratories (DTL) using enhanced IDTOMIS	1,200	1,000	Actual count of system registered DTLs	KMITS
	Number of Drug Abuse Treatment & Rehabilitation Centers using DTRRCOS	1,200	1,211		
	Number Training conducted for DTLs and treatment and rehabilitation centers	2	4	Actual count	
	Number of policies and MoPs developed or revised	3	5	Actual count from request	
	Number of agency beneficiaries using data IDTOMIS	2	6		





8. Phase 2: Unified Disease Registry System

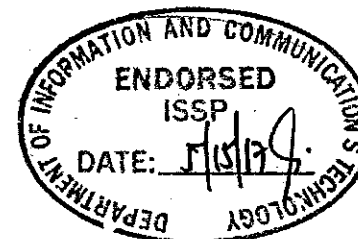
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES					
<i>Faster receipt of health care</i>	<i>Decreasing disease incidence in affected areas</i>	0	<i>Decrease to almost nil</i>	<i>Phil Integrated Disease Surveillance Report</i>	<i>Regional Epidemiology & Surveillance unit (RESU), EB</i>
<i>Reduced financial cost, mortality, morbidity</i>	<i>Number of victims contracting new disease</i>	0	<i>Decrease to about nil</i>		
<i>Better prevention response to outbreak</i>					





8. Phase 2: Unified Disease Registry System

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
IMMEDIATE OUTCOMES <i>Faster patient/victim data recording/ collection, processing, aggregation, storage and sharing especially among health program managers, responders and epidemiologists</i> <i>More up-to-date and quality data for an enhanced response and intervention to disease outbreaks or cases</i> <i>Faster notification of proper authorities and containment of epidemic/outbreaks</i> <i>Better or easier processing or analysis of disease trend</i>	<i>Number of days in reporting to central offices</i> <i>Number of hours when an cause (disease) outbreak is confirmed</i> <i>Number of hours of preparing disease incidence or trend analysis report</i>	<i>24 hours</i> <i>5 days</i> <i>More than 48 hours</i>	<i>< 8 hours</i> <i>< 2 days</i> <i><12 hours</i>		<i>RESU, EB all other offices involved</i>



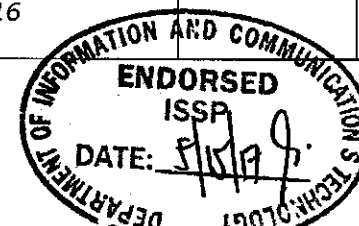
**8. Phase 2: Unified Disease Registry System**

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none"> Integrated Infectious Disease (ID) Registry Integrated Non-communicable Disease (NCD) Registry Implemented Integrated Disease surveillance system Mobile Apps for epidemiologists 	Number of health facilities implementing system	85	Increase to 650	Actual counts, Reports Training reports	RESU, EB & DPCB
	Number of hospitals trained	85	Increase to 1,000		PESU & MESU (provincial and municipal)
	Number of policies issued on IDs & NCDs reporting & surveillance activities	1	3		
	Number of training conducted	5	15		



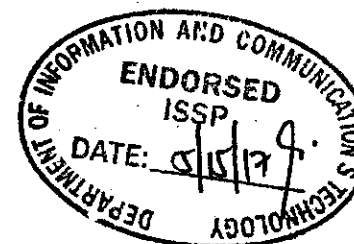


9. Phase 3: National Health Atlas & Integration with Phil. Geoportal					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES					
Better access to health data and information for accessing health services	<ul style="list-style-type: none"> Number of queries on location of facilities or where specific health services are available Number of people accessing NHA 	Average 20/day 0	Reduced number to nil > 1,000	Record of calls, letters System logs	KMITS
IMMEDIATE OUTCOMES					KMITS
Reduced cost in system development and maintenance and data collection	<ul style="list-style-type: none"> Amount spent on system development, maintenance & data collection Number of health program using NHA 	20M 5	Reduced cost 15	Contracts, vouchers	
Improved data visualization and analysis					
OUTPUTS					
Up-to-date and more accessible National Health Atlas	<ul style="list-style-type: none"> Number of completed validated all health facilities' geographic coordinates Number of policies and SOPs issued for implementation, updating, accessing & sharing Number of health indicators included Number of RHOs updating content 	5 regions 1 10 2	17 regions 3 40 16	Validation reports, MOA, Actual counts, walkthroughs	KMITS
Integrated NHA and Phil Geoportal					





10. Phase 3: National Telehealth Services Program					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Improved access to better health services in GIDA</i>	<i>Number of patient provided better services by doctors using system</i>	-	All	System logs on experts consults	BLHSD
IMMEDIATE OUTCOMES <i>Better access to medical expertise in times of diagnostics dilemma</i> <i>Enhanced reporting of health service statistic</i>	<i>Number of doctors consulting medical experts in medical centers</i> <i>Number of RHUs reporting through SMS</i>	10 350	30 600	System logs on experts consults	BLHSD
OUTPUTS Expanded adoption of integrated NTSP system with mhealth applications including RXBox integration	<i>Number of RHUs in GIDA implementing or DTTBs or using system</i> <i>Number of policies issued</i> <i>Number of training conducted</i>	350 1 2	600 2 10	Reports, Actual records, count	BLHSD





11. Phase 2: Health Emergency Management Service System Enhancement Project					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES <i>Faster receipt of health care</i> <i>Reduced risk to financial cost, mortality, morbidity</i>	<i>Number of affected individuals provided service with prescribed period</i> <i>% of individuals getting sick of contracted disease in evacuation centers or after the disaster</i>	<i>All affected</i> <i>All affected</i>	<i>All affected</i> <i>Decreased to nil</i>	<i>HEMS Coordinators report</i>	<i>HEMb</i>
IMMEDIATE OUTCOMES <i>Enhanced coordination of response</i> <i>Better flow and frequent flow of information among people concerned</i> <i>Enhanced and rapid identification and resolution of issues and decision on response</i> <i>Better containment of outbreak of disease</i>	<i>Number of response teams deployed on time</i> <i>Number of drugs/ medical supplies provided to and by RHOs & Hospitals to affected areas and individuals</i> <i>Number victims provided care (measles, diarrhea, RTI etc) in evacuation centers or onsite immediately</i>	<i>As needed with 24 hours</i> <i>As needed with 24 hours</i> <i>All affected</i>	<i>As needed within 12 hours</i> <i>As needed within 8 hours</i> <i>All affected immediately</i>	<i>HEMS Coordinators report</i> <i>Inventory reports, ARE, MR</i> <i>HEMS Coordinators report</i>	<i>HEMb</i>



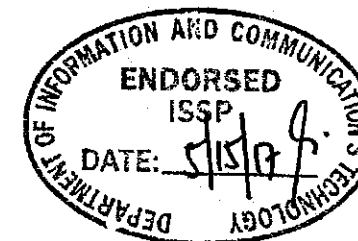


11. Phase 2: Health Emergency Management Service System Enhancement Project					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS <ul style="list-style-type: none">Implemented Health Emergency Management(HEM) Integrated Information System (HEMIIS)Trained HEM coordinators on HEMIIS including NDRRMC member agencies	Number of DOH units implementing HEMIIS	0	19	Actual count and walkthroughs	Health Emergency Management Bureau
	Number of HEMS coordinators trained	0	88	Examination of Training Records	
	Number of guidelines issued	0	3		
	Number of sub-modules integrated	1	19		





12. Verbal Autopsy System (SmartVA) for Strengthening Civil Registration and Vital Statistics					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
INTERMEDIATE OUTCOMES	<i>Improved coverage and quality of registration</i>	2	1	Actual count, reports	PSA
	<i>Increase utilization of vital statistics on deaths and births</i>	0	2,500		
IMMEDIATE OUTCOMES	<i>Improved birth and death registration</i>	66% (2010)	Increase to 80% (2019)	Actual PSA records and databases	PSA
	<i>Improve proportion and quality of death certification</i>	93.5% (2010)	Increase to 99% (2019)		
	<i>More quality data on deaths and births for health service planning and monitoring</i>	35%	Increase % to 70% (2019)		
	<i>Better linkage between health provider and local civil registrar</i>	15%	Reduced proportion to 7% (2019)		
	<i>Core quality/complete data on deaths by cause</i>				





12. Verbal Autopsy System (SmartVA) for Strengthening Civil Registration and Vital Statistics					
Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
OUTPUTS					
<ul style="list-style-type: none">• Institutionalized training on ICD 10 for Municipal/City Health Officer, Local Civil Registrar and Medical Records Officers	% CHOs/MHOs/LCRs/MROs trained on ICD10	30%	Increase to 70%	Training records	KMITS & EB , DOH
<ul style="list-style-type: none">• Implementation of enhanced and integrated computerized CRVS system at all LCROs and health facilities	Number of LCRO implementing enhanced CRVS system	0	2,500	Project documentation, Project implementation Reviews	
	Number trained on enhanced and integrated CRVS	0	2,500		
<ul style="list-style-type: none">• Vital Statistics (Deaths & Births) Web Portal and dashboard	Number of policies, guidelines, MoP posted / issued	0	3		

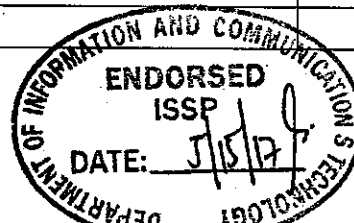




PART IV: RESOURCE REQUIREMENTS

A. DEPLOYMENT OF ICT EQUIPMENT & SERVICES

	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
I.	Office Productivity				
	A. CAPITAL OUTLAY				
	ICT Office Equipment				
	Desktop Computers with UPS				
		Central Offices	1,150	200	500
		Regional Offices	1,140	827	863
		Hospitals	1,759	2,005	2,209
		DATRC	60	36	120
		PITAHC	12	15	15
	Laptops				
		Central Offices	650	700	450
		Regional Offices	980	546	510
		Hospitals	344	277	333
		DATRC	24	36	84
		PITAHC	2	2	2
	Mobile Computing Device/Tablet				
		Central Offices		170	70
		Regional Offices	541	231	243
		Hospitals	78	66	73





DOH Information Systems Strategic Plan, 2018 - 2020

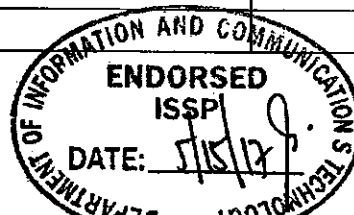
	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
		DATRC		12	12
		PITAHC	2	12	
	Printers				
		Central Offices	275	50	200
		Regional Offices	673	277	266
		Hospitals	1,146	958	1,196
		DATRC	48	24	36
		PITAHC	3	3	3
	Scanner				
		Central Offices	60	70	55
		Regional Offices	102	47	51
		Hospitals	189	147	174
		DATRC	12	12	12
		PITAHC	2	1	
	Projector				
		Central Offices	25	20	75
		Regional Offices	159	108	101
		Hospitals	107	67	94
		DATRC		12	
		PITAHC	3	3	
	Server				
		Central Offices		10	15
		Regional Offices	22	8	5
		Hospitals	5	4	5





DOH Information Systems Strategic Plan, 2018 - 2020

	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
		DATRC		12	
		PITAHC	1	1	
	Cheque Printer	Central Office (FMS)	1		
		Regional Office	1		
	Large Format Printer	Central Office (HPCS)	2		
	Small Format Printer	Central Office (HPCS)	25		
	Video Camera HD	Central Office (HPCS)	2		
	LED TV Billboard	Central Office (HPCS) & ROs	20		
	ICT Software				
	ICT Software (Operating System)				
		Central Offices	5	5	5
		Regional Offices	410	172	175
		Hospitals	241	239	135
		DATRC	20	24	10
		PITAHC	5	5	10
	Office Productivity Software				
	Adobe Creative Suite/Adobe Master Collection	Central Offices	4	12	4
		Regional Offices	20	7	13
	Anti-virus software	Central Offices	3,000	3,000	3,500
		Regional Offices	1,152	379	533
		Hospitals	90	80	85
	Auto-CAD	Central Offices	6		6





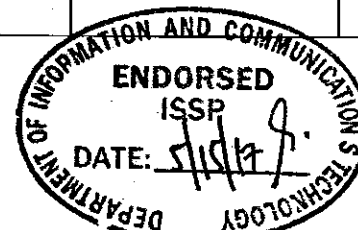
DOH Information Systems Strategic Plan, 2018 - 2020

	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
		Regional Offices	45	5	
	Camtasia	Central Offices		4	
	Exe Output	Central Offices		2	
	GIS	Central Offices	5	5	5
	MS Office Professional (latest version)	Central Offices	5	10	
		Regional Offices	573	456	318
		Hospitals	348	353	333
		DATRC	10	5	10
		PITAHC	5	10	5
	MS Project	Central Offices	2	2	2
	MS Visio	Central Offices		4	2
	MSSQL Standard Ed.	Central Offices	20		
	MySQL Enterprise Ed.	Central Offices		10	
		Regional Offices	8	3	8
	Navicat for Linux	Central Offices	1		1
	Navicat for Windows	Central Offices		5	
	PhpMaker + Report Maker	Central Offices		20	
		Regional Offices	5		5
	Piktochart	Regional Offices	5		5
	Powerbuilder or new RAD Tool	Central Offices	10		
	SMART Installer	Central Offices		5	
	Analytics Tools (Power BI)	Central Offices	1	1	1



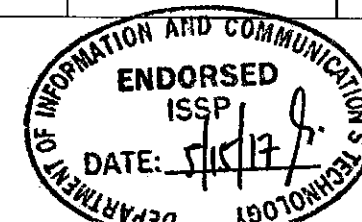


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Team Viewer Pro	Central Offices		10	
II	Internal ICT Projects				
1	Phase 2: Integrated Executive Information System				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	GPS Device	Central Office	28		
		Regional Offices	32		
	Mobile Computing Device/Tablet	Regional Offices	32		
	Pocket WIFI with free load	Regional Offices	32		
	Server (OLAP)	Central Office	1		
	Video display wall	Central Office	1		
	ICT Software				
	Database software	Central Office	2		
	Business Analytics	Central office, regional offices	1 lot		1 lot
	Mapping/GIS software	Central Office	2		3
	B. MOOE				
	Consultancy Services	Central Office	1	1	1
	Training	Central Offices	30		



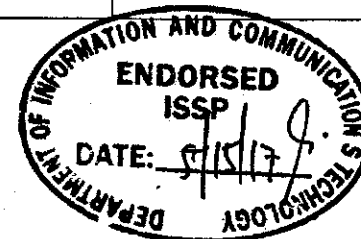


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
2	Phase 2: Updating of the Philippine Health Enterprise Architecture				
	A. MOOE				
	Consultancy Services	Central Office	1		
	Training	Central Office	111	82	
3	Phase 1: DOH Enterprise Resource Management System				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Server	Central Office	1		
	B. MOOE				
	Consultancy Services	Central Office	1		
	Training	Central Office	50	50	50
4	Local Health Systems				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Mobile Computing Device	Regional Offices	900		
	Server	Central Office	1		
	B. MOOE				
	Training	Regional Offices	16	16	



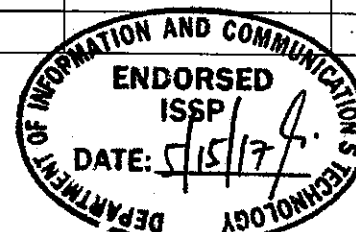


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
5	Phase 2: Expanded Electronic Drug Price Monitoring System				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Laptop	Regional Offices	18		
	Server	Central Office		1	
	WIFI Router	Regional Offices	18		
6	Phase 2: Implementation of the Integrated Licensing Information System				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Large Screen Monitors (for Blueprint viewing)	Central Office	2		
		Regional Offices	18		
	Mobile computing device	Central Office		22	
		Regional Offices	50	100	
	Server	Central Office	3		3
	B. MOOE				
	Consultancy Services	Central Office		1	
	Training	Central Office	40	40	40
		Regional Offices	54	54	54



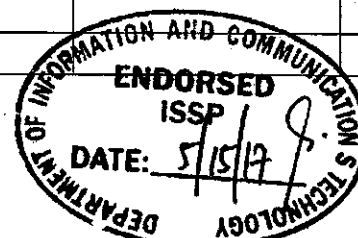


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
7	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation Project	BOQ and Quarantine Stations			
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Desktop Computers		50		
	Firewall		1		
	Laptop			29	
	Manage Switches		5		
	Server		2		
	ICT Software				
	Network Management		1		
	ICT Infrastructure, Machineries & Equipment				
	Server Room/Storage facilities		1		
	B. MOOE				
	Training		100	100	100
8	Phase 2: Expansion of the Integrated logistics management system				
	A. CAPITAL OUTLAY				
	ICT Equipment				



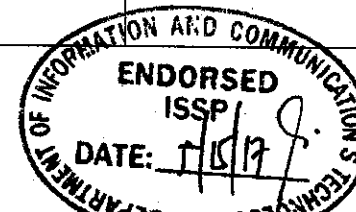


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Barcode Reader	Central Office	28		
		Regional Offices	36		
	Barcode Printer	Central Office	3		
		Regional Offices	18		
	Desktop computers with UPS	Regional Offices	18		
	Server	Central Office	1		
	B. MOOE				
	Consultancy Services	Central Office	1		
	Training	Central Office	30		
		Regional Offices	36		
9	Phase 1: Sub-national Integration of Health Information Systems				
	A. CAPITAL OUTLAY				
	ICT Software				
	Business Analytics Software	Regional Offices	48		
10	International Health Coordination Information Systems Integration				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Server	Central Office	1		
	B. MOOE				





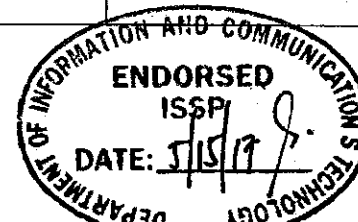
	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Training	Central Office	30		
11	ICT Infrastructure Development & Maintenance for Central Office				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Access Switch	Central Offices		30	
	Blade Chassis Server	Central Office	1		1
	Blade Servers	Central Office		11	
	CCTV	Hospital	1		
	Centralize Backup Solution	Central Office	1		
	Distribution Switch	Central Offices		10	
	Enterprise Firewall	Central Office (for HITP)		1	
	Ethernet Gigabit Switch	Regional Offices	64		64
	High End Server	Central Office (for HITP)		1	
	Managed Switch	Hospital	6		
	POE Switch	Central Offices		20	
	Storage equipment	Central Office	1		1
		Central Office (for HITP)		1	
	Voice Routers	Regional Offices	17		
		Hospitals		10	
	Data Center Equipment & Replacement	Central Office			





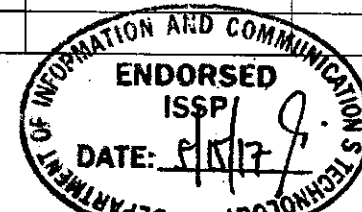
DOH Information Systems Strategic Plan, 2018 - 2020

	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Automatic Transfer Switch			2	
	Cooling system				1
	Electrical Wiring installation			1	
	Environmental Monitoring System			1	
	Fire Alarm System			1	
	Fire Suppression			1	
	Generator Set				1
	Lightning Arrester				1
	Raised Floor System			1	
	Security Access			2	
	Temperature and Humidifier Monitoring System				1
	UPS (100 KVA)			2	
	Water Leak Detection System			1	
	ICT Software				
	Database Software Subscription (MS SQL Server Enterprise Edition)	Central Office		3	
	MS SQL Server 2016	Hospitals	2		
	Sharepoint with Office 365	Regional Offices	1	1	
	Virtualization License	Central Office		22	
	Windows Server 2012	Regional Offices	1	1	1
		Hospitals	4	1	1
	ICT Subscription				



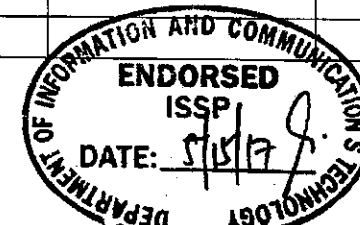


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Anti-Spam Email Gateway Security	Central Office		1	
	Anti-virus	Central Office	1	1	1
	DOH Corporate Email System	Central Office	1	1	1
	MySQL Enterprise Ed.	Central Office		10	10
	Network Management System Maintenance	Central Office	1	1	1
	a) Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	IP Phone	Central Offices	415		
		Regional Offices	85		
		Hospitals	100		
	Manage Switch	Regional Offices	17		
		Hospitals	20		
	Unified Communication System	Central Office		1	
		Regional Office	1		
	Voice Router	Central Office		1	
		Hospitals	20		
	B. MOOE				



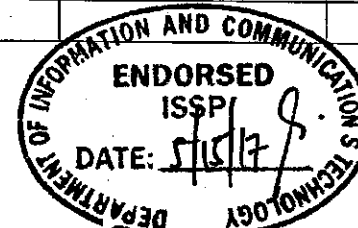


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Supplies and Materials Expenses				
	UTP Cable	Central Office	1		
	b) Migration of DOH Existing Video Conferencing equipment to Cloud based Video Conferencing solution				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Video Conferencing Component/Equipment	Central Office	1		1
	B. MOOE				
	Subscription Expenses				
	Subscription to Video Conferencing Cloud Based Provider	Central Office	1	1	1
	c) Cloud Based Centralized Wireless LAN Infrastructure				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Power over Ethernet Switch	Central Office	30		
	Wireless Access Point (WAP)	Central Office	85	5	5
	B. MOOE				



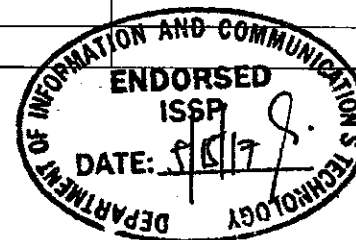


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Subscription Expenses				
	Cloud based WIFI Subscription	Central Office	1	1	1
	d) Consolidation of DOH Security Infrastructure for DOH Public Servers				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Advance Security Firewall	Central Office	1		1
	Consolidated Network Security Appliance	Central Office	1		
	Intrusion Prevention System	Central Office	1		1
	Web Application Firewall	Central Office	1		1
	e) Consolidation of Integrated Drug Test Operation and Management Information System (IDTOMIS) Security Infrastructure				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Advance Security Firewall	Central Office	1		1
	Intrusion Prevention System	Central Office	1		1
	Web Application Firewall	Central Office	1		1



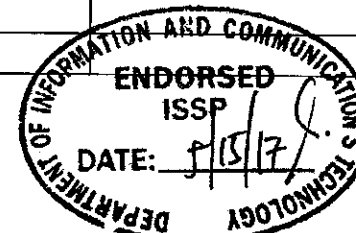


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	f) DOH Disaster Recovery Site Upgrade				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Hyper Converged Virtualization Infrastructure	Central Office	1		1
	B. MOOE				
	Subscription Expenses				
	Cloud computing Service/Data Center Service	Central Office	1	1	1
12	ICT Infrastructure Development and Maintenance for Regional Offices				
	a) Cloud Based Centralize WIFI Infrastructure for DOH Regional Offices (ROs)				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	PoE Switches	Regional Offices	3	3	
	Wireless Access Point	Regional Offices	8	8	
	B. MOOE				
	Subscription Expenses				





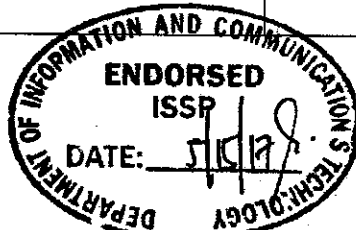
	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Cloud based WIFI Subscription	Regional Offices (16)	1	1	1
	b) Hyper Converged Virtualization Infrastructure				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Hyper-converged Virtualization infrastructure (HCVI) appliances and Hypervisor Software and Licenses	Regional Offices		8	8
	c) Enterprise Antivirus				
	A. CAPITAL OUTLAY				
	ICT Subscription				
	Centralize Enterprise Anti-virus	Regional Offices	8	8	
13	ICT Infrastructure Development and Maintenance for Hospitals and Drug Abuse Treatment and Rehabilitation Centers (DATRCs)				
	a) Next Generation Firewall for DOH Hospitals & DATRCs				
	A. CAPITAL OUTLAY				





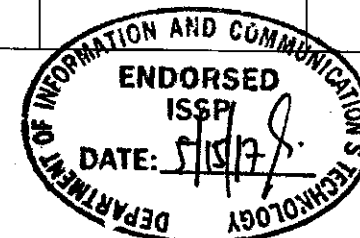
DOH Information Systems Strategic Plan, 2018 - 2020

	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	ICT Equipment				
	Next Generation Firewall	Hospitals	8	7	
	b) Hyper Converged Virtualization Infrastructure				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Hyper-converged Virtualization infrastructure (HCVI) appliances and Hypervisor Software and Licenses	Hospitals		7	8
	c) Structured Local Area Network (LAN) Cabling & Increasing Storage and Computing Capacity				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Storage	Hospitals		7	8
		DATRCs	5	8	
	ICT Infrastructure, Machineries and Equipment				
	Structured Local Area Network (LAN) Cabling	Hospitals		7	8
		DATRCs	5	8	



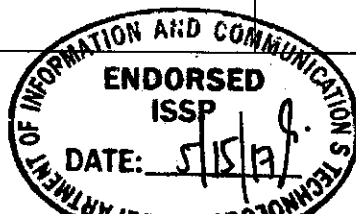


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
14	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Mobile Computing Device	Regional Offices			48
		Hospitals		100	100
	Server	Central Office	1		1
	SMS gateway	Central Office	2		
15	Phase 3: Document Management				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Barcode Reader	Central Office	4		
		Regional Offices	16		
		Hospitals	12		
	Desktop Computers	Regional Office	54		
		Hospitals		216	
	High Security, fireproof cabinets for permanent documents/Compactors	Central Offices	35		



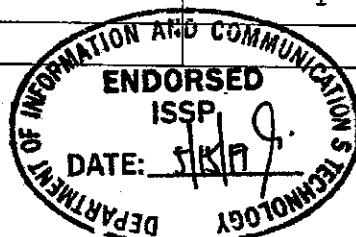


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	High Speed Scanner	Central Office	18		
		Regional Offices	64		
		Hospitals		72	
	Laptops	Central Office	10		
	Laptops (Macbook)	Central Office	10		
	Server	Regional Offices	19		
		Hospitals		72	
	ICT Subscription				
	Document Management and Archiving Software Subscription	Central Office	1		
		Regional Offices	1		
		Hospitals		1	
III	Cross-Agency ICT Projects				
1	Phase 2: Philippine Health Information Exchange				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Server	Central Office	6	2	2
	B. MOOE				
	Consultancy Services	Central Office	1	1	1
	Subscription Services (Standards)	Central Office	1	1	1



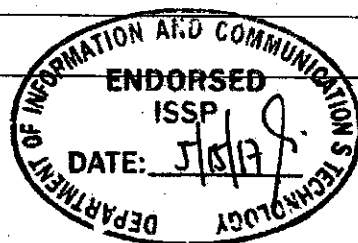


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Supplies and materials	Central Office	50	50	50
	Training Expenses	Central Office	5,000	5,000	5,000
2	Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS	Hospital (DOH/LGU)			
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Blade Chassis Server	Regional Office 4A			1
	Desktop computers with UPS	Hospital (DOH/LGU)	231	120	202
		Hospital/HC/RHUs	20		
	Printers	Hospital (DOH/LGU)	135	42	113
	Printers/Scanners	Hospital/HC/RHUs	20		
	Server		9		1
	Server/Storage Data Center Requirements	Regional Office 4A	1		1
	ICT Software				
	Software licenses (network & database)	Hospital (DOH/LGU)	10	10	10
	Software licenses (network hardware, network operating system & RDBMS)	Regional Office 4A	1	1	1
	ICT Subscription				
	Firewall and IPS license subscription	Regional Office 4A	1	1	1
	B. MOOE				





	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Communication Expense				
	Internet Subscription	Hospital/HC/RHUs	1	1	1
	Consultancy Services		1	1	1
	Training		200	200	200
3	Phase 3: Enhancement & Expanding Implementation of iClinicSys	2018-2020			
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Desktop computers with UPS	HC/RHUs	2,000	2,000	1,000
	Network Devices	HC/RHUs	1,000	1,000	500
	Printers	HC/RHUs	1,000	1,000	500
	Server	Central office	6	2	2
	B. MOOE				
	Contract/Consultancy services	Central Office	1	1	1
	Training	HC/RHUs	500	500	500
4	Phase 2: Philippine Health Data Standards Adoption and Institutionalization	2018-2020			
	A. MOOE				
	Consultancy Services (12 mos.)		1	1	
	Supplies & Materials for MoPs		500	800	



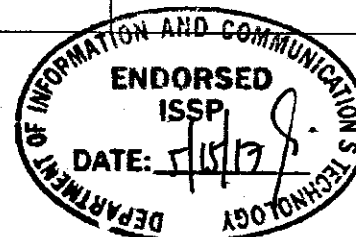


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	Training		400 (30days)	400 (30days)	
5	Phase 2: Philippine Health Enterprise Data Warehouse				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Server	Central Office	1		1
	Storage System	Central Office	2	2	
	ICT Software				
	Database Management Software	Central Office	2		
	B. MOOE				
	Consultancy Services	Central Office	1		
	Training	Central Office	50	50	50
		Regional Offices	36	36	36
6	Interconnecting Health Centers/Rural Health Units (HCs/RHUs), Hospitals and TRCs				
	A. MOOE				
	Communication Expenses:				
	Internet Subscription of Wireless Broadband	Rural Health Units/Hospitals/DATRCs	4,000	4,000	4,000
	Consultancy Services				



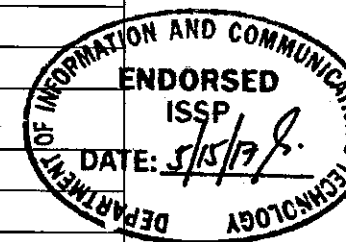


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	ICT consultancy Services for providing wireless broadband internet services with infrastructure development		1	1	
7	Drug Abuse Treatment and Rehabilitation Automation Project				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Desktop Computers with UPS	Central Office	10		
		DATRC	150		
	Laptop	Central Office	5		
		DATRC	65		
	Printer	Central Office	2		
		DATRC	65		
	Projector	Central Office	2		
		DATRC	2		
	Router	Central Office	1		1
	Server	Central Office	6	6	
		DATRC	13		
	Switches	Central Office	6	6	



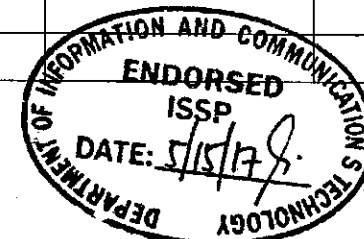


	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
8	Phase 2: Unified Disease Registry System	2018-2020			
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Laptops/Mobile computing device	Central Office	50	50	25
	Server	Central Office	1		
	SMS gateway	Central Office	1		
9	Phase 3: National Health Atlas & Integration with the Philippine Geoportal				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	GPS	Central	5		
		Regional Office		48	
	Touch Screen TV	Central Office			1
	B. MOOE				
	Consultancy Services	Central Office	1	1	1
10	Phase 3: Telehealth/ Telemedicine System				
	A. CAPITAL OUTLAY				
	ICT Equipment				
	Server	Central Office	1	1	





	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
11	Health Emergency Management Service System Enhancement Project	2018-2020			
	A. CAPITAL OUTLAY				
	ICT Equipment				
	BGAN with initial preload credit	Central Office	5		
	Server	Central Office		1	1
	Touch Screen TV	Central Office		2	
	ICT Infrastructure, Machineries and Equipment				
	Communication/Operations Room	Central Office	1		
		Regional Office		16	16
	Emergency Power	Central Office		1	
	B. MOOE				
	Communication Expenses				
	Annual Load Subscription	Central Office	20	20	20
		Hospitals	66	66	66
		Regional Office	16	16	16
12	Verbal Autopsy System (SmartVA) for Enhancing CRVS	Hospitals, HC/RHUs/Local Civil Registrar's Office			
	A. CAPITAL OUTLAY				





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	ICT Project & Item	Name Office/Organizational Unit	Proposed Number of Units		
			Year 1	Year 2	Year 3
	ICT Equipment				
	Computer Desktop with UPS, Printer & office Productivity Software		1,000	1,000	500
	B. MOOE				
	Consultancy Services		1	1	1

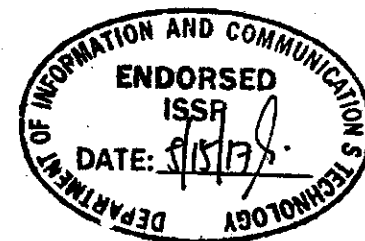




FIGURE 16: KNOWLEDGE MANAGEMENT & INFORMATION TECHNOLOGY SERVICE FUNCTION CHART

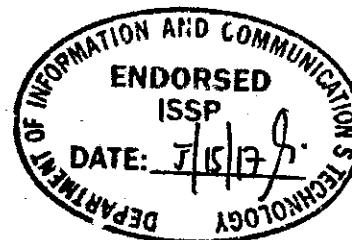
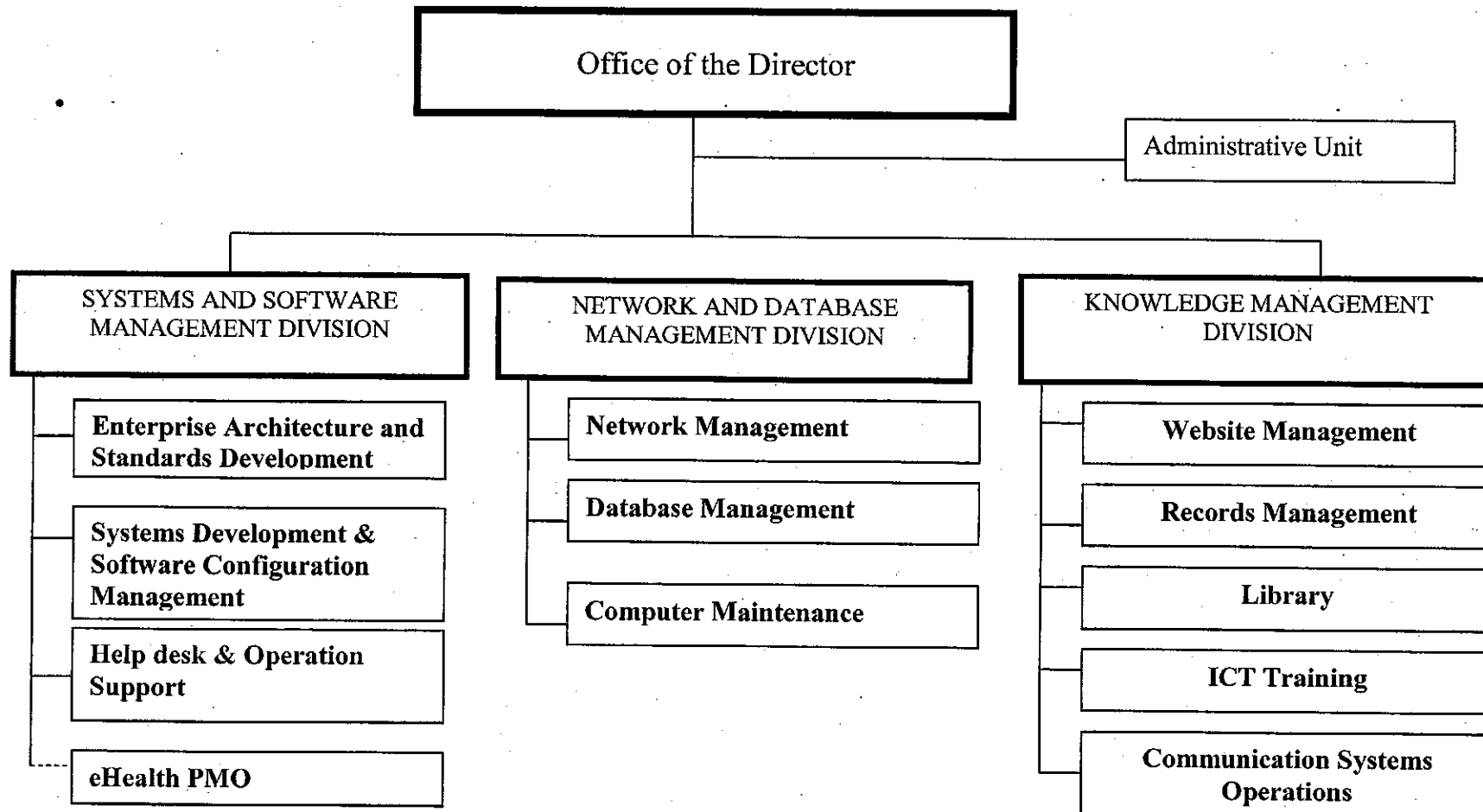




FIGURE 17: EXISTING ICT ORGANIZATIONAL STRUCTURE IN REGIONAL OFFICES

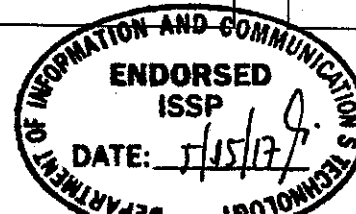
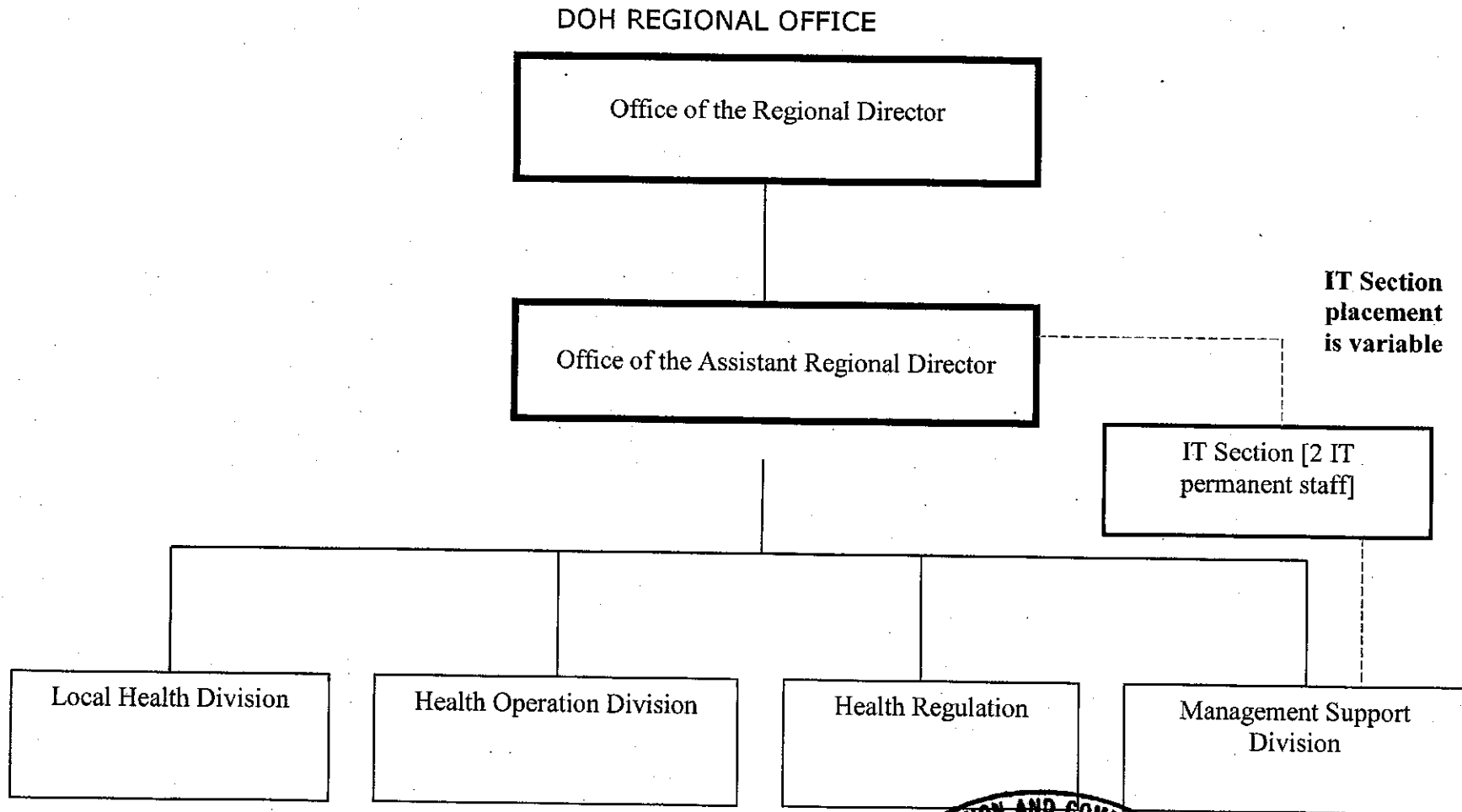
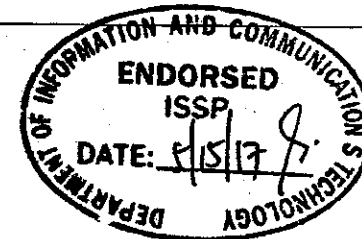
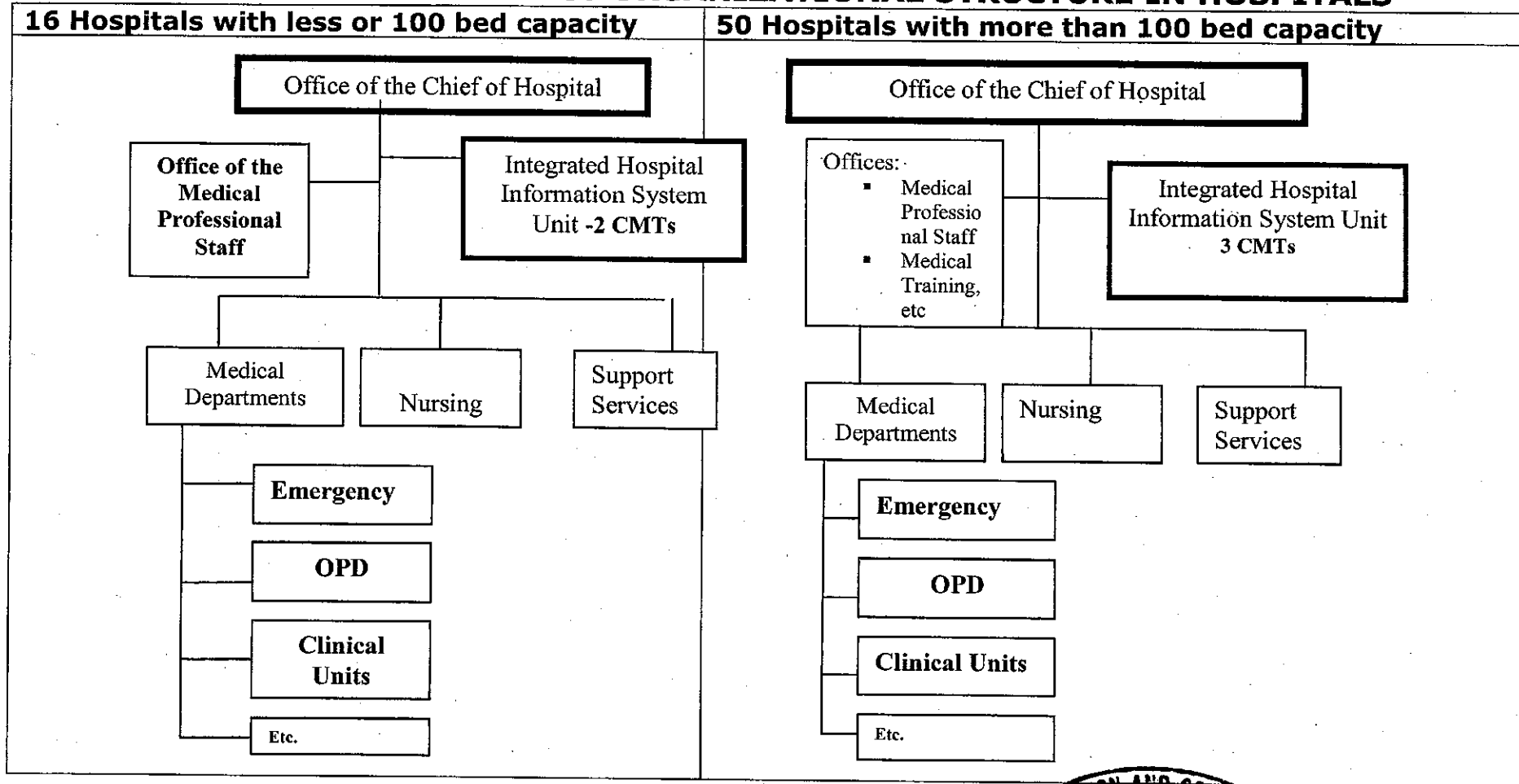




FIGURE 18: EXISTING ICT ORGANIZATIONAL STRUCTURE IN HOSPITALS





B.2 PROPOSED ICT ORGANIZATIONAL STRUCTURE

FIGURE 19a: PROPOSED ORGANIZATIONAL STRUCTURE (CENTRAL OFFICE)

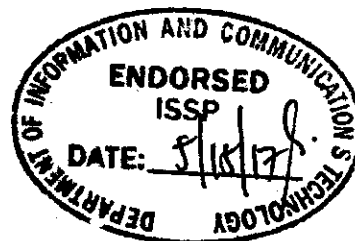
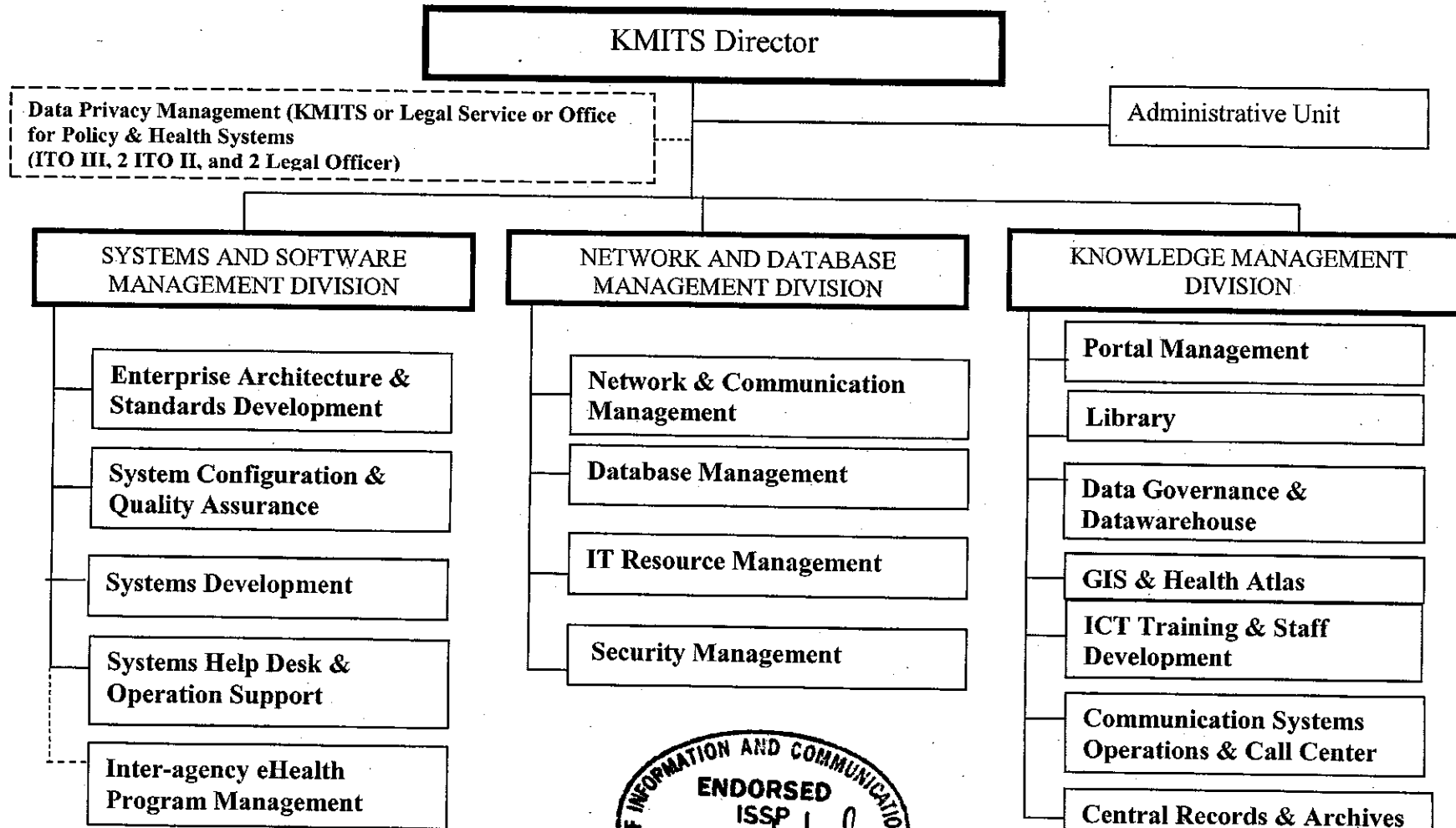




FIGURE 19b: PLACEMENT OF PROPOSED ADDITIONAL POSITIONS in KMITS

<div> <div>Office of the Director</div> <div> <div>Data Privacy Management (KMITS or Legal Service or Office for Policy & Health Systems) (ITO III, 2 ITO II, and 2 Legal Officer)</div> <div>Administrative Unit</div> </div> </div>			SYSTEMS AND SOFTWARE MANAGEMENT DIVISION			NETWORK AND DATABASE MANAGEMENT DIVISION			KNOWLEDGE MANAGEMENT DIVISION		
			Position	Existing	Proposed	Position	Existing	Proposed	Position	Existing	Proposed
			ITO III	1		ITO III	1		IO V	1	
			ITO II	1	1	ITO II	1		IO IV	1	1
			ISA III	3	4	ITO I	1		IO III	1	1
			ISA II	3	2	ISA III		2	IO II	2	2
			ISA I		4	ISA II	1		Librarian III	1	1
			Programmer III	1	2	Programmer III	1	1	ISA III		2
			Programmer II	3	6	Programmer II	1	2	ISA II		1
			Programmer I	2	4	CMT III	1	9	Programmer II		2
			ISR III		2	CMT II	1		Programmer I		
			Data Encoder		3	AAIV	2		ISR III		2
			AO III		1	ISRI	1		ISR I		1
			POIV (1) & III (6)		7	CO IV		4	CO IV		1
			AA	1		Data encoder		2	HPO I (4) HPO II (6)		10
						AA	1		PDO III		1
									AO III	1	
									AOI	1	
									SAA III	1	
									AA	1	
			TOTAL	15	37		12	20		10	25

One (1) ITO II & one (1) ISA I for PITACH

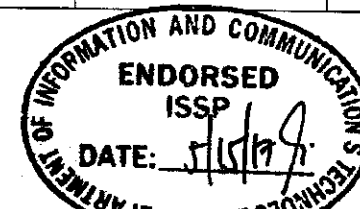




FIGURE 20: PROPOSED ICT ORGANIZATIONAL STRUCTURE FOR REGIONAL OFFICES

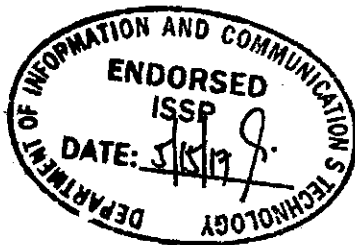
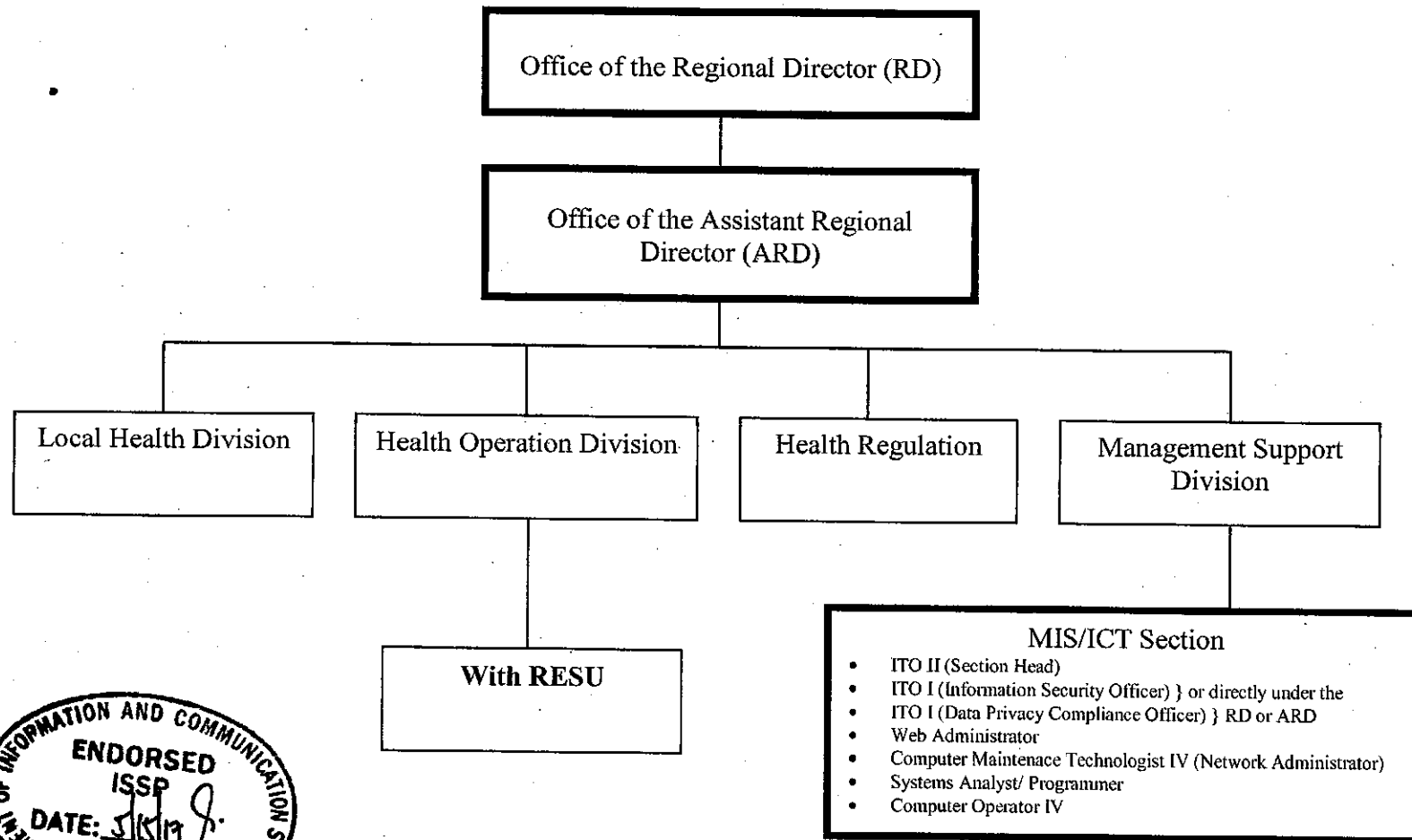




FIGURE 21: PROPOSED ICT ORGANIZATIONAL FOR TREATMENT & REHABILITATION CENTER

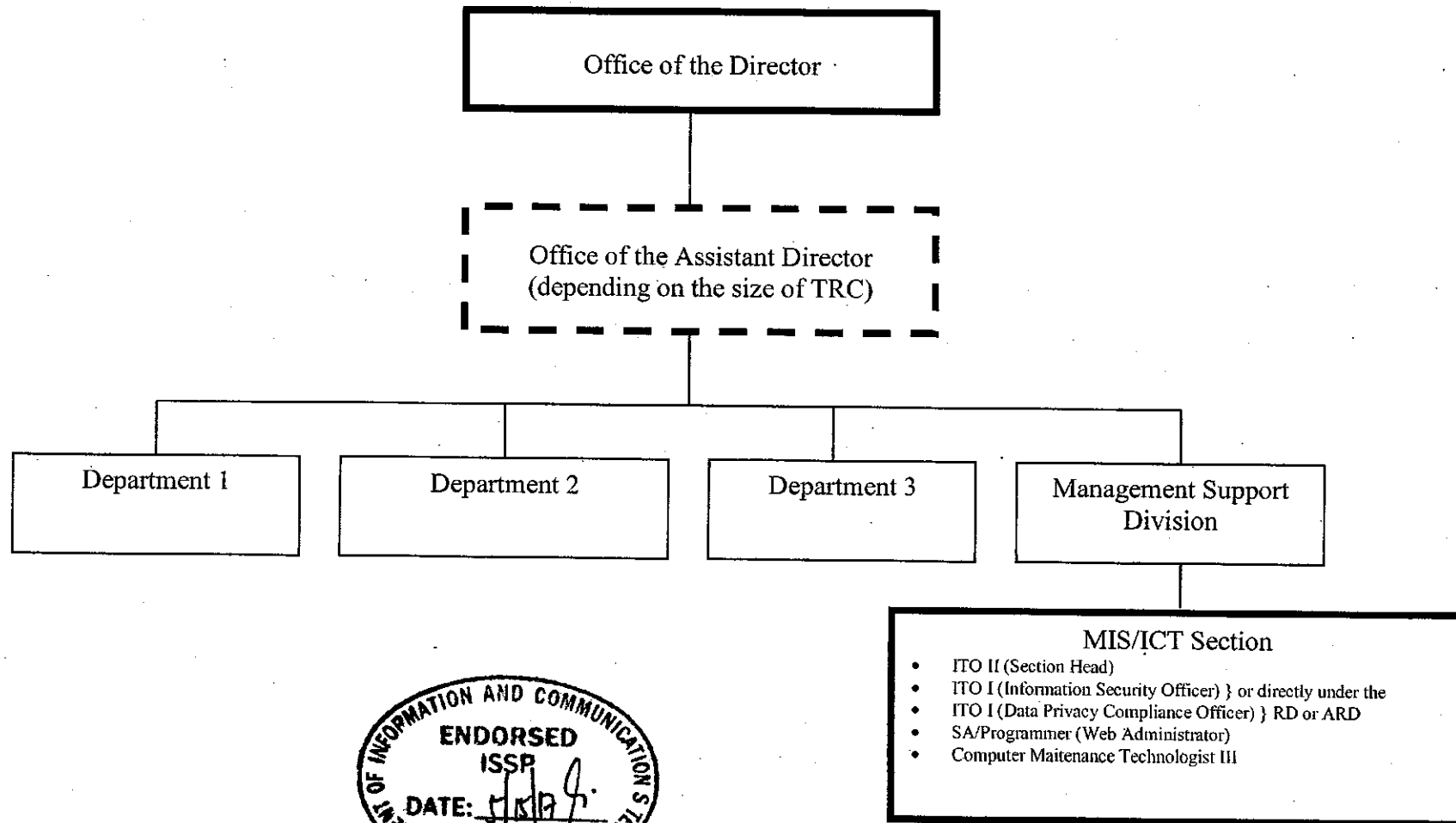
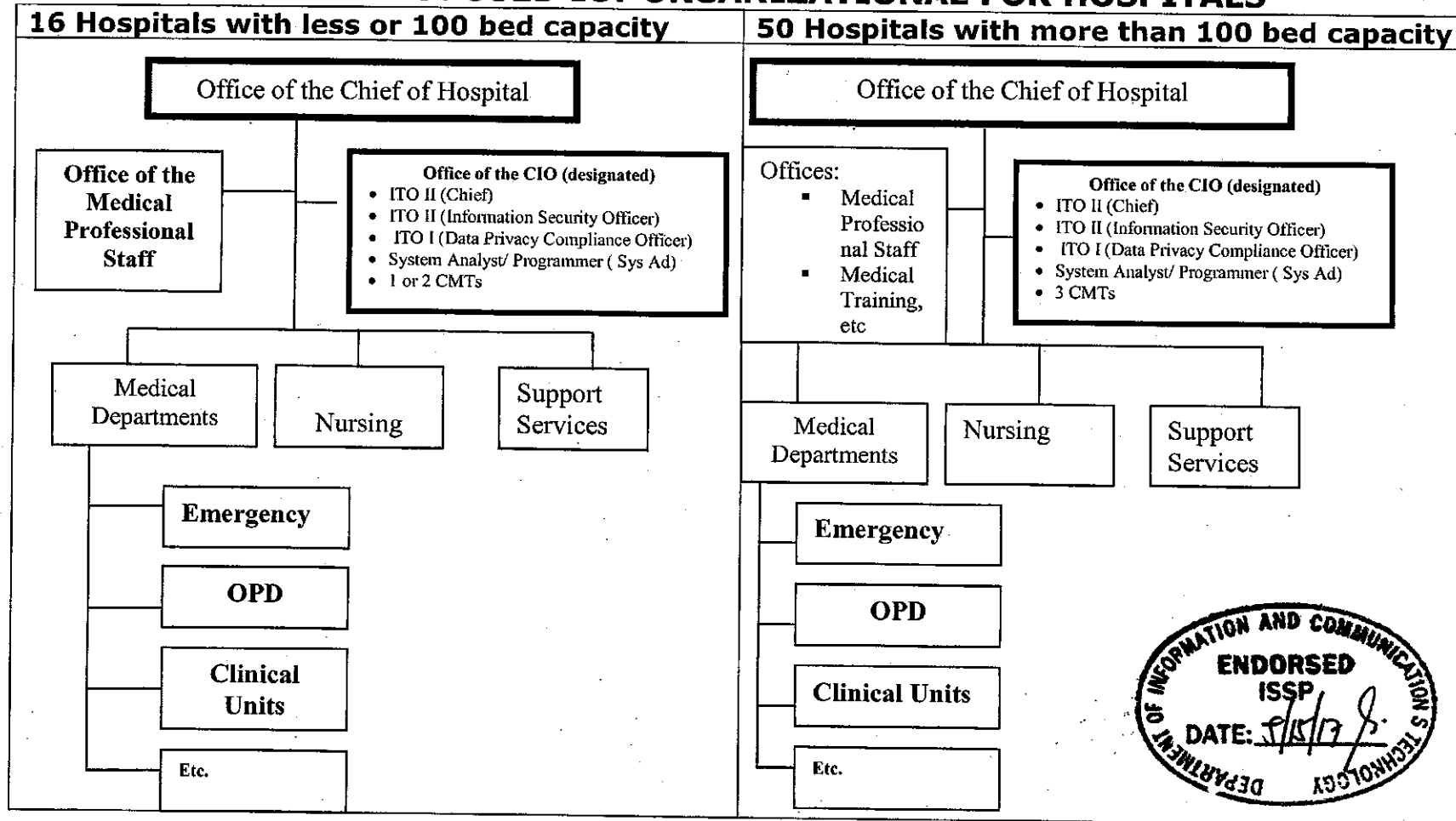


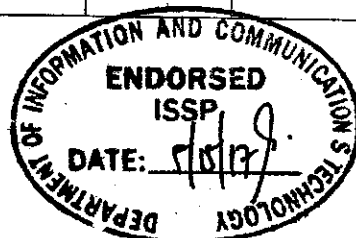


FIGURE 22: PROPOSED ICT ORGANIZATIONAL FOR HOSPITALS



**NUMBER OF EXISTING AND PROPOSED HUMAN RESOURCE COMPLEMENT**

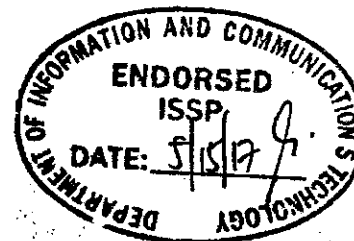
Position	EXISTING				PROPOSED			
	Permanent	Contractual	Out-sourced	Project-based	Permanent	Contractual	Out-sourced	Project-based
Information Technology Officer III	2				1			
Information Technology Officer(ITO) II	3	3			100	3		
Information Technology Officer I	1	2			87			
Information Systems Analyst (ISA) III	3	2	7	3	22	2	7	
Information Systems Analyst II	4	5	6	5	99		6	
Information Systems Analyst I	3	5			5	4		
Programmer III	2	1	8	6	3	3	8	
Programmer II	4	12		8	106	6		
Programmer I	2	56			5	56		
Computer Maintenance Technologist (CMT) III	67				40	2		
CMT II	83				67			
CMT I	83							
Information System Researcher III		3			3	2		
Information System Researcher(ISR) I	1				1			





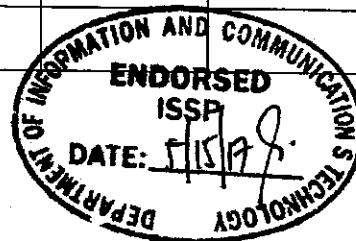
NUMBER OF EXISTING AND PROPOSED HUMAN RESOURCE COMPLEMENT

Position	EXISTING				PROPOSED			
	Permanent	Contractual	Out-sourced	Project-based	Permanent	Contractual	Out-sourced	Project-based
Computer Operator IV	8	92			101	4		
Data Encoder					5	17		
Other positions for data management, GIS and web administration, communication systems & ICT Training, Help Desks, call center, & other ehealth & other ITC works								
Information Officer (IO) IV	1				1			
Information Officer III	1				1			
Information Officer II	2				2			
Librarian III	1				1			
Administrative Officer (AO)	1	1			3	1		
Health Program Officers (HPO)		14			10	2		
Training Officer		1				2		
Project Officer/Project Development Officer (PO/PDO)		7		2	8	6		



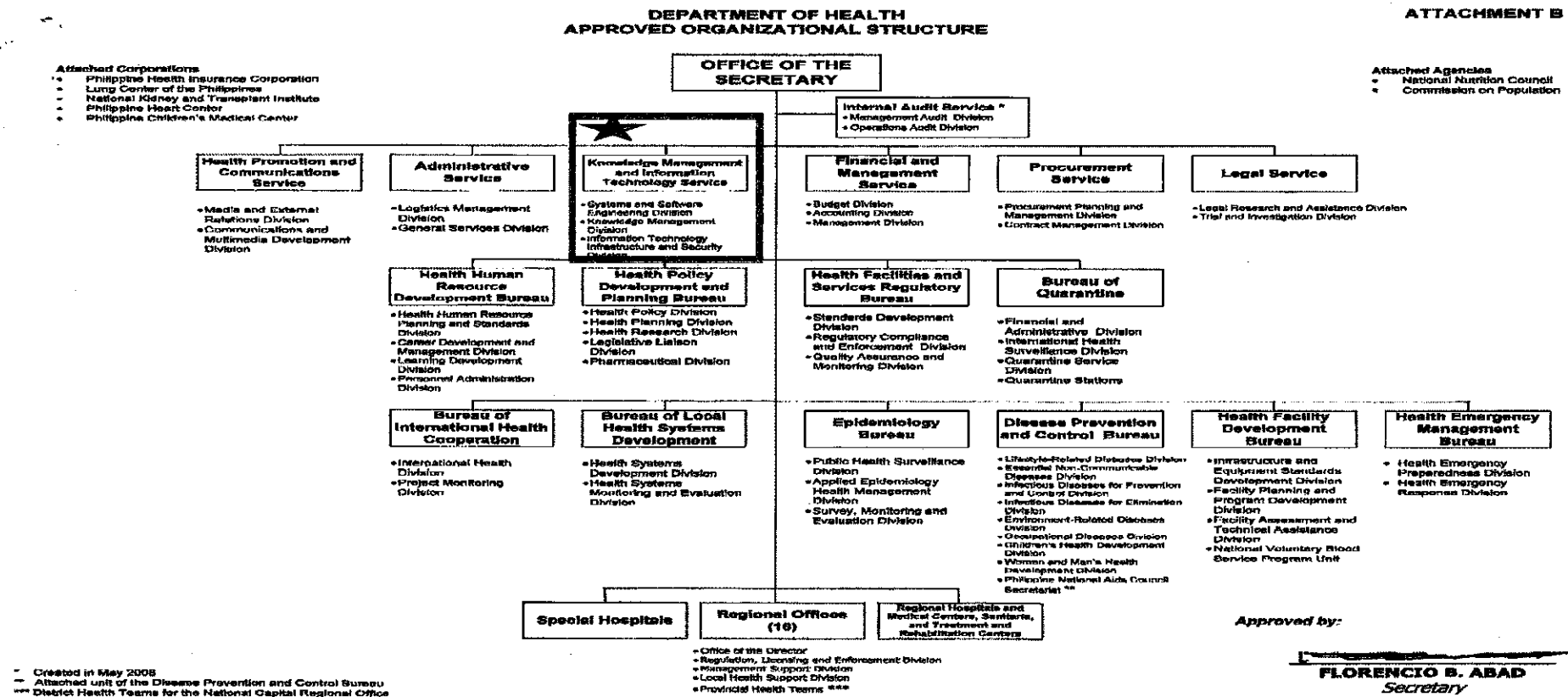


NUMBER AND PLACEMENT OF PROPOSED PERSONNEL									
Position	PROPOSED						Contractual		Outsourced
	Total	Central Office with PITACH	Regional Office (16 +1 NIR)	<100 bed hospital (16)	≥100 bed hospital (50)	DTRC	Central Office	Regional Office	Central Office
Information Technology Officer III	1	1							
Information Technology Officer II	100	4	17	16	50	13	3		
Information Technology Officer I	87	4	17	16	50				
Information Systems Analyst III	22	9				13	2		7
Information Systems Analyst II	99	3	17	16	50	13			6
Information Systems Analyst I	5	5					4		
Programmer III	3	3					3		8
Programmer II	106	10	17	16	50	13	6		
Programmer I	5	5					8	48	
Computer Maintenance Technologist (CMT) III	40	9	18			13	2		
CMT II	67		1	16	50				
CMT I									
Information System Researcher III	3	3					2		

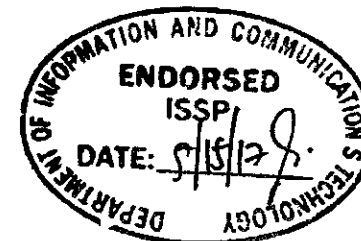




B.3 PLACEMENT OF THE ICT STRUCTURE IN DOH ORGANIZATIONAL STRUCTURE



★ Designate a CIO from the Executive Committee Members with rank of undersecretary

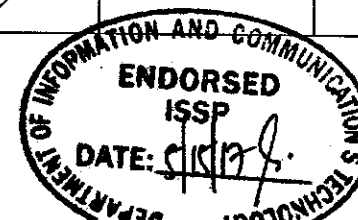




PART V. DEVELOPMENT AND INVESTMENT PROGRAM

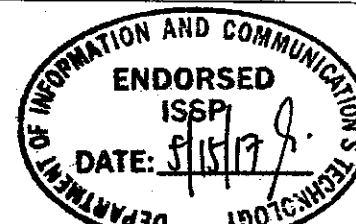
A. ICT PROJECTS IMPLEMENTATION SCHEDULE

	PROJECTS	Year 1	Year 2	Year 3
	INTERNAL ICT PROJECTS			
1	Phase 2: Integrated Executive Information System	✓	✓	✓
2	Phase 2: Updating of the Philippine Health Enterprise Architecture		✓	
3	Phase 1: DOH Enterprise Resource Management System	✓	✓	✓
4	Local Health Systems Project	✓	✓	✓
5	Phase 2: Expanded Electronic Drug Price Monitoring System	✓		✓
6	Phase 2: Implementation of the Integrated licensing information system	✓	✓	✓
7	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation Project	✓	✓	✓
8	Phase 2: Expansion of the integrated logistics management system	✓		
9	Phase 1: Sub-national Integration of health information systems	✓	✓	✓
10	International Health coordination information systems integration	✓	✓	
11	ICT Infrastructure Development and Maintenance for Central Office	✓	✓	✓
	a) Maintenance Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals	✓	✓	
	b) Migration of DOH Existing Video Conferencing equipment to	✓		



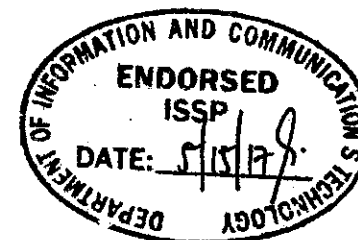


	PROJECTS	Year 1	Year 2	Year 3
	Cloud based Video Conferencing solution			
	c) Cloud Based Centralized Wireless LAN Infrastructure	✓	✓	✓
	d) Consolidation of DOH Security Infrastructure for DOH Public Servers	✓	✓	✓
	e) Consolidation of Integrated Drug Test Operation and Management Information System (IDTOMIS) Security Infrastructure	✓	✓	✓
	f) DOH Disaster Recovery Site Upgrade	✓	✓	✓
12	ICT Infrastructure Development and Maintenance for Regional Offices	✓	✓	✓
	a) Cloud Based Centralize WIFI Infrastructure for DOH Regional Offices (RO's)	✓	✓	✓
	b) Hyper Converged Virtualization Infrastructure	✓	✓	✓
	c) Enterprise Antivirus	✓	✓	✓
13	ICT Infrastructure Development and Maintenance for Hospitals and Drug Abuse Treatment and Rehabilitation Centers	✓	✓	✓
	a) Next Generation Firewall for DOH Hospitals & TRCs	✓	✓	✓
	b) Hyper Converged Virtualization Infrastructure	✓	✓	✓





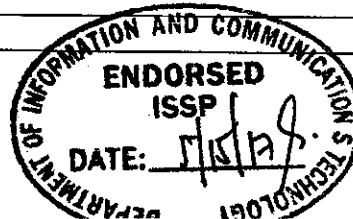
	PROJECTS	Year 1	Year 2	Year 3
	c) Structured Local Area Network (LAN) Cabling & increasing storage and computing capacity	✓	✓	✓
14	Phase IV: Communications Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	✓	✓	✓
15	Phase 3: Document Management	✓	✓	✓
	CROSS-AGENCY ICT PROJECTS			
1	Phase 2: Philippine Health Information Exchange	✓	✓	✓
2	Phase 4: Enhancement & Expanding Implementation of IHOMIS/ Integrated Health Information System	✓	✓	✓
3	Phase 3: Enhancement & Expanding Implementation of iClinicSys	✓	✓	✓
4	Phase 2: Health Data Standards Adoption & Institutionalization	✓	✓	✓
5	Phase 2: Philippine Health Enterprise Data warehouse	✓	✓	✓
6	Interconnecting Health Centers/Rural Health Units (HCs/RHUs), Hospitals and TRCs	✓	✓	✓
7	Drug treatment and rehabilitation automation project	✓	✓	✓
8	Phase 2: Unified Disease Registry System	✓	✓	✓
9	Phase 3: National Health Atlas & integration with the Philippine Geoportal	✓	✓	✓
10	Phase 3: Telehealth/Telemedicine System	✓	✓	✓
11	Health Emergency Management Service System Enhancement Project	✓	✓	✓
12	Verbal Autopsy System (SmartVA) for Strengthening CRVS		✓	✓





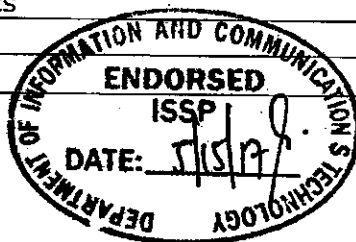
B. INFORMATION SYSTEMS IMPLEMENTATION SCHEDULE

INFORMATION SYSTEMS	YEAR 1	YEAR 2	YEAR 3
A. HEALTH SECTOR MANAGEMENT			
1. Philippine Health Information Exchange	✓	✓	✓
2. Integrated Executive Information System	✓	✓	
a. Unified Health Information System (UHMIS)	✓	✓	
b. PHA Dashboard	✓	✓	
c. National Health Atlas	✓	✓	✓
d. Health Facility Profiling System	✓	✓	✓
e. Sub-national Integrated Health Information System			
3. Health Information Technology/ Data Standard Terminology Registry	✓	✓	✓
a. National Health Data Dictionary System	✓	✓	✓
b. National Health Facility Registry	✓	✓	✓
c. National Health Data Standards Terminology Registry	✓	✓	✓
4. Philippine Health Enterprise Data Warehouse		✓	✓
a. DOH-PhilHealth Data Harmonization	✓		
b. DOH Dashboard & M & E system		✓	✓
5. Local Health Systems	✓	✓	✓
a. Political Profiling System	✓	✓	✓
b. Performance Monitoring System	✓	✓	✓
i. LGU Scorecard	✓	✓	✓
ii. Health Human Resource Augmentation System		✓	✓
c. Local Health Information System	✓	✓	✓
C. HOSPITAL SERVICES			
1. Integrated Hospital Operations and Management Information System & Interoperable Health Information System	✓	✓	✓
a. Module 1	✓	✓	✓



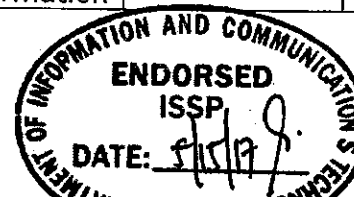


INFORMATION SYSTEMS	YEAR 1	YEAR 2	YEAR 3
b. Module 2	✓	✓	✓
c. Module 3		✓	✓
2. National Blood Bank Networking System	✓	✓	✓
3. Drug Abuse Treatment and Rehabilitation Center Operations System	✓	✓	✓
D. HEALTH REGULATION			
1. Integrated Licensing Information System [for Health Facilities & Services]	✓	✓	✓
2. Integrated Drug Test Operations and Management Information System	✓	✓	✓
3. Electronic Drug Price Management System	✓	✓	
4. Quarantine Services and International Health Regulation System	✓	✓	✓
E. TECHNICAL ADVISORY & SUPPORT SERVICES			
1. iClinicSys - Integrated Clinic System	✓	✓	✓
a. eFHSIS	✓	✓	✓
b. Integrated TB Information System	✓	✓	✓
c. Maternal & Neonatal Death Reporting system	✓	✓	✓
d. Schistosomiasis Information System	✓	✓	✓
e. Filariasis Information System	✓	✓	✓
f. National Rabies Information System	✓	✓	✓
g. Leprosy Info System/ Leprosy Alert Response and Surveillance Network	✓	✓	✓
h. Watching Over Mothers and Babies	✓	✓	✓
i. Family Planning Registry	✓	✓	✓
j. PIDSR	✓	✓	✓
k. Other Vertical Programs Info/Reporting System like Malaria and other Infectious Diseases and Non-communicable Diseases	✓	✓	✓
2. Verbal Autopsy System (SmartVA) to help strengthen Civil Registration and Vital Statistics for Mortality Statistics	✓	✓	
3. Unified Disease Registry System	✓	✓	✓
a. ONEISS	✓	✓	✓



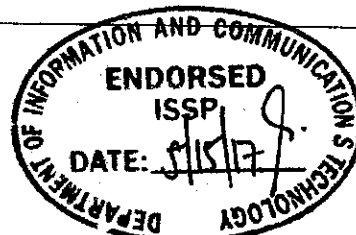


INFORMATION SYSTEMS	YEAR 1	YEAR 2	YEAR 3
b. VAWCRS	✓	✓	✓
c. PRPWD	✓	✓	✓
d. IPNIDMS	✓		
e. ICNCDRS	✓	✓	✓
i. Cancer, Diabetes mellitus, Stroke and Coronary Artery Disease Registries	✓	✓	
ii. Prevention of Blindness Registry & Cataract Surgical Outcome Monitoring Tool	✓	✓	
iii. Integrated COPD Registry	✓	✓	
iv. Renal Disease Registry	✓	✓	
v. Mental Health Registry	✓	✓	✓
f. Occupational Disease Registry	✓	✓	✓
g. FRRISS	✓	✓	✓
h. INTD Registry	✓	✓	✓
i. ITIS	✓	✓	✓
4. Disease Surveillance System	✓	✓	✓
a. ESR	✓	✓	✓
b. International Health Disease Surveillance	✓	✓	✓
c. PIDSR	✓	✓	✓
5. Telehealth (Telemedicine) System	✓	✓	✓
6. Philippine Organ Donor and Recipient Registry System	✓	✓	✓
7. Integrated Health Human Resources Development IS	✓	✓	✓
a. IHRHMIS	✓	✓	
b. NDHRH	✓		
c. IDHRH	✓		
d. Training Information System	✓	✓	
e. eLearning System for the DOH Academy	✓	✓	✓
8. Health Emergency Management Service Integrated Information	✓	✓	✓





INFORMATION SYSTEMS	YEAR 1	YEAR 2	YEAR 3
System (HEMS IIS)			
9. Environmental Health Information System	✓	✓	✓
F. SUPPORT TO OPERATION			
1. Health & DOH Portals	✓	✓	✓
a. Intranet	✓	✓	✓
b. DOH main website/portal	✓	✓	✓
c. Regional Health Offices websites	✓	✓	✓
d. Hospital Websites	✓	✓	✓
e. PITACH websites	✓	✓	✓
f. DATRCs website	✓	✓	✓
g. BOQ website	✓	✓	✓
2. DOH Enterprise Resource Management	✓	✓	✓
3. Financial Management Reporting System	✓	✓	✓
4. Integrated Logistic Management System	✓	✓	✓
a. POMIS	✓	✓	
b. NOSIRS & Warehousing	✓	✓	
c. Fixed Assets/property accountability system	✓	✓	
5. Integrated Personnel Management Information System	✓	✓	✓
a. PIS	✓	✓	
b. eJobs	✓	✓	
c. Payroll system	✓	✓	
d. Time and Attendance system (biometrics)	✓	✓	
6. International Health Coordination Information System (IHCIS)	✓	✓	✓
a. Foreign Medical Mission	✓	✓	
b. Foreign Donations Monitoring	✓	✓	
c. Foreign Travels	✓	✓	
d. Foreign Visits	✓	✓	
e. Foreign Fellowship & Training	✓	✓	





C. SUMMARY OF INVESTMENTS

C.1 SUMMATION OF BUDGETARY REQUIREMENTS PER YEAR

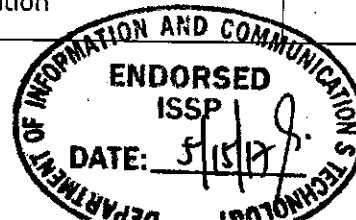
PROJECT	Year 1	Year 2	Year 3
Office Productivity	668,868,000	436,420,000	448,328,000
Internal ICT Projects	334,070,100	273,113,100	211,524,700
Cross-Agency ICT Projects	515,329,800	449,869,800	333,394,800
Continuing expenses for existing systems	167,155,000	149,790,000	153,610,000
GRAND TOTAL	1,685,422,900	1,309,192,900	1,146,857,500





C.2 SUMMATION OF COST PER ICT PROJECT

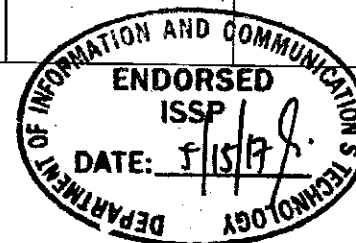
PROJECT	Year 1	Year 2	Year 3
	Cost	Cost	Cost
Office Productivity	668,868,000	436,420,000	448,328,000
Internal ICT Projects			
1. Phase 2: Integrated Executive Information System	30,402,000	3,000,000	23,000,000
2. Phase 2: Updating of the Philippine Health Enterprise Architecture	3,199,800	147,600	
3. Phase 1: DOH Enterprise Resource Management System	2,290,000	90,000	90,000
4. Local Health Systems	54,728,800	28,800	
5. Phase 2: Expanded Electronic Drug Price Monitoring System	1,440,000	700,000	
6. Phase 2: Implementation of the Integrated Licensing Information System	7,269,200	9,489,200	2,269,200
7. Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation Project	9,080,000	1,920,000	180,000
8. Phase 2: Expansion of the Integrated Logistics Management System	8,018,800		
9. Phase 1: Sub-national Integration of Health Information Systems	2,880,000		
10. International Health Coordination Information Systems Integration	754,000		





DOH Information Systems Strategic Plan, 2018 - 2020

PROJECT	Year 1	Year 2	Year 3
	Cost	Cost	Cost
11. ICT Infrastructure Development & Maintenance for Central Office	47,370,000	63,640,000	41,960,000
a) Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals	47,950,000	5,500,000	
b) Migration of DOH Existing Video Conferencing equipment to Cloud based Video Conferencing solution	3,500,000	2,000,000	3,500,000
c) Cloud Based Centralized Wireless LAN Infrastructure	5,920,000	3,600,000	3,600,000
d) Consolidation of DOH Security Infrastructure for DOH Public Servers	20,000,000		12,000,000
e) Consolidation of Integrated Drug Test Operation and Management Information System (IDTOMIS) Security Infrastructure	10,000,000		10,000,000
f) DOH Disaster Recovery Site Upgrade	23,500,000	20,000,000	23,500,000
12. ICT Infrastructure Development and Maintenance for Regional Offices			
a) Cloud Based Centralize WIFI Infrastructure	7,437,500	7,437,500	5,845,500
b) Hyper Converged Virtualization Infrastructure		28,000,000	28,000,000
c) Enterprise Antivirus	1,560,000	1,560,000	
13. ICT Infrastructure Development and Maintenance for Hospitals and Drug Abuse Treatment and Rehabilitation Centers (DATRCs)			





DOH Information Systems Strategic Plan, 2018 - 2020

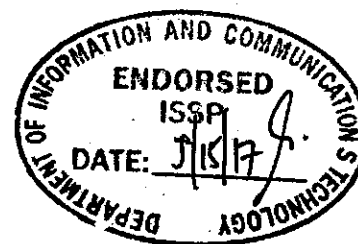
PROJECT	Year 1	Year 2	Year 3
	Cost	Cost	Cost
a) Next Generation Firewall	6,400,000	5,600,000	
b) Hyper Converged Virtualization Infrastructure		31,500,000	36,000,000
c) Structured Local Area Network (LAN) Cabling & Increasing Storage and Computing Capacity	7,500,000	22,500,000	12,000,000
14. Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	3,700,000	6,000,000	9,580,000
15. Phase 3: Document Management System	29,170,000	60,400,000	
TOTAL INTERNAL ICT PROJECTS	334,070,100	273,113,100	211,524,700
Cross-Agency ICT Projects			
1. Phase 2: Philippine Health Information Exchange	24,700,000	21,900,000	21,900,000
2. Phase 4: Enhancement and Expanding Implementation of iHOMIS/ Integrated Health Information System	62,370,000	38,820,000	67,570,000
3. Phase 3: Enhancement & Expanding Implementation of iClinicSys	180,650,000	177,850,000	90,350,000
4. Phase 2: Health Data Standards Adoption and Institutionalization	1,545,000	2,145,000	
5. Phase 2: Philippine Health Enterprise Data Warehouse	28,654,800	10,154,800	1,654,800





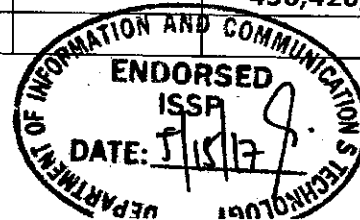
DOH Information Systems Strategic Plan, 2018 - 2020

PROJECT	Year 1	Year 2	Year 3
	Cost	Cost	Cost
6. Interconnecting Health Centers/Rural Health Units (HCs/RHUs), Hospitals and DATRCs	106,700,000	106,700,000	100,000,000
7. Drug Abuse Treatment and Rehabilitation Automation Project	20,615,000	4,500,000	500,000
8. Phase 2: Unified Disease Registry System	5,200,000	3,000,000	1,500,000
9. Phase 3: National Health Atlas & Integration with the Philippine Geoportal	10,175,000	11,680,000	11,000,000
10. Phase 3: Telehealth/Telemedicine System	700,000	700,000	
11. Health Emergency Management Service System Enhancement Project	10,020,000	8,420,000	4,920,000
12. Verbal Autopsy System (Smart VA) for Strengthening CRVS	64,000,000	64,000,000	34,000,000
TOTAL CROSS-AGENCY ICT PROJECTS	515,329,800	449,869,800	333,394,800
Continuing Expenses for Existing Systems	167,155,000	149,790,000	153,610,000
GRAND TOTAL	1,685,422,900	1,309,192,900	1,146,857,500



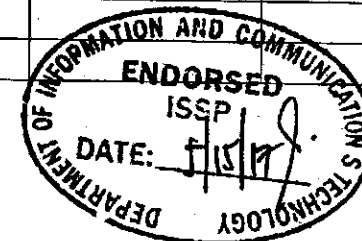
**C.3 SUMMARY OF INVESTMENTS PER ICT PROJECT**

	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
I	Office Productivity						
	A. CAPITAL OUTLAY						
	ICT Office Equipment						
	Desktop Computers with UPS	4,121	247,260,000	3,083	184,980,000	3,707	222,420,000
	Laptops	2,000	120,000,000	1,561	93,660,000	1,379	82,740,000
	Mobile Computing Device/Tablet	621	31,050,000	491	24,550,000	398	19,900,000
	Printers	2,145	53,625,000	1,312	32,800,000	1,701	42,525,000
	Projector	294	10,290,000	210	7,350,000	270	9,450,000
	Scanner	365	10,950,000	277	8,310,000	292	8,760,000
	Server	28	19,600,000	35	27,500,000	25	22,000,000
	Cheque Printer	1	15,000				
	Large Format Printer	2	10,000,000				
	Small Format Printer	25	2,500,000				
	Video Camera HD	2	3,400,000				
	LED TV Billboard	20	100,000,000				
	ICT Software						
	ICT Software (Operating System)	681	7,491,000	445	4,895,000	335	3,685,000
	Office Productivity Software	5,315	52,687,000	4,388	52,375,000	4,836	36,848,000
	TOTAL FOR OFFICE PRODUCTIVITY		668,868,000		436,420,000		448,328,000





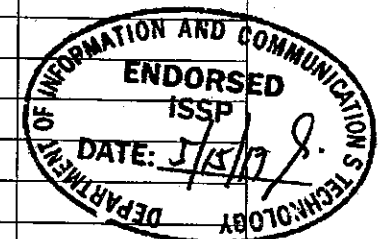
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
II	Internal ICT Projects						
1	Phase 2: Integrated Executive Information System						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	GPS Device	60	2,100,000				
	Mobile Computing Device/Tablet	32	1,920,000				
	Pocket WIFI with free load	32	128,000				
	Server (OLAP)	1	700,000				
	Video display wall	1	500,000				
	ICT Software						
	Database software	2	4,000,000				
	Business Analytics	1 lot	15,000,000			1 lot	15,000,000
	Mapping software	2	3,000,000			3	5,000,000
	B. MOOE						
	Consultancy Services	1	3,000,000	1	3,000,000	1	3,000,000
	Training	30	54,000				
	SUB-TOTAL		30,402,000		3,000,000		23,000,000
2	Phase 2: Updating of the Philippine Health Enterprise Architecture						
	A. MOOE						
	Consultancy Services	1	3,000,000				





DOH Information Systems Strategic Plan, 2018 - 2020

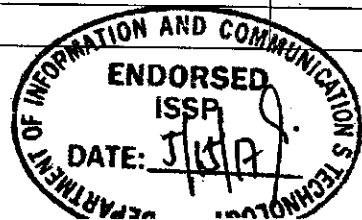
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	Training	111	199,800	82	147,600		
	SUB-TOTAL		3,199,800		147,600		
3	Phase 1: DOH Enterprise Resource Management System						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Server	1	700,000				
	B. MOOE						
	Consultancy Services	1	1,500,000				
	Training	50	90,000	50	90,000	50	90,000
	SUB-TOTAL		2,290,000		90,000		90,000
4	Local Health Systems						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Mobile Computing Device	900	54,000,000				
	Server	1	700,000				
	B. MOOE						
	Training	16	28,800	16	28,800		
	SUB-TOTAL		54,728,800		28,800		





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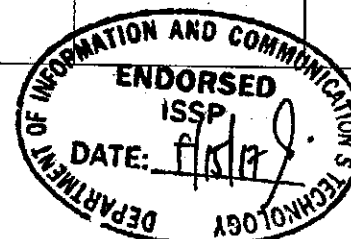
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
5	Phase 2: Expanded Electronic Drug Price Monitoring System						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Laptop	18	1,080,000				
	Server			1	700,000		
	WIFI Router	18	360,000				
	SUB-TOTAL		1,440,000		700,000		
6	Phase 2: Implementation of the Integrated Licensing Information System						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Large Screen Monitors (for Blueprint viewing)	20	2,000,000				
	Mobile computing device	50	3,000,000	122	7,320,000		
	Server	3	2,100,000			3	2,100,000
	B. MOOE						
	Consultancy Services			1	2,000,000		
	Training	94	169,200	94	169,200	94	169,200





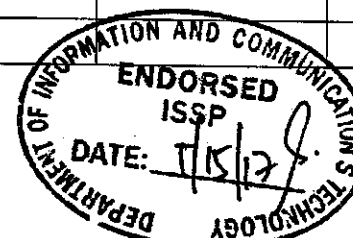
DOH Information Systems Strategic Plan, 2018 - 2020

	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	SUB-TOTAL		7,269,200		9,489,200		2,269,200
7	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Desktop Computers	50	3,000,000				
	Firewall	1	1,000,000				
	Laptop			29	1,740,000		
	Manage Switches	5	500,000				
	Server	2	1,400,000				
	ICT Software						
	Network Management	1	1,000,000				
	ICT Infrastructure, Machineries & Equipment						
	Server Room /Storage Facility	1	2,000,000				
	B. MOOE						
	Training	100	180,000	100	180,000	100	180,000
	SUB-TOTAL		9,080,000		1,920,000		180,000





	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
8	Phase 2: Expansion of the Integrated Logistics Management System						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Barcode Reader	64	1,280,000				
	Barcode Printer	21	840,000				
	Desktop Computers with UPS	18	1,080,000				
	Server	1	700,000				
	B. MOOE						
	Consultancy Services	1	4,000,000				
	Training	66	118,800				
	SUB-TOTAL		8,018,800				
9	Phase 1: Sub-national Integration of Health Information Systems						
	A. CAPITAL OUTLAY						
	ICT Software						
	Business Analytics Software	48	2,880,000				
	SUB-TOTAL		2,880,000				





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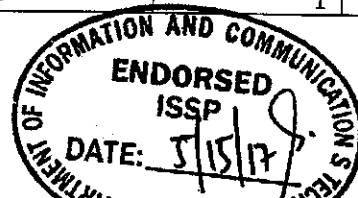
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
10	International Health Coordination Information Systems Integration						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Server	1	700,000				
	B. MOOE						
	Training	30	54,000				
	SUB-TOTAL		754,000				
11	ICT Infrastructure Development & Maintenance for Central Office						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Access Switch			30	1,800,000		
	Blade Chassis Server	1	15,000,000			1	15,000,000
	Blade Servers			11	11,000,000		
	CCTV	1	450,000				
	Centralize Backup Solution	1	6,000,000				
	Distribution Switch			10	1,000,000		
	Enterprise Firewall			1	3,000,000		
	Ethernet Gigabit Switch	64	1,920,000			64	1,920,000
	High End Server			1	1,200,000		





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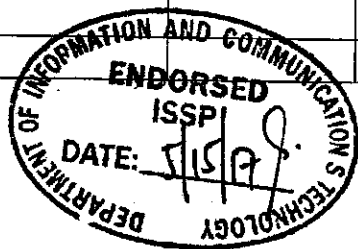
Budget Item/Account	Year 1		Year 2		Year 3	
	Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
Managed Switch	6	850,000				
PoE Switch			20	1,200,000		
Storage equipment	1	6,000,000	1	600,000	1	6,000,000
Voice Routers	17	8,500,000	10	5,000,000		
Data Center Equipment Replacement						
Automatic Transfer Switch			2	2,000,000		
Cooling system					1	5,000,000
Electrical Wiring installation			1	1,000,000		
Environmental Monitoring System			1	1,000,000		
Fire Alarm System			1	1,500,000		
Fire Suppression			1	1,500,000		
Generator Set					1	2,000,000
Lightning Arrester					1	2,000,000
Raised Floor System			1	500,000		
Security Access			2	1,000,000		
Temperature and Humidifier Monitoring System					1	2,000,000
UPS (100KVA)			2	8,000,000		
Water Leak Detection System			1	1,000,000		
ICT Software						
Database Software Subscription (MS SQL Server Enterprise Edition)			3	1,500,000		
MS SQL Server 2016	2	600,000				
Sharepoint with Office 365	1	300,000	1	300,000		





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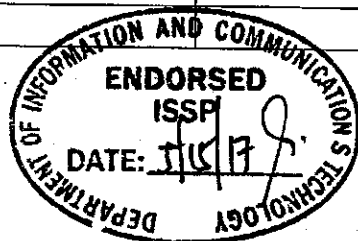
Budget Item/Account	Year 1		Year 2		Year 3	
	Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
Virtualization License			22	11,000,000		
Windows Server 2012	5	350,000	2	140,000	2	140,000
ICT Subscription	1	2,000,000	12	3,000,000	11	2,500,000
Centralize Enterprise Anti-virus	1	1,400,000	1	1,400,000	1	1,400,000
DOH Corporate Email System	1	4,000,000	1	4,000,000	1	4,000,000
SUB-TOTAL		47,370,000		63,640,000		41,960,000
a) Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals						
A. CAPITAL OUTLAY						
ICT Equipment						
IP Phone	600	30,000,000				
Manage Switch	37	7,400,000				
Unified Communication System	1	450,000	1	5,000,000		
Voice Router	20	10,000,000	1	500,000		
B. MOOE						
Supplies and Materials Expenses						
UTP Cable	1	100,000				
SUB-TOTAL		47,950,000		5,500,000		





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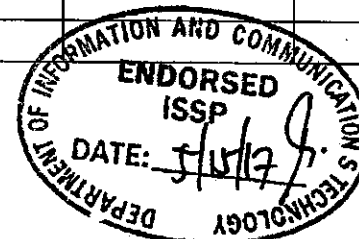
Budget Item/Account	Year 1		Year 2		Year 3	
	Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
b) Migration of DOH Existing Video Conferencing equipment to Cloud based Video Conferencing solution						
A. CAPITAL OUTLAY						
ICT Equipment						
Video Conferencing Component/Equipment	1	1,500,000			1	1,500,000
B. MOOE						
Subscription Expenses						
Video Conferencing Cloud Based Provider	1	2,000,000	1	2,000,000	1	2,000,000
SUB-TOTAL		3,500,000		2,000,000		3,500,000
c) Cloud Based Centralized Wireless LAN Infrastructure						
A. CAPITAL OUTLAY						
ICT Equipment						
Power over Ethernet Switch	30	720,000				
Wireless Access Point (WAP)	85	1,700,000	5	100,000	5	100,000
B. MOOE						
Subscription Expenses						
Cloud Based WIFI Subscription	1	3,500,000	1	3,500,000	1	3,500,000
SUB-TOTAL		5,920,000		3,600,000		3,600,000





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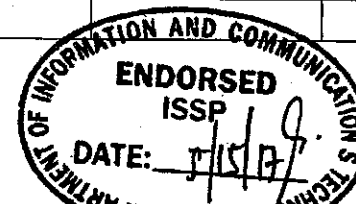
Budget Item/Account	Year 1		Year 2		Year 3	
	Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
d) Consolidation of DOH Security Infrastructure for DOH Public Servers						
A. CAPITAL OUTLAY						
ICT Equipment						
Advance Security Firewall	1	5,000,000			1	5,000,000
Consolidated Network Security Appliance	1	8,000,000				
Intrusion Prevention System	1	3,000,000			1	3,000,000
Web Application Firewall	1	4,000,000			1	4,000,000
SUB-TOTAL		20,000,000				12,000,000
e) Consolidation of Integrated Drug Test Operation and Management Information System (IDTOMIS) Security Infrastructure						
A. CAPITAL OUTLAY						
ICT Equipment						
Advance Security Firewall	1	3,000,000			1	3,000,000
Intrusion Prevention System	1	3,000,000			1	3,000,000
Web Application Firewall	1	4,000,000			1	4,000,000
SUB-TOTAL		10,000,000				10,000,000





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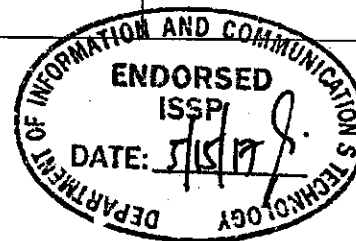
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	f) DOH Disaster Recovery Site Upgrade						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Hyper-Converged Virtualization Infrastructure	1	3,500,000			1	3,500,000
	B. MOOE						
	Subscription Expenses						
	Cloud Computing Service/Data Center Service	1	20,000,000	1	20,000,000	1	20,000,000
	SUB-TOTAL		23,500,000		20,000,000		23,500,000
12	ICT Infrastructure Development and Maintenance for Regional Offices						
	a) Cloud Based Centralize WIFI Infrastructure for DOH Regional Offices (ROs)						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	PoE Switches	3	72,000	3	72,000		
	Wireless Access Point	8	1,520,000	8	1,520,000		
	B. MOOE						
	Cloud Based WIFI Subscription	1	5,845,500	1	5,845,500	1	5,845,500





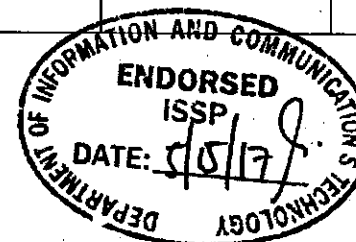
DOH Information Systems Strategic Plan, 2018 - 2020

Budget Item/Account	Year 1		Year 2		Year 3	
	Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
SUB-TOTAL		7,437,500		7,437,500		5,845,500
b) Hyper Converged Virtualization Infrastructure						
A. CAPITAL OUTLAY						
ICT Equipment						
Hyper-Converged Virtualization Infrastructure (HCVI) Appliances and Hypervisor Software and Licenses			8	28,000,000	8	28,000,000
SUB-TOTAL				28,000,000		28,000,000
c) Enterprise Antivirus						
A. CAPITAL OUTLAY						
ICT Subscription						
Centralize Enterprise Anti-virus	8	1,560,000	8	1,560,000		
SUB-TOTAL		1,560,000		1,560,000		



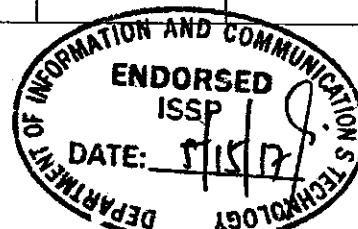


	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
13	ICT Infrastructure Development and Maintenance for Hospitals and Drug Abuse Treatment and Rehabilitation Centers (DATRCs)						
	a) Next Generation Firewall for DOH Hospitals & DATRCs						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Next Generation Firewall	8	6,400,000	7	5,600,000		
	SUB-TOTAL		6,400,000		5,600,000		
	b) Hyper Converged Virtualization Infrastructure						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Hyper-Converged Virtualization Infrastructure (HCVI) Appliances and Hypervisor Software and Licenses			7	31,500,000	8	36,000,000
	SUB-TOTAL				31,500,000		36,000,000





	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	c) Structured Local Area Network (LAN) Cabling & Increasing Storage and Computing Capacity						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Storage	5	2,500,000	15	7,500,000	8	4,000,000
	ICT Infrastructure, Machineries and Equipment						
	Structured Local Area Network (LAN) Cabling	5	5,000,000	15	15,000,000	8	8,000,000
	SUB-TOTAL		7,500,000		22,500,000		12,000,000
14	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Mobile Computing Device			100	6,000,000	148	8,880,000
	Server	1	700,000			1	700,000
	SMS gateway	2	3,000,000				
	SUB-TOTAL		3,700,000		6,000,000		9,580,000



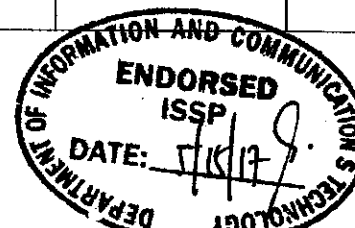


	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
15	Phase 3: Document Management System						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Barcode Reader	32	640,000				
	Desktop Computers	54	3,240,000	216	12,960,000		
	High Security, fireproof cabinets for permanent documents/Compactors	35	700,000				
	High Speed Scanner	82	1,640,000	72	1,440,000		
	Laptops	10	600,000				
	Laptops (Macbook)	10	850,000				
	Server	19	9,500,000	72	36,000,000		
	ICT Subscription						
	Document Management and Archiving Software Subscription	2	12,000,000	1	10,000,000		
	SUB-TOTAL		29,170,000		60,400,000		
	TOTAL FOR INTERNAL ICT PROJECTS		334,070,100		273,113,100		211,524,700





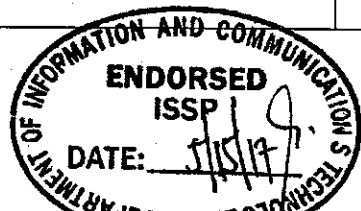
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
III	Cross-Agency ICT Projects						
1	Phase 2: Philippine Health Information Exchange						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Server	6	4,200,000	2	1,400,000	2	1,400,000
	B. MOOE						
	Consultancy/Contract Services	1	8,000,000	1	8,000,000	1	8,000,000
	Subscription Services (Standards)	1	3,000,000	1	3,000,000	1	3,000,000
	Supplies and Materials	50	500,000	50	500,000	50	500,000
	Training Expenses	5,000	9,000,000	5,000	9,000,000	5,000	9,000,000
	SUB-TOTAL		24,700,000		21,900,000		21,900,000
2	Phase 4: Enhancement and Expanding Implementation of IHOMIS/IHIS						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Blade Chassis Server					1	15,000,000
	Desktop computers with UPS	251	15,060,000	120	7,200,000	202	12,120,000
	Printers	135	4,050,000	42	1,260,000	113	3,390,000
	Printers/Scanners	20	600,000				





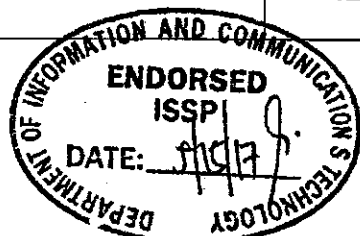
DOH Information Systems Strategic Plan, 2018 - 2020

	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	Server	9	6,300,000			1	700,000
	Server/Storage Data Center Requirements	1	6,000,000			1	6,000,000
	ICT Software						
	Software licenses (network and database)	10	4,000,000	10	4,000,000	10	4,000,000
	Software licenses (network hardware, network operating system & RDBMS)	1	10,000,000	1	10,000,000	1	10,000,000
	ICT Subscription						
	Firewall and IPS license subscription	1	5,000,000	1	5,000,000	1	5,000,000
	B. MOOE						
	Communication Expense						
	Internet Subscription	1	6,000,000	1	6,000,000	1	6,000,000
	Consultancy Services	1	5,000,000	1	5,000,000	1	5,000,000
	Training	200	360,000	200	360,000	200	360,000
	SUB-TOTAL		62,370,000		38,820,000		67,570,000
3	Phase 3: Enhancement & Expanding Implementation of iClinicSys						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Desktop computers with UPS	2,000	120,000,000	2,000	120,000,000	1,000	60,000,000
	Network Devices	1,000	30,000,000	1,000	30,000,000	500	15,000,000
	Printers	1,000	25,000,000	1,000	25,000,000	500	12,500,000





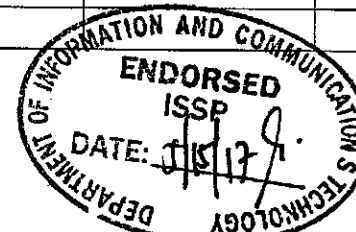
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	Server	6	4,200,000	2	1,400,000	2	1,400,000
	B. MOOE						
	Contract/Consultancy Services	1	450,000	1	450,000	1	450,000
	Training	500	1,000,000	500	1,000,000	500	1,000,000
	SUB-TOTAL		180,650,000		177,850,000		90,350,000
4	Phase 2: Health Data Standards Adoption and Institutionalization						
	A. MOOE						
	Consultancy Services (12 mos.)	1	65,000	1	65,000		
	Supplies & Materials for MoPs	500	1,000,000	800	1,600,000		
	Training	400 (30 days)	480,000	400 (30 days)	480,000		
	SUB-TOTAL		1,545,000		2,145,000		
5	Phase 2: Philippine Health Enterprise Data Warehouse						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Server	1	1,500,000			1	1,500,000
	Storage System	2	10,000,000	2	10,000,000		





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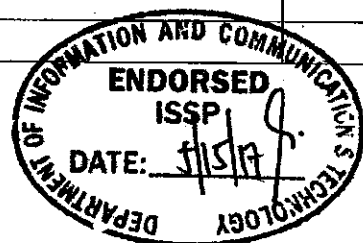
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	ICT Software						
	Database Management Software	2	15,000,000				
	B. MOOE						
	Consultancy Services	1	2,000,000				
	Training	86	154,800	86	154,800	86	154,800
	SUB-TOTAL		28,654,800		10,154,800		1,654,800
6	Interconnecting Health Centers/Rural Health Units (HCs/RHUs), Hospitals and DATRCs						
	A. MOOE						
	Consultancy Services	1	6,700,000	1	6,700,000		
	Internet Subscription	4,000	100,000,000	4,000	100,000,000	4,000	100,000,000
	SUB-TOTAL		106,700,000		106,700,000		100,000,000
7	Drug Abuse Treatment and Rehabilitation Automation Project						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Desktop computers with UPS	160	9,600,000				
	Laptop	70	4,200,000				
	Printer	67	1,675,000				





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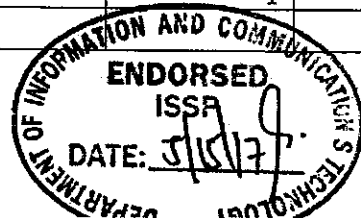
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	Projector	4	140,000				
	Router	1	500,000			1	500,000
	Server	19	4,200,000	6	4,200,000		
	Switches	6	300,000	6	300,000		
	SUB-TOTAL		20,615,000		4,500,000		500,000
8	Phase 2: Unified Disease Registry System						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Laptops/Mobile computing device	50	3,000,000	50	3,000,000	25	1,500,000
	Server	1	700,000				
	SMS gateway	1	1,500,000				
	SUB-TOTAL		5,200,000		3,000,000		1,500,000
9	Phase 3: National Health Atlas & Integration with the Philippine Geoportal						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	GPS	5	175,000	48	1,680,000		





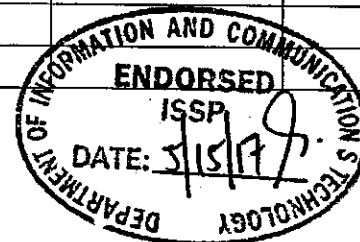
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	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	Touch Screen TV					1	1,000,000
	B. MOOE						
	Consultancy Services	1	10,000,000	1	10,000,000	1	10,000,000
	SUB-TOTAL		10,175,000		11,680,000		11,000,000
10	Phase 3: Telehealth/Telemedicine System						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Server	1	700,000	1	700,000		
	SUB-TOTAL		700,000		700,000		
11	Health Emergency Management Service System Enhancement Project						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	BGAN with initial preload credit	5	6,000,000				
	Server			1	700,000	1	700,000
	Touch Screen TV			2	2,000,000		
	ICT Infrastructure, Machineries and Equipment						
	Communications/Operations Room	1	3,000,000	16	3,200,000	16	3,200,000
	Emergency Power			1	1,500,000		





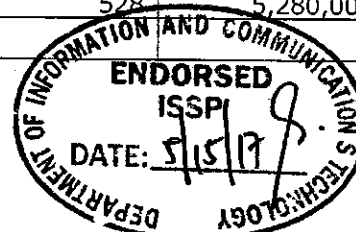
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	B. MOOE						
	Communication Expenses						
	Annual Load Subscription	102	1,020,000	102	1,020,000	102	1,020,000
	SUB-TOTAL		10,020,000		8,420,000		4,920,000
12	Verbal Autopsy (SmartVA) System for Strengthening CRVS						
	A. CAPITAL OUTLAY						
	ICT Equipment						
	Computer Desktop with UPS, Printer & office Productivity Software	1,000	60,000,000	1,000	60,000,000	500	30,000,000
	B. MOOE						
	Consultancy Services	1	4,000,000	1	4,000,000	1	4,000,000
	SUB-TOTAL		64,000,000		64,000,000		34,000,000
	TOTAL FOR CROSS-AGENCY ICT PROJECTS		515,329,800		449,869,800		333,394,800
IV	Continuing Expenses for Existing Systems						
	A. MOOE						
	Professional Services						





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Budget Item/Account	Year 1		Year 2		Year 3	
	Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
ICT Security Services	1	2,000,000	1	2,000,000	1	2,000,000
Subscription Expense						
Colocation/Cloud Service	1	3,000,000	1	3,000,000	1	3,000,000
Communication Expenses						
Internet Subscription	105	125,000,000	105	125,000,000	105	125,000,000
Telephone	3	5,800,000	1	1,800,000	1	1,800,000
General ICT Services						
Biometric Scanners Service Contract	1	500,000	1	500,000	1	500,000
Data Center, Generator Set, PACU and UPS Maintenance	1	6,000,000	1	6,000,000	1	6,000,000
Network Security Maintenance	3	4,500,000	3	4,500,000	3	4,500,000
Video Conference Equipment Maintenance (17 units in regions and 5 units in central office)	1	5,000,000				
ICT Repair and Maintenance	214	1,070,000	234	1,170,000	234	1,170,000
Supplies and Materials Expenses						
DSLR Camera	1	95,000				
External hard drive	64	640,000	4	40,000	64	640,000
Fax machine	50	750,000			20	300,000
IP KVM	3	450,000			3	450,000
Mini-projector	82	2,460,000			82	2,460,000
Mouse	50	10,000			50	10,000
Toner	100	500,000	100	500,000	100	500,000
Other supplies(cables, wire, ports,+)	528	5,280,000	528	5,280,000	528	5,280,000
Training Expense						





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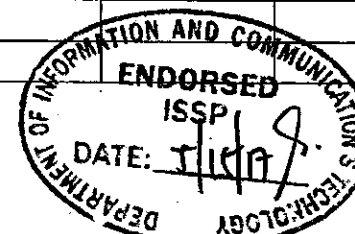
	Budget Item/Account	Year 1		Year 2		Year 3	
		Physical Target	Cost	Physical Target	Cost	Physical Target	Cost
	Comprehensive Database Management Training	5	1,000,000				
	Comprehensive Server Virtualization Training	5	2,500,000				
	COBIT 5 Training	3	600,000				
	TOTAL FOR CONTINUING EXPENSES FOR EXISTING SYSTEMS		167,155,000		149,790,000		153,610,000
	GRAND TOTAL		1,685,422,900		1,309,192,900		1,146,857,500





D. YEAR 1 COST BREAKDOWN

	Detailed Cost Item	Office Productivity	Phase 2: Integrated Executive Information System	Phase 2: Updating of the Philippine Health Enterprise Architecture	Phase 1: DOH Enterprise Resource Management System	Local Health System	Phase 2: Expanded Electronic Drug Price Monitoring System	Phase 2: Implementation of the Integrated Licensing Information System
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Cheque Printer	15,000						
	Desktop Computer with UPS	247,260,000						
	GPS		2,100,000					
	Laptop	120,000,000					1,080,000	
	Large Format Printer	10,000,000						
	Large Screen Monitor (for Blueprint viewing)							2,000,000
	LED TV Billboard	100,000,000						
	Mobile Computing Device/Tablet	31,050,000	1,920,000			54,000,000		3,000,000
	Pocket WIFI with free load		128,000					
	Printer	53,625,000						
	Projector	10,290,000						
	Scanner	10,950,000						
	Server	19,600,000	700,000		700,000	700,000		2,100,000
	Small Format Printer	2,500,000						
	Video Camera HD	3,400,000						
	Video display wall		500,000					





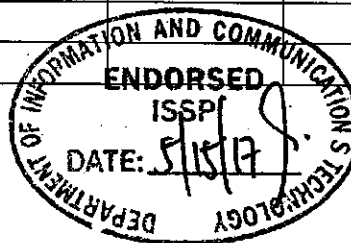
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	Detailed Cost Item	Office Productivity	Phase 2: Integrated Executive Information System	Phase 2: Updating of the Philippine Health Enterprise Architecture	Phase 1: DOH Enterprise Resource Management System	Local Health System	Phase 2: Expanded Electronic Drug Price Monitoring System	Phase 2: Implementation of the Integrated Licensing Information System
	WIFI Router						360,000	
2	ICT Software							
	ICT Software	7,491,000						
	Office Productivity Software	52,687,000						
	Business Analytics Software		15,000,000					
	Database Software		4,000,000					
	Mapping Software		3,000,000					
B	MOOE							
1	Professional Services							
	Consultancy/Contract Services		3,000,000	3,000,000	1,500,000			
2	Training		54,000	199,800	90,000	28,800		169,200
	TOTAL COST YEAR 1	668,868,000	30,402,000	3,199,800	2,290,000	54,728,800	1,440,000	7,269,200



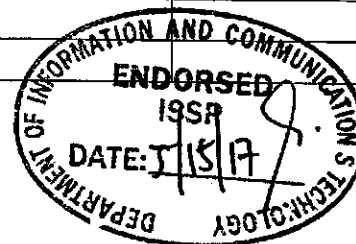


	Detailed Cost Item	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation	Phase 2: Expansion of the Logistics Management System	Phase 1: Sub- national Integration of Health Information Systems	International Health Coordination Information Systems Integration	ICT Infrastructure Development & Maintenance for Central Office	Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals	Migration of DOH Existing Video Conferencing Equipment to Cloud Based Video Conferencing Solution
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Barcode Printer		840,000					
	Barcode Reader		1,280,000					
	Blade Chassis Server					15,000,000		
	CCTV					450,000		
	Centralize Backup Solution					6,000,000		
	Desktop Computer	3,000,000						
	Desktop Computer with UPS		1,080,000					
	Ethernet Gigabit Switch					1,920,000		
	Firewall	1,000,000						
	IP Phone						30,000,000	
	Manage Switch	500,000				850,000	7,400,000	
	Server	1,400,000	700,000		700,000			
	Storage System/Equipment					6,000,000		
	Unified Communication System						450,000	
	Video Conferencing Component/Equipment							1,500,000
	Voice Router					8,500,000	10,000,000	





	Detailed Cost Item	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation	Phase 2: Expansion of the Logistics Management System	Phase 1: Sub- national Integration of Health Information Systems	International Health Coordination Information Systems Integration	ICT Infrastructure Development & Maintenance for Central Office	Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals	Migration of DOH Existing Video Conferencing Equipment to Cloud Based Video Conferencing Solution
2	ICT Software							
	Business Analytics Software			2,880,000				
	MS SQL Server 2016					600,000		
	Network Management	1,000,000						
	Sharepoint with Office 365					300,000		
	Windows Server 2012					350,000		
3	ICT Subscription							
	ICT/Software Subscription					2,000,000		
	Centralize Enterprise Anti-virus					1,400,000		
	DOH Corporate Email System					4,000,000		
4	Infrastructure, Machineries and Equipment							
	Server Room/Storage facility	2,000,000						
B	MOOE							
1	Professional Services							
	Consultancy/Contract Services		4,000,000					
2	Subscription Expense							





DOH Information Systems Strategic Plan, 2018 - 2020

	Detailed Cost Item	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation	Phase 2: Expansion of the Logistics Management System	Phase 1: Sub- national Integration of Health Information Systems	International Health Coordination Information Systems Integration	ICT Infrastructure Development & Maintenance for Central Office	Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals	Migration of DOH Existing Video Conferencing Equipment to Cloud Based Video Conferencing Solution
	Video Conferencing Cloud Based Provider							2,000,000
3	Supplies and Materials							
	Other supplies (cables, wire, ports, etc)						100,000	
4	Training	180,000	118,800		54,000			
	TOTAL COST YEAR 1	9,080,000	8,018,800	2,880,000	754,000	47,370,000	47,950,000	3,500,000





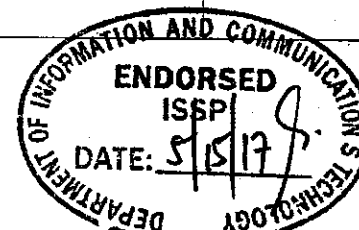
DOH Information Systems Strategic Plan, 2018 - 2020

	Detailed Cost Item	Cloud Based Centralized Wireless LAN Infrastructure	Consolidation of DOH Security Infrastructure for DOH Public Servers	Consolidation of IDTOMIS Security Infrastructure	DOH Disaster Recovery Site Upgrade	Cloud Based Centralize WIFI Infrastructure for ROs	Hyper Converged Virtualization Infrastructure for ROs	Enterprise Antivirus for ROs
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Advance Security Firewall		5,000,000	3,000,000				
	Consolidated Network Security Appliance		8,000,000					
	Hyper-Converged Virtualization Infrastructure				3,500,000			
	Intrusion Prevention System		3,000,000	3,000,000				
	Power over Ethernet Switch	720,000				72,000		
	Web Application Firewall		4,000,000	4,000,000				
	Wireless Access Point	1,700,000				1,520,000		
2	ICT Subscription							
	Centralize Enterprise Anti-virus							1,560,000
B	MOOE							
1	Subscription Expense							
	Cloud Based WIFI Subscription	3,500,000				5,845,500		
	Cloud Computing Service/Data Center Service				20,000,000			
	TOTAL COST YEAR 1	5,920,000	20,000,000	10,000,000	23,500,000	7,437,500	0	1,560,000





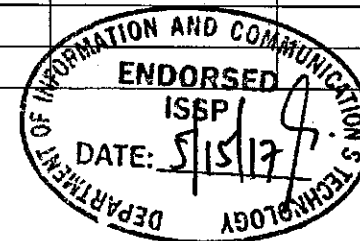
	Detailed Cost Item	Next Generation Firewall for DOH Hospitals & DATRCs	Hyper Converged Virtualization Infrastructure for DOH Hospitals & DATRCs	Structured LAN Cabling & Increasing Storage and Computing Capacity for DOH Hospitals & DATRCs	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	Phase 3: Document Management System	Phase 2: Philippine Health Information Exchange	Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Barcode Reader					640,000		
	Desktop Computer					3,240,000		
	Desktop Computer with UPS							15,060,000
	High Security, fireproof cabinet for permanent documents/Compactor					700,000		
	High Speed Scanner					1,640,000		
	Laptop					600,000		
	Laptop (Macbook)					850,000		
	Next Generation Firewall	6,400,000						
	Printer							4,050,000
	Printer/Scanner							600,000
	Server				700,000	9,500,000	4,200,000	6,300,000
	Server/Storage Data Center Requirements							6,000,000
	SMS gateway				3,000,000			
	Storage System/Equipment			2,500,000				





DOH Information Systems Strategic Plan, 2018 - 2020

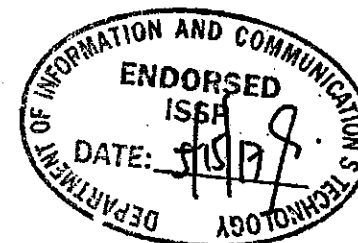
	Detailed Cost Item	Next Generation Firewall for DOH Hospitals & DATRCs	Hyper Converged Virtualization Infrastructure for DOH Hospitals & DATRCs	Structured LAN Cabling & Increasing Storage and Computing Capacity for DOH Hospitals & DATRCs	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	Phase 3: Document Management System	Phase 2: Philippine Health Information Exchange	Phase 4: Enhancement and Expanding Implementation of IHOMIS/IHIS
2	ICT Software							
	Software licenses (network and database)							4,000,000
	Software licenses (network hardware, network operating system & RDBMS)							10,000,000
3	ICT Subscription							
	Document Management and Archiving Software Subscription					12,000,000		
	Firewall and IPS license subscription							5,000,000
4	Infrastructure, Machineries and Equipment							
	Structured Local Area Network (LAN) Cabling			5,000,000				
B	MOOE							
1	Professional Services							
	Consultancy/Contract Services						8,000,000	5,000,000
2	Subscription Expense							





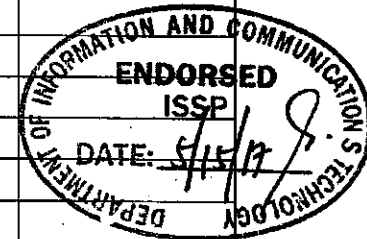
DOH Information Systems Strategic Plan, 2018 - 2020

	Detailed Cost Item	Next Generation Firewall for DOH Hospitals & DATRCs	Hyper Converged Virtualization Infrastructure for DOH Hospitals & DATRCs	Structured LAN Cabling & Increasing Storage and Computing Capacity for DOH Hospitals & DATRCs	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	Phase 3: Document Management System	Phase 2: Philippine Health Information Exchange	Phase 4: Enhancement and Expansion of Implementation of iHOMIS/IHIS
	Subscription Services (Standards)						3,000,000	
3	Communication							
	Internet Subscription							6,000,000
4	Supplies and Materials						500,000	
5	Training						9,000,000	- 360,000
	TOTAL COST YEAR 1	6,400,000	0	7,500,000	3,700,000	29,170,000	24,700,000	62,370,000





	Detailed Cost Item	Phase 3: Enhancement & Expanding Implementation of iClinicSys	Phase 2: Health Data Standards Adoption and Institutionalization	Phase 2: Strengthening of the Health Enterprise Data Warehouse	Interconnecting Health Centers/Rural Health Units (HCs/RHUs), Hospitals and DATRCs	Drug Abuse Treatment and Rehabilitation Automation Project	Phase 2: Unified Disease Registries Disease System
A	CAPITAL OUTLAY						
1	ICT Equipment						
	Desktop Computer with UPS	120,000,000				9,600,000	
	Laptop					4,200,000	
	Laptop/Mobile computing Device						3,000,000
	Network Device	30,000,000					
	Network Switch					300,000	
	Printer	25,000,000				1,675,000	
	Projector					140,000	
	Router					500,000	
	Server	4,200,000		1,500,000		4,200,000	700,000
	SMS gateway						1,500,000
	Storage System/Equipment			10,000,000			
2	ICT Software						
	Database Management Software			15,000,000			
B	MOOE						
1	Professional Services						
	Consultancy/Contract Services	450,000	65,000	2,000,000	6,700,000		





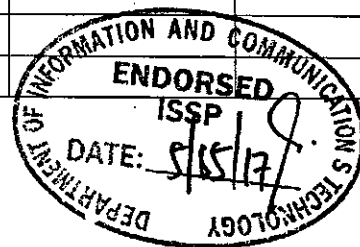
DOH Information Systems Strategic Plan, 2018 - 2020

	Detailed Cost Item	Phase 3: Enhancement & Expanding Implementation of iClinicSys	Phase 2: Health Data Standards Adoption and Institutionalization	Phase 2: Strengthening of the Health Enterprise Data Warehouse	Interconnecting Health Centers/Rural Health Units (HCs/RHUs), Hospitals and DATRCs	Drug Abuse Treatment and Rehabilitation Automation Project	Phase 2: Unified Disease Registries Disease System
2	Communication						
	Internet Subscription				100,000,000		
3	Supplies and Materials		1,000,000				
4	Training	1,000,000	480,000	154,800			
	TOTAL COST YEAR 1	180,650,000	1,545,000	28,654,800	106,700,000	20,615,000	5,200,000





	Detailed Cost Item	Phase 3: National Health Atlas & Integration with the Philippine Geoportal	Phase 3: Telehealth/ Telemedicine System	Health Emergency Management Service System Enhancement Project	Verbal Autopsy System for Enhancing CRVS	Continuing Expenses for Existing Systems
A	CAPITAL OUTLAY					
1	ICT Equipment					
	BGAN with initial preload credit			6,000,000		
	Computer Desktop with UPS, Printer & office Productivity Software				60,000,000	
	GPS	175,000				
	Server		700,000			
2	Infrastructure, Machineries and Equipment					
	Communications/Operations Room			3,000,000		
B	MOOE					
1	Professional Services					
	Consultancy/Contract Services	10,000,000			4,000,000	
	ICT Security Services					2,000,000
2	Subscription Expense					
	Colocation/Cloud Service					3,000,000
3	Communication					
	Telephone					5,800,000
	Internet Subscription					125,000,000





	Detailed Cost Item	Phase 3: National Health Atlas & Integration with the Philippine Geoportal	Phase 3: Telehealth/ Telemedicine System	Health Emergency Management Service System Enhancement Project	Verbal Autopsy System for Enhancing CRVS	Continuing Expenses for Existing Systems
	Annual Load Subscription			1,020,000		
4	General ICT Services					
	Biometric Scanners Service Contract					500,000
	Data Center, Generator Set, PACU and UPS Maintenance					6,000,000
	Network Security Maintenance					4,500,000
	Video Conference Equipment Maintenance (17 units in regions and 5 units in central office)					5,000,000
5	Repair and Maintenance					
	ICT Office Equipment					1,070,000
6	Supplies and Materials					
	DSLR Camera					95,000
	External hard drive					640,000
	Fax machine					750,000
	IP KVM					450,000
	Mini-projector					2,460,000
	Mouse					10,000
	Toner					500,000





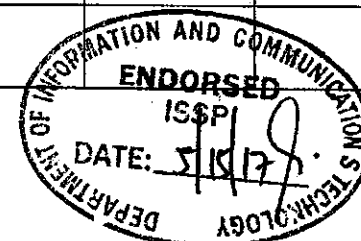
	Detailed Cost Item	Phase 3: National Health Atlas & Integration with the Philippine Geoportal	Phase 3: Telehealth/ Telemedicine System	Health Emergency Management Service System Enhancement Project	Verbal Autopsy System for Enhancing CRVS	Continuing Expenses for Existing Systems
	Other supplies (cables, wire, ports, etc)					5,280,000
7	Training					
	Comprehensive Database Management Training					1,000,000
	Comprehensive Server Virtualization Training					2,500,000
	COBIT 5 Training					600,000
	TOTAL COST YEAR 1	10,175,000	700,000	10,020,000	64,000,000	167,155,000





E. YEAR 2 COST BREAKDOWN

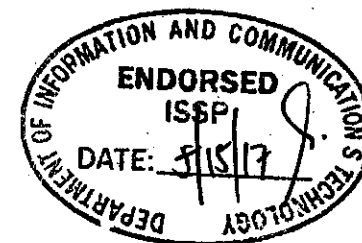
	Detailed Cost Item	Office Productivity	Phase 2: Integrated Executive Information System	Phase 2: Updating of the Philippine Health Enterprise Architecture	Phase 1: DOH Enterprise Resource Management System	Local Health System	Phase 2: Expanded Electronic Drug Price Monitoring System	Phase 2: Implementation of the Integrated Licensing Information System
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Desktop Computer with UPS	184,980,000						
	Laptop	93,660,000						
	Mobile Computing Device/Tablet	24,550,000						7,320,000
	Printer	32,800,000						
	Projector	7,350,000						
	Scanner	8,310,000						
	Server	27,500,000					700,000	
2	ICT Software							
	ICT Software	4,895,000						
	Office Productivity Software	52,375,000						
B	MOOE							
1	Professional Services							
	Consultancy/Contract Services		3,000,000					2,000,000





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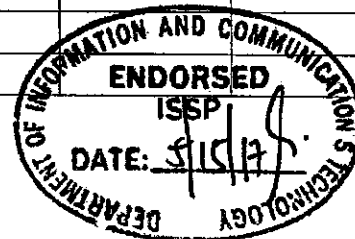
	Detailed Cost Item	Office Productivity	Phase 2: Integrated Executive Information System	Phase 2: Updating of the Philippine Health Enterprise Architecture	Phase 1: DOH Enterprise Resource Management System	Local Health System	Phase 2: Expanded Electronic Drug Price Monitoring System	Phase 2: Implementation of the Integrated Licensing Information System
2	Training			147,600	90,000	28,800		169,200
	TOTAL COST YEAR 2	436,420,000	3,000,000	147,600	90,000	28,800	700,000	9,489,200





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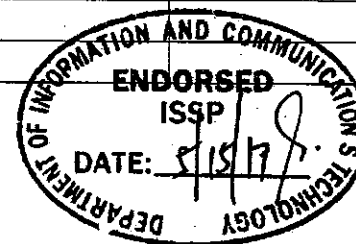
	Detailed Cost Item	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation	Phase 2: Expansion of the Integrated Logistics Management System	Phase 1: Sub- national Integration of Health Information Systems	International Health Coordination Information Systems Integration	ICT Infrastructure Development & Maintenance for Central Office	Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals	Migration of DOH Existing Video Conferencing Equipment to Cloud Based Video Conferencing Solution
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Access Switch					1,800,000		
	Automatic Transfer Switch					2,000,000		
	Blade Server					11,000,000		
	Distribution Switch					1,000,000		
	Electrical Wiring Installation					1,000,000		
	Environmental Monitoring System					1,000,000		
	Fire Alarm System					1,500,000		
	Fire Suppression					1,500,000		
	Firewall					3,000,000		
	Laptop	1,740,000						
	Power over Ethernet Switch					1,200,000		
	Raised Floor System					500,000		
	Security Access					1,000,000		
	Server					1,200,000		
	Storage System/Equipment					600,000		
	Unified Communication System						5,000,000	
	UPS (100KVA)					8,000,000		





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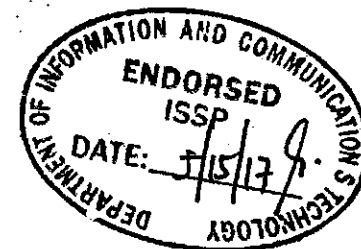
	Detailed Cost Item	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation	Phase 2: Expansion of the Integrated Logistics Management System	Phase 1: Sub- national Integration of Health Information Systems	International Health Coordination Information Systems Integration	ICT Infrastructure Development & Maintenance for Central Office	Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals	Migration of DOH Existing Video Conferencing Equipment to Cloud Based Video Conferencing Solution
	Voice Router					5,000,000	500,000	
	Water Leak Detection System					1,000,000		
2	ICT Software							
	Database Software Subscription (MS SQL Server Enterprise Edition)					1,500,000		
	Sharepoint with Office 365					300,000		
	Virtualization License					11,000,000		
	Windows Server 2012					140,000		
3	ICT Subscription							
	ICT/Software Subscription					3,000,000		
	Centralize Enterprise Anti-virus					1,400,000		
	DOH Corporate Email System					4,000,000		
B	MOOE							
1	Subscription Expense							
	Video Conferencing Cloud Based Provider							2,000,000





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	Detailed Cost Item	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation	Phase 2: Expansion of the Integrated Logistics Management System	Phase 1: Sub- national Integration of Health Information Systems	International Health Coordination Information Systems Integration	ICT Infrastructure Development & Maintenance for Central Office	Maintenance and Expansion of IPPBX System and Fax Over IP Implementation in Central Office, Regional Offices and Hospitals	Migration of DOH Existing Video Conferencing Equipment to Cloud Based Video Conferencing Solution
2	Training	180,000						
	TOTAL COST YEAR 2	1,920,000	0	0	0	63,640,000	5,500,000	2,000,000





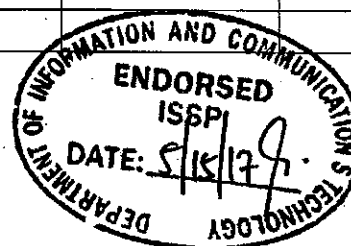
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	Detailed Cost Item	Cloud Based Centralized Wireless LAN Infrastructure	Consolidation of DOH Security Infrastructure for DOH Public Servers	Consolidation of IDTOMIS Security Infrastructure	DOH Disaster Recovery Site Upgrade	Cloud Based Centralize WIFI Infrastructure for ROs	Hyper Converged Virtualization Infrastructure for ROs	Enterprise Antivirus for ROs
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Hyper-Converged Virtualization Infrastructure (HCVI) Appliances and Hypervisor Software and Licenses						28,000,000	
	Power over Ethernet Switch					72,000		
	Wireless Access Point	100,000				1,520,000		
2	ICT Subscription							
	Centralize Enterprise Anti-virus							1,560,000
B	MOOE							
1	Subscription Expense							
	Cloud Based WIFI Subscription	3,500,000				5,845,500		
	Cloud Computing Service/Data Center Service				20,000,000			
	TOTAL COST YEAR 2	3,600,000	0	0	20,000,000	7,437,500	28,000,000	1,560,000



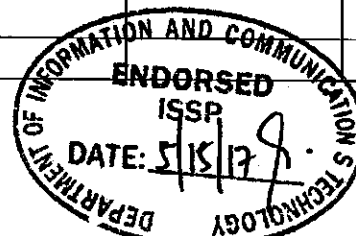


	Detailed Cost Item	Next Generation Firewall for DOH Hospitals & DATRCs	Hyper Converged Virtualization Infrastructure for DOH Hospitals & DATRCs	Structured LAN Cabling & Increasing Storage and Computing Capacity for DOH Hospitals & DATRCs	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	Phase 3: Document Management System	Phase 2: Philippine Health Information Exchange	Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Desktop Computer					12,960,000		
	Desktop Computer with UPS							7,200,000
	High Speed Scanner					1,440,000		
	Hyper-Converged Virtualization Infrastructure (HCVI) Appliances and Hypervisor Software and Licenses		31,500,000					
	Mobile Computing Device/Tablet				6,000,000			
	Next Generation Firewall	5,600,000						
	Printer							1,260,000
	Server					36,000,000	1,400,000	
	Storage System/Equipment			7,500,000				
2	ICT Software							
	Software licenses (network and database)							4,000,000





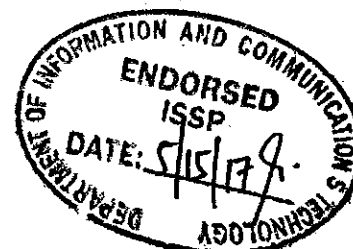
	Detailed Cost Item	Next Generation Firewall for DOH Hospitals & DATRCs	Hyper Converged Virtualization Infrastructure for DOH Hospitals & DATRCs	Structured LAN Cabling & Increasing Storage and Computing Capacity for DOH Hospitals & DATRCs	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	Phase 3: Document Management System	Phase 2: Philippine Health Information Exchange	Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS
	Software licenses (network hardware, network operating system & RDBMS)							10,000,000
3	ICT Subscription							
	Document Management and Archiving Software Subscription					10,000,000		
	Firewall and IPS license subscription							5,000,000
4	Infrastructure, Machineries and Equipment							
	Structured Local Area Network (LAN) Cabling			15,000,000				
B	MOOE							
1	Professional Services							
	Consultancy/Contract Services						8,000,000	5,000,000
2	Subscription Expense							
	Subscription Services (Standards)						3,000,000	





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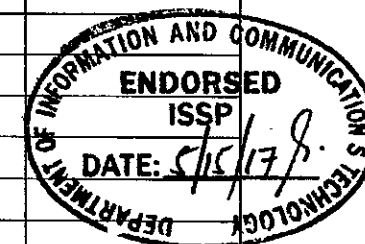
	Detailed Cost Item	Next Generation Firewall for DOH Hospitals & DATRCs	Hyper Converged Virtualization Infrastructure for DOH Hospitals & DATRCs	Structured LAN Cabling & Increasing Storage and Computing Capacity for DOH Hospitals & DATRCs	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	Phase 3: Document Management System	Phase 2: Philippine Health Information Exchange	Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS
3	Communication							
	Internet Subscription							6,000,000
4	Supplies and Materials						500,000	
5	Training						9,000,000	360,000
	TOTAL COST YEAR 2	5,600,000	31,500,000	22,500,000	6,000,000	60,400,000	21,900,000	38,820,000





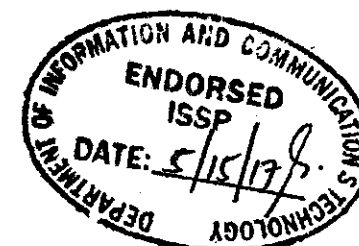
DOH Information Systems Strategic Plan, 2018 - 2020

	Detailed Cost Item	Phase 3: Enhancement & Expanding Implementation of iClinicSys	Phase 2: Health Data Standards Adoption and Institutionalization	Phase 2: Philippine Health Enterprise Data Warehouse	Interconnecting Health Centers/Rural Health Units (HCs/RHUs), Hospitals and DATRCs	Drug Abuse Treatment and Rehabilitation Automation Project	Phase 2: Unified Disease Registry System
A	CAPITAL OUTLAY						
1	ICT Equipment						
	Desktop Computer with UPS	120,000,000					
	Laptop/Mobile computing Device						3,000,000
	Network Device	30,000,000					
	Network Switch					300,000	
	Printer	25,000,000					
	Server	1,400,000				4,200,000	
	Storage System/Equipment			10,000,000			
B	MOOE						
1	Professional Services						
	Consultancy/Contract Services	450,000	65,000		6,700,000		
2	Communication						
	Internet Subscription				100,000,000		
3	Supplies and Materials		1,600,000				
4	Training	1,000,000	480,000	154,800			
	TOTAL COST YEAR 2	177,850,000	2,145,000	10,154,800	106,700,000	4,500,000	3,000,000





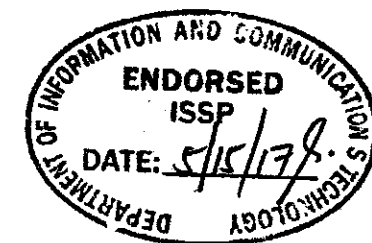
	Detailed Cost Item	Phase 3: National Health Atlas & Integration with the Philippine Geoportal	Phase 3: Telehealth/ Telemedicine System	Health Emergency Management Service System Enhancement Project	Verbal Autopsy System (SmartVA) for Enhancing CRVS	Continuing Expenses for Existing Systems
A	CAPITAL OUTLAY					
1	ICT Equipment					
	Computer Desktop with UPS,Printer & office Productivity Software				60,000,000	
	GPS	1,680,000				
	Server		700,000	700,000		
	Touch Screen TV			2,000,000		
2	Infrastructure, Machineries and Equipment					
	Communications/Operations Room			3,200,000		
	Emergency Power			1,500,000		
B	MOOE					
1	Professional Services					
	Consultancy/Contract Services	10,000,000			4,000,000	
	ICT Security Services					2,000,000
2	Subscription Expense					
	Colocation/Cloud Service					3,000,000
3	Communication					





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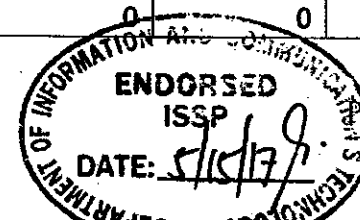
	Detailed Cost Item	Phase 3: National Health Atlas & Integration with the Philippine Geoportal	Phase 3: Telehealth/ Telemedicine System	Health Emergency Management Service System Enhancement Project	Verbal Autopsy System (SmartVA) for Enhancing CRVS	Continuing Expenses for Existing Systems
	Annual Load Subscription			1,020,000		
	Internet Subscription					125,000,000
	Telephone					1,800,000
4	General ICT Services					
	Biometric Scanners Service Contract					500,000
	Data Center, Generator Set, PACU and UPS Maintenance					6,000,000
	Network Security Maintenance					4,500,000
5	Repair and Maintenance					
	ICT Office Equipment					1,170,000
6	Supplies and Materials					
	External hard drive					40,000
	Toner					500,000
	Other supplies (cables, wire, ports, etc)					5,280,000
	TOTAL COST YEAR 2	11,680,000	700,000	8,420,000	64,000,000	149,790,000





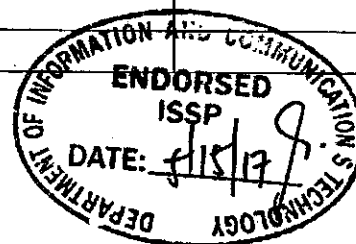
F. YEAR 3 COST BREAKDOWN

	Detailed Cost Item	Office Productivity	Phase 2: Integrated Executive Information System	Phase 2: Updating of the Philippine Health Enterprise Architecture	Phase 1: DOH Enterprise Resource Management System	Local Health Systems	Phase 2: Expanded Electronic Drug Price Monitoring System	Phase 2: Implementation of the Integrated Licensing Information System
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Desktop Computer with UPS	222,420,000						
	Laptop	82,740,000						
	Mobile Computing Device/Tablet	19,900,000						
	Printer	42,525,000						
	Projector	9,450,000						
	Scanner	8,760,000						
	Server	22,000,000						2,100,000
2	ICT Software							
	ICT Software	3,685,000						
	Office Productivity Software	36,848,000						
	Business Analytics		15,000,000					
	Mapping		5,000,000					
B	MOOE							
1	Professional Services							
	Consultancy/Contract Services		3,000,000					
2	Training				90,000			169,200
	TOTAL COST YEAR 3	448,328,000	23,000,000	0	90,000	0	0	2,269,200





	Detailed Cost Item	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation	Phase 2: Expansion of the Logistics Management System	Phase 1: Sub-national Integration of Health Information Systems	International Health Coordination Information Systems Integration	ICT Infrastructure Development & Maintenance for Central Office	Maintenance and Expansion of IPPBX System and Fax Over IP Implementat ion in CO,ROs and Hospitals	Migration of DOH Existing Video Conferencing Equipment to Cloud Based Video Conferencing Solution
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Blade Chassis Server					15,000,000		
	Cooling System					5,000,000		
	Ethernet Gigabit Switch					1,920,000		
	Generator Set					2,000,000		
	Lightning Arrester					2,000,000		
	Storage System/Equipment					6,000,000		
	Temperature and Humidifier Monitoring System					2,000,000		
	Video Conferencing Component/Equipment							1,500,000
2	ICT Software							
	Windows Server 2012					140,000		
3	ICT Subscription							
	ICT/Software Subscription					2,500,000		





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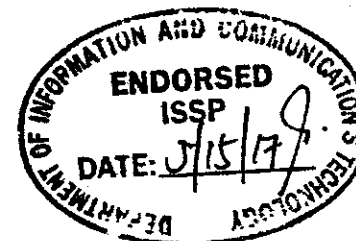
	Detailed Cost Item	Phase 2 & 3: Expansion of the Quarantine Services and International Health Regulation Automation	Phase 2: Expansion of the Logistics Management System	Phase 1: Sub-national Integration of Health Information Systems	International Health Coordination Information Systems Integration	ICT Infrastructure Development & Maintenance for Central Office	Maintenance and Expansion of IPPBX System and Fax Over IP Implementat ion in CO,ROs and Hospitals	Migration of DOH Existing Video Conferencing Equipment to Cloud Based Video Conferencing Solution
	Centralize Enterprise Anti-virus					1,400,000		
	DOH Corporate Email System					4,000,000		
B	MOOE							
1	Subscription Expense							
	Video Conferencing Cloud Based Provider							2,000,000
2	Training	180,000						
	TOTAL COST YEAR 3	180,000	0	0	0	41,960,000	0	3,500,000





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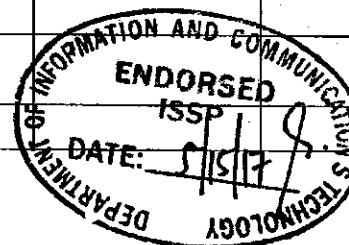
	Detailed Cost Item	Cloud Based Centralized Wireless LAN Infrastructure	Consolidation of DOH Security Infrastructure for DOH Public Servers	Consolidation of IDTOMIS Security Infrastructure	DOH Disaster Recovery Site Upgrade	Cloud Based Centralize WIFI Infrastructure for ROs	Hyper Converged Virtualization Infrastructure for ROs	Enterprise Antivirus for ROs
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Advance Security Firewall		5,000,000	3,000,000				
	Hyper-Converged Virtualization Infrastructure				3,500,000			
	Hyper-Converged Virtualization Infrastructure (HCVI) Appliances and Hypervisor Software and Licenses						28,000,000	
	Intrusion Prevention System		3,000,000	3,000,000				
	Web Application Firewall		4,000,000	4,000,000				
	Wireless Access Point	100,000						
B	MOOE							
1	Subscription Expense							
	Cloud Based WIFI Subscription	3,500,000				5,845,500		
	Cloud Computing Service/Data Center Service				20,000,000			
	TOTAL COST YEAR 3	3,600,000	12,000,000	10,000,000	23,500,000	5,845,500	28,000,000	0





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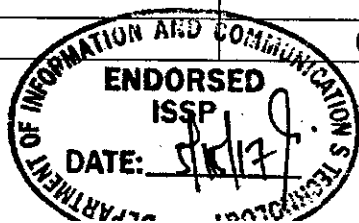
	Detailed Cost Item	Next Generation Firewall for DOH Hospitals & DATRCs	Hyper Converged Virtualization Infrastructure for DOH Hospitals & DATRCs	Structured LAN Cabling & Increasing Storage and Computing Capacity for DOH Hospitals & DATRCs	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	Phase 3: Document Management System	Phase 2: Philippine Health Information Exchange	Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS
A	CAPITAL OUTLAY							
1	ICT Equipment							
	Blade Chassis Server							15,000,000
	Desktop Computer with UPS							12,120,000
	Hyper-Converged Virtualization Infrastructure (HCVI) Appliances and Hypervisor Software and Licenses		36,000,000					
	Mobile Computing Device/Tablet				8,880,000			
	Printer							3,390,000
	Server				700,000		1,400,000	700,000
	Server/Storage Data Center Requirements							6,000,000
	Storage System/Equipment			4,000,000				
2	ICT Software							
	Software licenses (network and database)							4,000,000
	Software licenses (network hardware, network operating system & RDBMS)							10,000,000





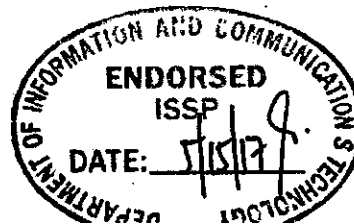
DOH Information Systems Strategic Plan, 2018 - 2020

	Detailed Cost Item	Next Generation Firewall for DOH Hospitals & DATRCs	Hyper Converged Virtualization Infrastructure for DOH Hospitals & DATRCs	Structured LAN Cabling & Increasing Storage and Computing Capacity for DOH Hospitals & DATRCs	Phase IV: Communication Systems Upgrading and/or establishment for disease surveillance, health emergencies and on-line reporting	Phase 3: Document Management System	Phase 2: Philippine Health Information Exchange	Phase 4: Enhancement and Expanding Implementation of iHOMIS/IHIS
3	ICT Subscription							
	Firewall and IPS license subscription							5,000,000
4	Infrastructure, Machineries and Equipment							
	Structured Local Area Network (LAN) Cabling			8,000,000				
B	MOOE							
1	Professional Services							
	Consultancy/Contract Services						8,000,000	5,000,000
2	Subscription Expense							
	Subscription Services (Standards)						3,000,000	
3	Communication							
	Internet Subscription							6,000,000
4	Supplies and Materials						500,000	
5	Training						9,000,000	360,000
	TOTAL COST YEAR 3	0	36,000,000	12,000,000	9,580,000	0	21,900,000	67,570,000





	Detailed Cost Item	Phase 3: Enhancement & Expanding Implementation of iClinicSys	Phase 2: Health Data Standards Adoption and Institutionalization	Phase 2: Philippine Health Enterprise Data Warehouse	Interconnecting Health Centers/Rural Health Units (HCs/RHUs), Hospitals and DATRCs	Drug Abuse Treatment and Rehabilitation Automation Project	Phase 2: Unified Disease Registry System
A	CAPITAL OUTLAY						
1	ICT Equipment						
	Desktop Computer with UPS	60,000,000					
	Laptop/Mobile computing Device						1,500,000
	Network Device	15,000,000					
	Printer	12,500,000					
	Router					500,000	
	Server	1,400,000		1,500,000			
B	MOOE						
1	Professional Services						
	Consultancy/Contract Services	450,000					
2	Communication						
	Internet Subscription				100,000,000		
3	Training	1,000,000		154,800			
	TOTAL COST YEAR 3	90,350,000	0	1,654,800	100,000,000	500,000	1,500,000



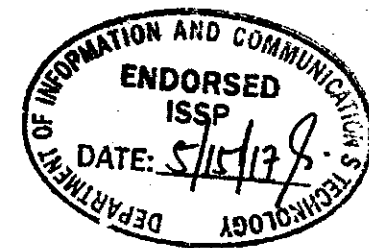


	Detailed Cost Item	Phase 3: National Health Atlas & Integration with the Philippine Geoportal	Phase 3: Telehealth/ Telemedicine System	Health Emergency Management Service System Enhancement Project	Verbal Autopsy System (SmartVA) for Enhancing CRVS	Continuing Expenses for Existing Systems
A	CAPITAL OUTLAY					
1	ICT Equipment					
	Computer Desktop with UPS, Printer & office Productivity Software				30,000,000	
	Server			700,000		
	Touch Screen TV	1,000,000				
2	Infrastructure, Machineries and Equipment					
	Communications/Operations Room			3,200,000		
B	MOOE					
1	Professional Services					
	Consultancy/Contract Services	10,000,000			4,000,000	
	ICT Security Services					2,000,000
2	Subscription Expense					
	Colocation/Cloud Service					3,000,000
3	Communication					
	Annual Load Subscription			1,020,000		
	Internet Subscription					125,000,000
	Telephone					1,800,000





	Detailed Cost Item	Phase 3: National Health Atlas & Integration with the Philippine Geoportal	Phase 3: Telehealth/ Telemedicine System	Health Emergency Management Service System Enhancement Project	Verbal Autopsy System (SmartVA) for Enhancing CRVS	Continuing Expenses for Existing Systems
4	General ICT Services					
	Biometric Scanners Service Contract					500,000
	Data Center, Generator Set, PACU and UPS Maintenance					6,000,000
	Network Security Maintenance					4,500,000
5	Repair and Maintenance					
	ICT Office Equipment					1,170,000
6	Supplies and Materials					
	External hard drive					640,000
	Fax machine					300,000
	IP KVM					450,000
	Mini-projector					2,460,000
	Mouse					10,000
	Toner					500,000
	Other supplies (cables, wire, ports, etc)					5,280,000
7	Training					
	TOTAL COST YEAR 3	11,000,000	0	4,920,000	34,000,000	153,610,000





ANNEX A-5: EXISTING INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) INFRASTRUCTURE INVENTORY

AGENCY NAME: DEPARTMENT OF HEALTH

Respondent (IS Planner/CIO/MIS Head): CRISPINITA A. VALDEZ

Position / Désignation: Director IV

Division/Section/Unit: Knowledge Management and Information Technology Service

Telephone/Fax Number: 781-7673

Respondent's Email Address: cavaldez@doh.gov.ph; cavaldez2005@yahoo.com

Objectives:

- To identify the hardware, software, network and other ICT resources being used to manage information by National Government Agencies (NGAs), Government-owned and Controlled Corporations (GOCCs), State Colleges and Universities (SUCs), and Constitutional and Financial Autonomous Group (CFAG);
- To update existing benchmark and standards; and
- To provide inputs to the MITHI Steering Committee in determining the ICT budget requirements of the agency.

1. HARDWARE / OTHER ICT EQUIPMENT

Fill-out Instruction:

- Please count all existing computing devices and peripherals owned or leased by your office that are functioning including those acquired through projects. In case of multi-year contract for leased units, then just write the number of units under the appropriate year when the leased units were acquired. Do not include in succeeding years unless another batch was leased. **Reference year is last year.** Kindly replace "last year" and preceding years by the actual year number. For example, if last year is 2013, then write 2013 under the 1st column. For last 2 years, write 2012 and for last 3 years, write 2011.

1.1 Number of Computing Devices and Peripherals by Type and by Year Acquired

TYPES	TOTAL NUMBER OF FUNCTIONING UNITS BY YEAR ACQUIRED						
	2016		2015		2014		More than 3 years
	Owned	Leased	Owned	Leased	Owned	Leased	
Mainframe							
Servers	25		17		6		66
Desktop PC	3,702		3,075		1,024		3,159
Laptop / Notebook / Netbook PC	1,337		931		511		1,439
Mobile Phone ² (incl. smartphones)							
Tablet PC	432		340		281		338
Multi-function printer (print, copy, etc.)	1,677		1,300		551		1,605
Printer only							
LCD Projector	273		203		60		234
Digital Camera (Include DSLR, if any)					2		
Wide-format Printer or Plotter							2
Small Scanner (ex. flatbed scanner)	273		214		62		294
Smart Card Reader							

¹ In case all three positions are occupied by different persons, then the IS Planner should have priority in answering this survey.

² Count only the mobile phones owned or leased by your agency.



TYPES	TOTAL NUMBER OF FUNCTIONING UNITS BY YEAR ACQUIRED						
	2016		2015		2014		More than 3 years
	Owned	Leased	Owned	Leased	Owned	Leased	
Wide-format Scanner							
External Hard Drive	10		59		39		33
Generator Set							1
Others, please specify (continue on a separate sheet if necessary)							

1.2 Number of Computing Devices and Peripherals by Usage

TYPES	Operations			General Administration and Support Services Support to Operations ³	Projects (Not agency-funded)
	Employees	Training	Frontline Services ⁴		
Servers					
Desktop PC	10,390	200	70	300	
Laptop / Notebook / Netbook PC	4,000			218	
Multi-function printer (print, copy, etc.)	5,023	10		120	
Printer only					

1.3 Number of Servers by Capacity and by Location

TOTAL CAPACITY OF HDD	LOCATION	
	IN-HOUSE	CO-LOCATED
Above 4 TB	8	
2 TB to 4 TB	40	
Below 2TB	66	

2. SOFTWARE, APPLICATION SYSTEMS, INFORMATION SYSTEMS AND DATABASES

2.1 Operating Systems

2.1.1 OS for Stand-alone PCs (desktops and laptops)

OPERATING SYSTEM	Lifetime License? ⁵	If not, write below the year of expiration
Older than Windows XP	<input type="checkbox"/>	
Windows XP	<input checked="" type="checkbox"/>	
Windows Vista	<input checked="" type="checkbox"/>	
Windows 7	<input checked="" type="checkbox"/>	
Windows 8 and up	<input checked="" type="checkbox"/>	
Linux	<input type="checkbox"/>	
Mac OS	<input checked="" type="checkbox"/>	

³Those used in planning, coordination, internal training, monitoring and evaluation⁴Those used by external clients⁵Mark if yes. Examples are OEM license (software is already installed in the hardware) and Enterprise (Perpetual) license, which does not require renewal and is for life long. (source: <http://www.manageengine.com/products/service-desk/help/adminguide/configurations/software/software-license-type.html>)



Mac OS X	<input type="checkbox"/>	
Others, please specify (continue on a separate sheet if necessary)	<input type="checkbox"/>	

2.1.2 OS for Workstations (desktops and laptops)

OPERATING SYSTEM	Lifetime License?	If not, write below the year of expiration
Older than Windows XP	<input type="checkbox"/>	
Windows NT	<input type="checkbox"/>	
Windows XP	<input type="checkbox"/>	
Windows Vista	<input type="checkbox"/>	
Windows 7	<input checked="" type="checkbox"/>	
Windows 8 and up	<input checked="" type="checkbox"/>	
Solaris	<input type="checkbox"/>	
Linux	<input type="checkbox"/>	
Mac OS	<input type="checkbox"/>	
Others, please specify (continue on a separate sheet if necessary)		

2.1.3 OS for Servers

OPERATING SYSTEM	Lifetime License?	If not, write below the year of expiration
Windows NT	<input type="checkbox"/>	
Windows 2000	<input type="checkbox"/>	
Windows Server 2003	<input checked="" type="checkbox"/>	
Windows Server 2008	<input checked="" type="checkbox"/>	
Windows Server 2012	<input checked="" type="checkbox"/>	
Solaris	<input type="checkbox"/>	
OpenSolaris	<input type="checkbox"/>	
OS/2	<input type="checkbox"/>	
Linux	<input checked="" type="checkbox"/>	
Mac OS X Server	<input type="checkbox"/>	
Others, please specify (continue on a separate sheet if necessary)		

2.2 Office Automation Software

SOFTWARE / APPLICATION PACKAGE	Lifetime License?	If not, write below the year of expiration
Older than MS Office 2003	<input type="checkbox"/>	
MS Office 2003	<input type="checkbox"/>	
MS Office XP	<input type="checkbox"/>	
MS Office 2007	<input checked="" type="checkbox"/>	
MS Office 2010	<input checked="" type="checkbox"/>	
MS Visio	<input checked="" type="checkbox"/>	
MS Project	<input checked="" type="checkbox"/>	
Open Project	<input type="checkbox"/>	
Open Office	<input type="checkbox"/>	



Others, please specify (continue on a separate sheet if necessary)

2.3 Operational⁶ Oversight / Administrative Systems (please refer to the examples⁷ below).

NAME OF SYSTEM (Please list down the name/s of your strategic system/s)	Own Intellectual Property, Y or N? ⁸	DEVELOPMENT PLATFORM (ex. LAMP, .NET, Java)	WORKING ENVIRONMENT ⁹ (Use codes below)	MAINTENANCE COST	USE ¹⁰ (Pls. write codes only; refer below)	Implementation Status
Health and DOH Portals • Intranet • DOH main web-site/Portal • Regional Health Offices websites • Hospital web-sites	Y	Php Drupal CMS Joomla/ Wordpress	W	400,000	13	
Financial Management System - Financial Recording and Budget Utilization Tracking & Reporting - Expenditure Tracking System - ENGAS	Y ENGAS (N)	Php	W C	200,000	1, 13	Operational – eNGAS Financial Management Reporting System – for development
Integrated Logistics Information System (ILIS) - National Online Stock Inventory Reporting System (NOSIRS) - Procurement Operation and Management Information System (POMIS) - Online Property Accountability Mgmt. System	Y	Php	W	1,000,000	1,13	Operational – NOSIRS module For expansion to include additional requirements for procurement
Customer Relationship Management System (CRM) - Infobook/Knowledgebase	Y	Php	W	200,000	2, 3	Ongoing initial implementation and database build-up
Integrated Personnel Transaction Information System - Personnel Information System (PIS) - e-jobs - Payroll System	Y	Php Powerbuilder	W C	200,000	15	Operational - (PIS, Payroll, eJobs) PTIS (ongoing testing)
Online Document Tracking Information System (DTRAK)	Y	Php	W	1,000,000	15	Operational, for enhancement

⁶ Include only those currently being used by your office or agency.

⁷ Payroll System, 201 File Information and Promotion System, Vehicle Monitoring System, Document Tracking System, Attendance and Leave Monitoring System, Financial Management Information System, Inventory System, Records Management System

⁸ Write Y for Yes if your agency has intellectual property right to the database. Write N for No.

⁹ WORKING ENVIRONMENT: S - Stand alone; C - Client-Server; W - Web-based

¹⁰ USE: 1 -Public Financial Management; 2 - Citizen Frontline Services; 3 - Ease of Doing Business; 4 - Higher Education; 5 - Basic Education; 6 - Health; 7 - Justice, Peace and Order; 8 - Energy; 9 -Land and Other Geospatial Information; 10 - Disaster and Climate Change Management; 11 -Public Works and Transport; 12 -iGov and ICT Infrastructure; 13 - Transparency and Citizen's Participation; 14 -Citizen Registry; 15 - Others, please specify.



NAME OF SYSTEM (Please list down the name/s of your strategic system/s)	Own Intellectual Property: Y or N? ⁸	DEVELOPMENT PLATFORM (ex. LAMP, .NET, Java)	WORKING ENVIRONMENT ⁹ (Use codes below)	MAINTENANCE COST	USE ¹⁰ (Pls. write codes only; refer below)	Implementation Status
Document Archiving System (DAS)	N	Onbase	W	1,000,000	15	Operational Ongoing enhancement
Integrated eLibrary Information System (ieLIS)	N	InMagic Genie	W		15	Operational – expanded users to included DOH Regions & Hospitals with Library
International Health Coordination Information System (IHCIS) - Foreign Medical Mission - Foreign donations - Foreign Visits - Foreign fellowship and training	Y	Php	W	200,000	10, 15	Some modules - operational For development of Integrated System
Local Health Systems (LHS) - Political Profiling Systems - Performance Monitoring or LGU Scorecard - Health Human Resources Augmentation (BHW, Doctors to the Barrios, Community Health Teams, Nurses, etc.) - Local Health Information System	Y	Php	W	200,000	15	BHW Registry Operational LGU Scorecard – ongoing implementation



2.4 Operational¹¹ Strategic Information Systems(please refer to the examples¹² below).

NAME OF SYSTEM (Please list down the name/s of your strategic system/s)	Own Intellectual Property, Y or N? ¹³	DEVELOPMENT PLATFORM (ex. LAMP, .NET, Java)	WORKING ENVIRONMENT ¹⁴ (Use codes below)	MAINTENANCE COST	USE ¹⁵ (Pls. write codes only; refer below)	Implementation Status
OPERATIONAL STRATEGIC INFORMATION SYSTEMS						
Philippine Health Information Exchange (PHIE)	Y	Php	W	5,000,000	3, 6	PHIE Lite Operational – ongoing initial implementation
Integrated Executive Information System (iEIS) (• Unified Health Management Information System (UHMIS) • KP Dashboard (KPD) • National Health Atlas (NHA))	Y	Phpmaker .Net Php	W	1,200,000	6	NHA & UHMIS – operational Integrated EIS for development KP (PHA) Dashboard for updating
Integrated Hospital Operations and Management Information System (iHOMIS)	Y	Powerbuilder	C	7,000,000	6	operational - Under continuing Software Maintenance and Enhancements
National Blood Bank Network System (NBBNetS)	Y	Php	W		6	Operational in selected hospitals
Integrated Drug Test Operation and Management Information System (IDTOMIS)	Y	Java, C# (client side Framework version 2)	W (with stand-alone version) Hybrid	5,000,000	2, 3, 6	operational - for enhancement

¹¹ Include only those currently being used by your office or agency.

¹²eCensus, Electronic Filing and Payment System, eTIN, Government e-Procurement System, Automated Customs Operations System, Electronic Customs Clearance Facility, Licensure Examination & Registration Integrated System, Machine Readable Passports and Visas, Philippine Land Registration and Information System, Government Employees Management Information System, e-GSIS, eReal Property Tax System, Business Permit & License System, iRegister, Hospital Operations and Management Information System

¹³Write Y for Yes if your agency has intellectual property right to the database. Write N for No.

¹⁴WORKING ENVIRONMENT: S - Stand alone; C - Client-Server; W - Web-based

¹⁵USE: 1 -Public Financial Management; 2 - Citizen Frontline Services; 3 - Ease of Doing Business; 4 - Higher Education; 5 - Basic Education; 6 - Health; 7 - Justice, Peace and Order; 8 - Energy; 9 -Land and Other Geospatial Information; 10 - Disaster and Climate Change Management; 11 -Public Works and Transport; 12 -iGov and ICT Infrastructure; 13 - Transparency and Citizen's Participation; 14 -Citizen Registry; 15 - Others, please specify.



NAME OF SYSTEM (Please list down the name/s of your strategic system/s)	Own Intellectual Property, Y or N? ¹³	DEVELOPMENT PLATFORM (ex. LAMP, .NET, Java)	WORKING ENVIRONMENT ¹⁴ (Use codes below)	MAINTENANCE COST	USE ¹⁵ (Pls. write codes only; refer below)	Implementation Status
Electronic Drug Price Monitoring System (EDPMS)	Y	php	W	200,000	13	Operational – for enhancement
Quarantine Services and International Health Regulation	Y	Php	W	200,000	2,3,6	Phase 1 operational – for expansion
Health Emergency Management Service Integrated Information System (HEMS IIS) HEMS Web Portal and Database Surveillance in Post Extreme Emergencies and Disasters (SPEED)	Y	php	W		6, 10	some modules operational, ongoing development – for implementation
Health Information Technology Standard/Health Data Standards Terminology Registry (HITS/HDSTR) • National Health Data Dictionary System (NHDDS) • Health Data Standards Terminology Registry (HDSTR) • National Health Facility Registry	Y	php	W		6,3, 15 Others – Health Standards	HITS/HDSTR – for development
Philippine Health Enterprise Data Warehouse	N	PowerBI	W	3,200,000	6	For build-up, harmonization
iClinicSys - Integrated Clinic System • Field Health Service Information System (FHSIS) • Integrated TB Information System • Maternal And Neonatal Death Reporting System • Schistosomiasis Information System • Filariasis Information System • National Rabies Information System • Watching Over Mothers And Babies (WOMB) • Leprosy Information System/Leprosy Alert Response And Surveillance Network • Other Vertical Health Programs Info/Reporting Systems like Malaria And Other Infectious Diseases (ID), and also Non-Communicable Diseases (NCD)	Y	Php	W (with stand-alone version) Hybrid	5,200,000	6	operational, for nationwide implementation



NAME OF SYSTEM (Please list down the name/s of your strategic system/s)	Own Intellectual Property, Y or N? ¹³	DEVELOPMENT PLATFORM (ex. LAMP, .NET, Java)	WORKING ENVIRONMENT ¹⁴ (Use codes below)	MAINTENANCE COST	USE ¹⁵ (Pls. write codes only; refer below)	Implementation Status
Watching Over-Mother and Babies (WOMB) • Maternal and Neonatal Health Tracking System (MNHTS) • Maternal and Neonatal Death Reporting System (MNDRS)	Y	Php/Android Programming	W/Android application	500,000	6	for expansion of implementation to include Occ. Mindoro
Unified Disease Registry System - Online National Electronic Injury Surveillance System (ONEISS) - Violence against Women and Children Registry System (VAWCERS) - Philippine Registry for Persons with Disabilities (PRPWD) - Integrated Philippine Network for Injury Data Management System (IPNIDMS) - Integrated Chronic Non-Communicable Disease Registry System (ICNCDRS) • Cancer Registry • Diabetes Mellitus Registry • Stroke Registry • Coronary Artery Disease Registry • Prevention of Blindness Registry and Cataract Surgical Outcome Monitoring Tool • Integrated Chronic Obstructive Pulmonary Disease and Occupational Disease Registry - Firework Related Respiratory Illness Surveillance System (FRRISS) - Integrated Neglected Tropical Diseases (INTD)	Y	Php	W	14,000,000	6	Operational – some modules undergoing system enhancement
Disease Surveillance System • Integrated Early Warning and Alert System/ Event Surveillance • Integrated Disease Surveillance System	Y	Php	W	200,000	6	piloted in selected regions
eField Health Services Information System (eFHSIS)	Y	Php	W	500,000	6	Operational
Health Facility Enhancement Program Tracking System (HFEPTS)	Y	php	W	200,000	3	Operational



NAME OF SYSTEM (Please list down the name/s of your strategic system/s)	Own Intellectual Property, Y or N? ¹³	DEVELOPMENT PLATFORM (ex. LAMP, .NET, Java)	WORKING ENVIRONMENT ¹⁴ (Use codes below)	MAINTENANCE COST	USE ¹⁵ (Pls. write codes only; refer below)	Implementation Status
Web-based Public Assistance Information System (WebPAIS) - Medical Assistance Program	Y	Php	W	200,000	3	Operational – for expansion of users
INTEGRATED HEALTH HUMAN RESOURCE DEVELOPMENT INFORMATION SYSTEMS (IHRHRDIS) - Integrated Human Resource for Health Mgmt Info System - National Database on Human Resource for Health IS - Training Information System - eLearning System for DOH Academy	Y	Php	W		15 Others - Health Human Resource Registry	NDHRHIS is operational Training Info. System – for expansion
National Telehealth Service Program (NTSP)	Open source	Php	W mobile app		6	piloted in selected regions
HIV/AIDS Registry	Y	Php	W	1,000,000	6	Operational and Under Maintenance (Previous Version) Ongoing development (New Version)

2.5 Databases (please include only existing databases)

NAME OF DATABASE	Own Intellectual Property, Y or N?	BRIEF DESCRIPTION AND KEY FIELDS ¹⁶	DATABASE MANAGEMENT SOFTWARE ¹⁷ USED	MAINTENANCE COST	USE (Pls. write codes only; refer below)
Drug Testing Database, Health Registries Database, Administrative Databases	Y		MySQL (Enterprise)	3,000,000	6, 1, 10

¹⁶Briefly describe the purpose or importance of the database.

¹⁷ Examples of DBMS are MS Excel, MS Access, MS SQL Server, MySQL, IBM's DB2, Oracle SQL, Sybase SQL, Informix, FoxPro



NAME OF DATABASE	Own Intellectual Property, Y or N?	BRIEF DESCRIPTION AND KEY FIELDS ¹⁶	DATABASE MANAGEMENT SOFTWARE ¹⁷ USED	MAINTENANCE COST	USE (Pls. write codes only; refer below)
Personnel Database, Payroll Database	Y		Sybase		1
eNGAS, Phil. Health Ent. Datawarehouse	Y		MS SQL Server	3,000,000	6,1,10
(please continue on a separate sheet if necessary)					

3. NETWORK

- 3.1 Does your agency have a Local Area Network (LAN)? ☒ YES ☐ NO
- 3.2 Does your agency have an Intranet? ☒ YES ☐ NO
- 3.3 If yes, does your agency have a Virtual Private Network (VPN)? ☒ YES ☐ NO
- 3.4 Does your agency have a Wide Area Network (WAN)? ☒ YES ☐ NO
- 3.5 Does your agency have a Private Automatic Branch Exchange (PABX or PBX)? ☒ YES ☐ NO
- 3.6 If yes, what is the PBX set up? ☒ Private ☐ Hosted ☒ VoIP PBX or IP-PBX ☐ Hosted IP
- 3.7 Is your agency connected to the Internet? ☒ YES ☐ NO
- 3.8 What is/are your agency's mode/s of access to the Internet? (Check all items that are applicable)
- ☐ Dial-up ☐ DSL ☒ ISDN
- ☒ Leased line ☐ Mobile phone ☐ Satellite
- ☒ WIFI ☐ Others, please specify _____
- 3.9 Who is (are) your Internet Service Provider(s)? If more than one, please state who is the primary and who is the secondary provider? PLDT Inc. (primary), Eastern Telecommunications Phils., Inc. (secondary), IP Converge Data Services, Inc. (tertiary), DOST-ASTI (quaternary)
- 3.10 What is the combined Internet bandwidth (voice and data)? voice: 2xE1 data: 275Mbps
- 3.11 How many employees have access to the Internet in the office? 2,500
- 3.12 How many employees have their own official e-mail address? 2,000
- 3.13 Does your agency have a web site? ☒ YES ☐ NO
- 3.14 If YES, what is the URL of your agency's web site? http://www.doh.gov.ph

4. SECURITY, DISASTER RECOVERY & BACK-UP

- 4.1 Does your agency have a protection scheme for your ICT resources? ☒ YES ☐ NO
- 4.2 If YES, what is/are the measure/s being used by your office? (Check all applicable)
- ☒ Security Policy / Guideline ☒ Disaster Recovery Plan
- ☒ Back-up power unit (e.g. UPS, Generator) ☐ Digital signatures
- ☒ Encryption ☐ Off-site back-up
- ☒ Hardware firewall ☒ Physically restricted access to critical ICT equipment
- ☐ Software firewall ☒ Secure servers



- ☒ Subscription to a security service (e.g. anti-virus software, intrusion alert)
 ☒ Storage of back-up media in localities other than the operating environment
☒ Regular ICT security training of employees
 ☐ Others, please specify _____

5. DATA ARCHIVING

- 5.1 Does your agency have a data archiving system? ☒ YES ☐ NO
- 5.2 If yes, what type of data archiving system does your agency use?
☐ Manual ☐ Electronic ☒ Both/Combination
- 5.3 If electronic data archiving is being utilized, what is the mode?
☐ Conventional ☐ Cloud
- 5.4 If conventional mode, what is the medium of storage of the archived data?
☐ Optical disks (e.g. CD-Rom, DVD) ☐ Hard Disk
☐ Tape ☐ External Hard Drive
☐ Microfiche ☐ Diskette
☐ Others, please specify _____
- 5.5 What information is archived by your agency electronically? (Check all items that are applicable)
- ☒ Publications (Annual Report, Statistical Report, etc.)
 ☐ Letters, memorandum, orders, communications, etc.
☒ Audio-visual recordings
 ☐ Unprocessed/Raw Data
☐ Maps
 ☐ Photographs
☐ Public documents (civil registration forms, passports, land titles, etc.)
 ☒ Others, please specify Administrative issuances (e.g. Department Order, Department Circular), Legal Cases

6. SPECIAL SOLUTIONS AND OTHER SERVICES

SPECIAL SOLUTIONS PACKAGE	USE ¹⁸ (Pls. write codes only; refer below)	MAINTENANCE COST
Geographic Information System	6, 9	300,000
Cloud computing	6, 13	3,000,000
CCTV System	15 – IT Office and Data Center Security	600,000
Automated Fingerprint Identification System	15 -Administration	400,000 – 500,000 per site
Document Management and Archiving System	15 – Records Management	4,500,000
Mission Critical Equipment and IP Enabled PABX-VOIP System (Central Office, 16 Regional Office, 1 DOH ARMM and 11 Hospitals)	15-Communication	4,500,000
Next Generation Firewall software and License Subscription	15-Security	2,800,000
UTM Firewall software and License Subscription	15-Security	613,786
Others, please specify		

¹⁸USE: 1 –Public Financial Management; 2 – Citizen Frontline Services; 3 – Ease of Doing Business; 4 – Higher Education; 5 – Basic Education; 6 - Health; 7 – Justice, Peace and Order; 8 – Energy; 9 –Land and Other Geospatial Information; 10 – Disaster and Climate Change Management; 11 –Public Works and Transport; 12 –iGov and ICT Infrastructure; 13 – Transparency and Citizen's Participation; 14 –Citizen Registry; 15 – Others, please specify.



7. DATACENTER

7.1 Does your agency have a data center?
NO☒ YES ☐7.2 If yes, how many sites? One (1) only; Location: DOH Central Office, Tayuman, Manila

7.3 Please check applicable maintenance set-up:

☐ In-house☒ Outsourced7.4 Does it have a back-up site?
NO☒ YES ☐

8. ICT PROJECTS

8.1 Details of Ongoing ICT Projects

PROJECT NAME ¹⁹	DESCRIPTION	PERIOD (in mm/dd/yyyy)		COST ²⁰ (in pesos)	DEVELOPMENT STRATEGY ²¹ (Please write codes only; refer below)	STATUS ²² (Please write codes only; refer below)	USE ²³ (Pls. write codes only; refer below)
		Start Date	End Date				
Watching Over Mothers and Babies	The WOMB Project facilitates access and utilization of the agency's maternal, neonatal, and child health and nutrition (MNCHN) services at the local level.	01/01/2014	12/31/2016	49,224,809	C	O, D (Replication sites)	6
Phase 1 Of The Ehealth For Universal Health Care Project	The main initiative of the inter-agency eHealth program is the PHIE, which aims to help address two main challenges to our health system: access to health care services, and access to real-time information for decision-making.	01/01/2015	12/31/2017	154,098,900	C	U	2,3,6,13

8.2 Issues Encountered in the Implementation of ICT Projects

¹⁹PROJECT NAME: In case an ICT project is divided in phases and its budget is given by phases, kindly list each phase as a separate project tagged as <Project Name> Ph. 1, <Project Name> Ph. 2, and so on.

²⁰COST: For ICT projects and project phases that ended in 2013 or earlier, kindly provide the **actual cost** in pesos and not the proposed cost.

²¹DEVELOPMENT STRATEGY: I – In-house; O – Outsourced; C – Combination

²²STATUS: U – Under Development; D – For Deployment; O – Operational

²³USE: 1 – Public Financial Management; 2 – Citizen Frontline Services; 3 – Ease of Doing Business; 4 – Higher Education; 5 – Basic Education; 6 – Health; 7 – Justice, Peace and Order; 8 – Energy; 9 – Land and Other Geospatial Information; 10 – Disaster and Climate Change Management; 11 – Public Works and Transport; 12 – iGov and ICT Infrastructure; 13 – Transparency and Citizen's Participation; 14 – Citizen Registry; 15 – Others, please specify.



- | | |
|---|---|
| <input checked="" type="checkbox"/> No budget or insufficient budget | <input checked="" type="checkbox"/> Delay in the release of projects funds |
| <input checked="" type="checkbox"/> Opposition or reluctance of stakeholders | <input type="checkbox"/> Lack of support by management |
| <input checked="" type="checkbox"/> Difficulty in recruiting and/or retaining qualified ICT personnel | <input type="checkbox"/> Low level of ICT skills among employees |
| <input checked="" type="checkbox"/> Unavailability of required bandwidth to support system/s | <input type="checkbox"/> Not used or seldom used by intended users and/or clients |
| <input checked="" type="checkbox"/> Problems in contract management for outsourced services | <input checked="" type="checkbox"/> Problems in procurement |
| <input type="checkbox"/> Others, please specify | |

Please send accomplished questionnaire to:

E-GOVERNMENT FUND MANAGEMENT OFFICE
Information and Communications Technology Office
Carlos P. Garcia Ave., UP Diliman, Quezon City 1101
or email soft copy to mithi_survey@ncc.gov.ph

You may download the form at <http://www.icto.dost.gov.ph>. Call 920-7421 or 920-01-01 loc. 3912 for assistance.

Thank you for participating in the MITHI ICT Resources Inventory 2016.

Definition of Terms:

Archiving in general is a process that will ensure that information is preserved against technical obsolescence and physical damage. It will also help conserve very expensive resources and ensure that the research potential of the information is fully exploited. In the Philippine Statistical System (PSS), the adoption of archiving measures has been identified by the NSCB through Resolution No. 11 (s. 1997) as a key policy to ensure the preservation, systematic storage and retrieval of statistical data including records on their methodology, concepts and other metadata.²⁴

Automated Fingerprint Identification System (AFIS) is a biometric identification (ID) methodology that uses digital imaging technology to obtain, store, and analyze fingerprint data.²⁵

Cloud computing is the use of computing resources (hardware and software) that are delivered as a service over a network (typically the Internet).²⁶

Co-located is an arrangement wherein a space is provided for a customer's telecommunications equipment on the service provider's premises.²⁷

Computing devices include mainframes, minicomputers and microcomputers i.e. desktop personal computers (PCs), laptops PCs including notebooks and netbooks, and handheld devices like mobile phones including smartphones, Personal Digital Assistants (PDAs), palmtops, tablets and multimedia players.

DataCenter is a centralized repository, either physical or virtual, for the storage, management, and dissemination of data and information organized around a particular body of knowledge or pertaining to a particular business.²⁸

Desktop PC is a PC that is not designed for portability and is expected to be set up in a permanent location.²⁹

Digital signature is an authentication code created with a sender's secret key and can be verified by a recipient using the sender's public key.³⁰

External hard drive is a hard drive that sits outside the main computer tower in its own enclosure. It allows the user to back up or store important information separate from the main internal hard drive, which could become compromised, damaged or corrupted.³¹

Firewall is a hardware, software or a combination of the two protecting a computer network from unauthorized access.

Geographic Information System (GIS) is a system of hardware and software used for storage, retrieval, mapping, and analysis of geographic data.³²

Intranet is "a private network that is contained within an enterprise. It may consist of many inter-linked LANs. The main purpose of an intranet is to share company information and computing resources among employees".³³

Laptop, also called a **notebook**, is a portable PC that integrates the display, keyboard, a pointing device or trackball, processor, memory and hard drive all in a battery-operated package slightly larger than an average hardcover book.³⁴

²⁴ ISSP Template Revised 2003 iib

²⁵ <http://searchsecurity.techtarget.com/definition/Automated-Fingerprint-Identification-System>

²⁶ http://en.wikipedia.org/wiki/Cloud_computing

²⁷ <http://searchsoa.techtarget.com/definition/collocation>

²⁸ <http://searchdatacenter.techtarget.com/definition/data-center>

²⁹ <http://computer.howstuffworks.com/10-types-of-computers.htm#page=2>

³⁰ http://linux.about.com/cs/linux101/g/digital_signatu.htm?terms=Digital+signature

³¹ <http://www.wisegeek.com/what-is-an-external-hard-drive.htm>

³² <http://www.nwgis.com/gisdefn.htm>

³³ http://searchwebservices.techtarget.com/sDefinition/0,,sid26_gci212377,00.html



Local Area Network (LAN) is "a group of computers and associated devices that share a common communications line or wireless link and typically share the resources of a single processor or server within a small geographic area (for example, within an office building)".³⁵

Magnetic card reader is a device used to read magnetic stripe cards, such as credit cards.³⁶

Mainframes are ultra high-performance computer made for high-volume, processor-intensive computing.³⁷

MICR reader is a device that can recognize human readable characters printed on documents such as cheques using a special magnetic ink. MICR stands for Magnetic Ink Character Recognition.³⁸

Microfiche is a sheet of microfilm (a film bearing a photographic record on a reduced scale of printed or other graphic matter) containing rows of microimages of pages of printed matters.³⁹

Mobile phone is a handheld or wearable device that may not only have call and short messaging service (SMS) functions but may be integrated with common computer applications (email, database, multimedia, calendar/scheduler).

Multimedia player combine the functions of a PDA with multimedia features, such as a digital camera, an MP3 player and a video player.⁴⁰ This does not include digital voice recorders that only play and record audio files.

Office automation software are ready-made or in-house developed software packages that support clerical and other common office tasks.

Original equipment manufacturer (OEM) license covers software for stand-alone desktop PCs and laptops and MUST stay bundled with the computer system and NOT distributed as a separate (or stand-alone) product. This software will be identified or labeled "For Distribution Only With New Computer Hardware."⁴¹

Outsourcing is an arrangement in which one company provides services for another company that could also be or usually have been provided in-house.

Oversight or administrative systems are those application software that support development planning, fiscal and financial management and operations, auditing, personnel administration, and assets and supplies management.

PABX stands for private automatic branch exchange and is a telephone switching system used within a business or organization. It works by interconnecting telephone extensions to each other and to the outside public telephone network.⁴²

Palmtop, more commonly known as **Personal Digital Assistant (PDA)**, is a tightly integrated computer that often uses flash memory instead of a hard drive for storage. This computer usually does not have keyboards but rely on touch screen technology for user input. Palmtops are typically smaller than a paperback novel, very lightweight with a reasonable battery life.⁴³

Server is a computer that has been optimized to provide services to other computers over a network.⁴⁴

Smart card reader is an electronic device that reads smart cards and can be an external device or a built-in feature of a keyboard, PC or laptop.⁴⁵

Stand-alone PCs are independent computer units. They are **not** connected to any other PC or to the network and operate independently.

Strategic information systems are client-driven application software that support mission-critical operations and provide direct public access to government services.

Tablet is a mobile computer, larger than a mobile phone or personal digital assistant, integrated into a flat touch screen and primarily operated by touching the screen rather than using a physical keyboard. It often uses an onscreen virtual keyboard, a passive stylus pen, or a digital pen.⁴⁶

VOIP is an acronym for Voice Over Internet Protocol, or in more common terms phone service over the Internet.⁴⁷

Web site is your agency's presence on the Internet environment.

Wide Area Network is similar to a Local Area Network (LAN), but unlike LANs, WANs are not limited to a single location.⁴⁸

Workstations are categorized as PCs attached to an office network (usually a Local Area Network) to differentiate it from Stand-alone PCs.

³⁴ <http://computer.howstuffworks.com/10-types-of-computers.htm#page=3>

³⁵ http://searchsmallbizit.techtarget.com/sDefinition/0,,sid44_gci212495,00.html

³⁶ http://en.wikipedia.org/wiki/Card_reader

³⁷ <http://www.techterms.com/definition/mainframe>

³⁸ <http://simple.wikipedia.org/wiki/MICR>

³⁹ <http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=microfiche>

⁴⁰ <http://electronics.howstuffworks.com/gadgets/travel/pda1.htm>

⁴¹ <http://www.auditnet.org/articles/softwarelicenses.htm#What%20Types>

⁴² http://www.ehow.com/facts_7267523_definition-pabx.html

⁴³ <http://computer.howstuffworks.com/10-types-of-computers.htm#page=5>

⁴⁴ <http://computer.howstuffworks.com/10-types-of-computers.htm#page=7>

⁴⁵ http://en.wikipedia.org/wiki/Card_reader

⁴⁶ <http://mashable.com/follow/topics/tablets>

⁴⁷ <http://www.voip-info.org/wiki/view/What+is+VOIP>

⁴⁸ <http://www.techterms.com/definition/wan>