

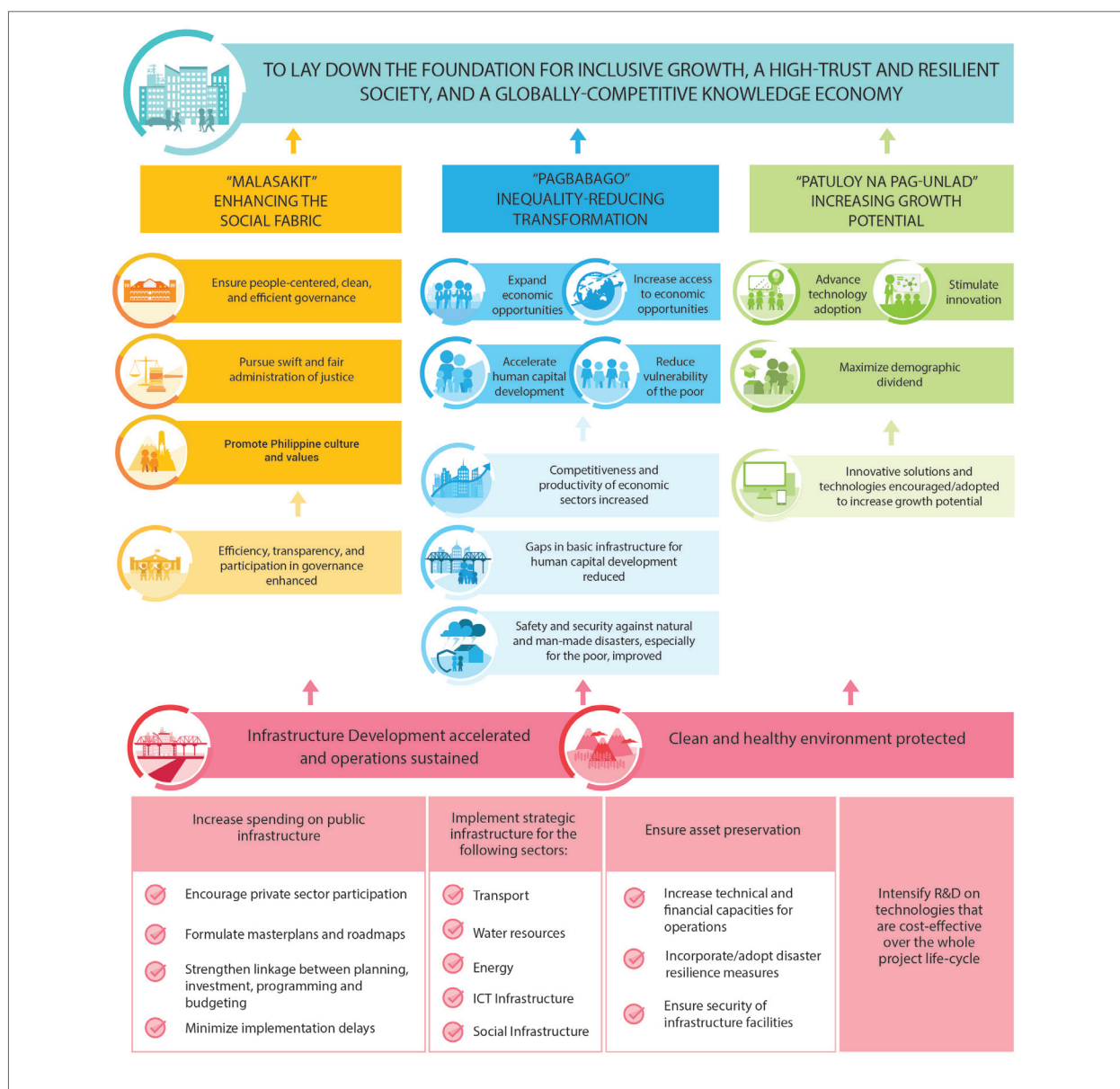
19 Accelerating Infrastructure Development

Accelerating Infrastructure Development

The government has delivered on its commitment to prioritize infrastructure development. It laid down strong foundations for the Build, Build, Build (BBB) Program by taking several key steps to fast-track approval, and subsequently implement high-impact projects to address infrastructure backlogs and support overall economic productivity.

As of December 2017, 24 infrastructure flagship projects (IFPs) amounting to more than ₱1.13 trillion have been approved by the National Economic and Development Authority (NEDA) Board/Investment Coordination Committee (ICC) or are currently being implemented. Meanwhile, the remaining 51 IFPs are in the pipeline for ICC processing and approval. The government has further implemented various sectoral policies to strengthen the institutional capacity and monitoring of the implementation of infrastructure programs and projects (PAPs) to further accelerate infrastructure development.

Figure 19.1 Strategic Framework to Accelerate Infrastructure Development

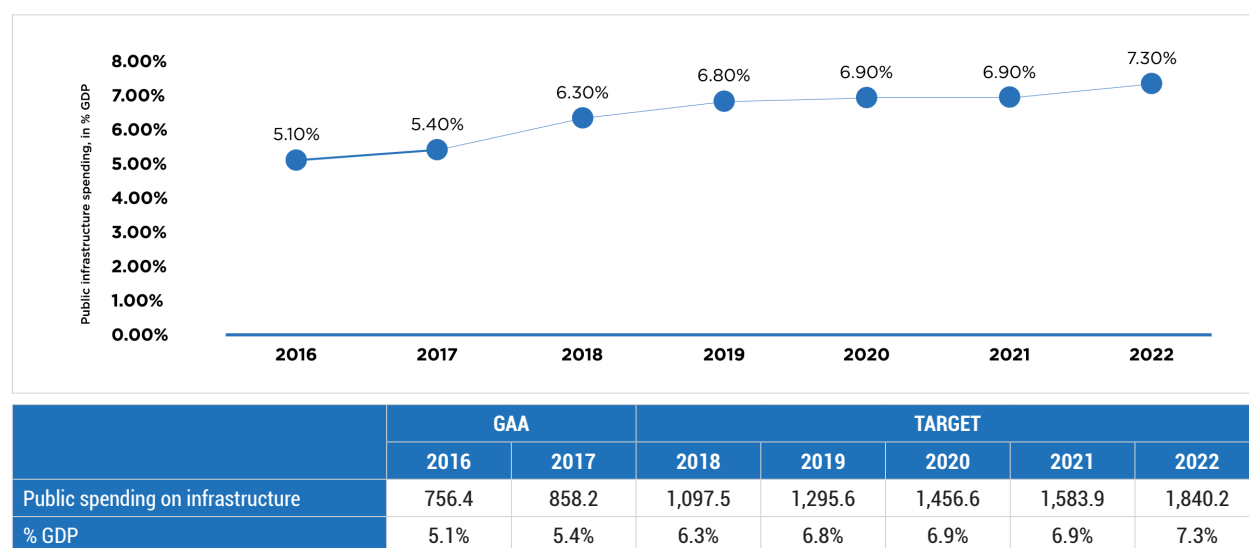


Accomplishments

Increasing spending on public infrastructure

The government has maintained its spending targets for infrastructure development. The government has committed to accelerate public infrastructure spending from 5.10 percent of the gross domestic product (GDP) in 2016 to 5.40 percent in 2017, with an increase in funding allocation of ₱101.76 billion based on the General Appropriations Act (GAA).

Figure 19.2 Obligation-Based Public Spending on Infrastructure, in Percent of the GDP (2016-2022)



Major infrastructure-related roadmaps and masterplans are currently being formulated to appropriately and efficiently address the infrastructure gaps and bottlenecks in the country:

- Philippine Transport System Master Plan (PTSMP)
- Philippine Water Supply and Sanitation Master Plan (PWSSMP)
- Manila Bay Sustainable Development Master Plan (MBSDMP)

There are ongoing efforts to improve the government systems and procedures to further streamline the approval and implementation of major capital infrastructure projects. In June 2017, the NEDA Board confirmed the approval of increasing the project cost threshold for ICC review to ₱2.5 billion and above, except otherwise provided by law. This deglogged the pipeline projects for ICC approval while exacting greater accountability from implementing agencies (IAs) to exercise due diligence on a large number of major capital projects.

The government has commenced initiatives to develop the infrastructure pipeline, as well as ensured the timely movement of projects in the pipeline. These initiatives include, among others, the approval of project preparation facilities such as the (a) the Project Development and Other Related Studies (PDRS) Fund amounting to ₱1.595 billion to be administered by NEDA for 2018 and (b) Infrastructure Preparation and Innovation Facility (IPIF) amounting to ₱7.92 billion to be financed through Official Development Assistance (ODA) facilitated by the Department of Finance from 2018 to 2021. Likewise, the NEDA Board approved the creation of a Project Facilitation, Monitoring, and Innovation (PFMI) Task Force to closely monitor the implementation of IFPs throughout their life cycle and provide policy and procedural recommendations to the ICC and Committee on Infrastructure (INFRACOM) and consequently, for the NEDA Board's consideration.

Implementing strategic infrastructure

Transport

The National Transport Policy (NTP) was approved for adoption to guide the development of the transportation sector. In order to realize the Transport Vision of a safe, secure, reliable, efficient, integrated, intermodal, affordable, cost-effective, environmentally sustainable, and people-oriented national transport system, the NTP was adopted by the government through NEDA Board Resolution No. 5 dated June 27, 2017. Accordingly, the formulation of the PTSMP and the updating of the Transport Roadmap for the Greater Capital Region (GCR) and High Standard Highway (HSH) Master Plan was initiated in 2017.

The existing road and highway network is continuously being improved to attain prescribed standards and promote inclusivity of non-motorized transport. The improvement in the resiliency, design capacities, and levels of service of some road sections/corridors, while underway, is still unable to cope with the increasing number of motor vehicles, particularly those leading to major gateways. As such, traffic congestion remains a primary concern particularly in urban areas/metropolis. Existing road and highway networks also lack the provision for non-motorized transport and pedestrian facilities.

As for the country's high standard highway network, the NAIA Expressway Phase II, STAR II, and the widening of NLEX have been completed and currently being utilized. Construction of Skyway Stage 3 is underway while the implementation of the NLEX-SLEX Connector Road, C6 Expressway, and SLEX Toll Road 4 is ongoing. Remaining sections of existing expressways are being completed including: Binalonan to Pozorrubio Section of TPLEX, NLEX Harbor Link-Segment 10, and Bustos to San Rafael Segment of the Plaridel Bypass Road.

Under the Conditional Matching Grant to Provinces (CMGP) or the KALSADA Program, the upgrading of identified local roads was continued with 788 km completed in 2016, and about 1200 km programmed in 2017.

Two bridges, the Binondo-Intramuros Bridge and the Estrella-Pantaleon Bridge, were approved by the NEDA Board for immediate implementation to serve as alternative linkages between major thoroughfares in Metro Manila. Inter-island bridges in the regions are also underway with the widening of the Governor Miranda Bridge II in Davao del Norte and the construction of Panguil Bay Bridge to connect Misamis Occidental and Lanao del Norte.

Improvements in road-based transport services were undertaken with the extension of validity of driver's licenses to five (5) years; expansion of Premium Point-to-Point (P2P) bus service to eight (8) routes, including the provincial route to Cavite; implementation of the PUV Modernization Program, with the issuance of the Omnibus Franchising Guidelines as an initial step; transfer of the Interim Southwest Terminal from Coastal Mall to a better location along Roxas Boulevard; and commencement of works for the new Southwest and South Intermodal Transport Exchanges which offer long-term solution for inter-modal transport.

The necessary upgrading and expansion of the country's mass transport network is still inadequate given that rail assets require high level of operation and maintenance aside from their huge capital investment outlay, while procurement and delivery of these assets also require longer lead time.

Nevertheless, to encourage the shift from private vehicle to public transport usage, with emphasis on mass transit, the following activities were undertaken: finalization of the plans for the Common Station and North-South Commuter Rail (NSCR) (Malolos to Tutuban); construction of two stations for the LRT Line 2 East Extension (Santolan to Masinag), LRT Line 1 South Extension (Baclaran to Bacoor, Cavite), and MRT 7 Project (North Avenue Station to Bulacan); and installation of wireless fidelity (WiFi) service, new ventilation and security equipment rehabilitation of conveyances in MRT3 and LRT Lines 1 and 2, as well as rehabilitation of PNR trains and stations. The following projects, using standard gauge as adopted through INFRACOM Resolution No.02-2016 signed on August 5, 2016, were also approved by the NEDA Board for immediate implementation:

- a. Metro Manila Subway Project Phase I – 25.3-km underground rail from Mindanao Avenue in Quezon City to FTI in Taguig with a spur line to NAIA;
- b. North-South Railway Project South Line, Commuter and Long Haul – construction of a 72-km commuter rail from Manila to Los Baños and a 639-km line, consisting of Los Baños-Legaspi (406 km), Legazpi-Matnog (117 km), Calamba-Batangas (58 km), and a Manila-Los Baños Line (58 km);
- c. Malolos-Clark Railway Project – 70-km rail extending NSCR from Malolos to Clark International Airport; and
- d. Mindanao Rail Project Phase 1 – 102-km line along the Tagum-Davao-Digos Corridor.

Improvements in existing airports and development of new airports are underway to accommodate increasing passenger and cargo traffic. NAIA remains as the main international gateway for the GCR because of its proximity to ancillary services (e.g., for overseas Filipino workers [OFWs] shippers, etc.) and availability of flights. The following improvements for NAIA were undertaken: restriction of General Aviation Flights during peak hours to give priority to commercial flights; strict implementation of the five-minute rule for pilots to take-off (which resulted in an increase from 40 percent to 78 percent of “on-time performance” of flights); construction of rapid exit taxiway to allow aircraft to leave the runway at higher speeds; and improvement of other facilities including comfort rooms, Wi-Fi access, and waiting areas for passengers and well-wishers. Premium airport buses servicing all NAIA Terminals going to and from nearby destinations such as Makati, Entertainment City, and Intramuros were also operated for enhanced passenger convenience.

Improvement of other regional airports, such as Laguindingan (Cagayan De Oro), Davao, Bacolod-Silay (Negros Occidental), and Iloilo, has also been given government funding allocation. Further, 19 out of 42 regional airports are now capable of accommodating night flights, while eight (8) more are being night rated. The New Puerto Princesa Airport in Palawan began operating in May 2017, and the development of the Mactan-Cebu International Airport, New Bohol (Panglao) International Airport, and New Bicol International Airport is ongoing. Upgrading of the Clark International Airport to accommodate eight (8) million passengers per year is also underway. Flights in Clark have increased by at least 39 more flights per day. The One-Stop-Shop center for OFWs was also put in place.

The modernization of the country’s Communication, Navigation and Surveillance/Air Traffic Management has been completed.

Initiatives in the maritime transport sector have been undertaken given its importance for inter-island and regional connectivity. The Roll On-Roll Off (RoRo) network is being improved with the acquisition of 15 brand new RoRo vessels to ply major nautical highways. As part of the country’s initiative for Master Plan on ASEAN Connectivity 2025, the RoRo network was expanded by opening the Davao/GenSan – Bitung ASEAN RoRo in April 2017. Based on initial assessments, travel time in this route has decreased from five (5) weeks to at most three (3) days while shipping cost was reduced from US\$ 2,200 to 700.

Port expansions across the country are also being undertaken to accommodate the projected cargo traffic demand of 772,640.23 metric tons. Main ports in Iloilo, General Santos City, Cagayan de Oro, and Zamboanga are being modernized to increase efficiency of port operations. The formulation of the 10-Year Maritime Industry Development Program has also commenced with the joint leadership of the Department of Transportation (DOTr) and MARINA.

As a key alternative mode of transport in Metro Manila, the Pasig Ferry service was relaunched complemented with bus/shuttle services.

Despite efforts to increase safety and security for the traveling public, road accidents, mass transit service interruptions, and illegal activities (e.g., pilferage, smuggling, etc.) are still prevalent. The Inter-Agency Council on Traffic was formed and has actively worked on harmonizing traffic laws, ordinances, and penalties of local government units (LGUs) in Metro Manila, particularly on apprehending colorum vehicles, illegal parking, and illegal sidewalk vendors. Given the vast coastline area of the country, the current floating and air assets of the Philippine Coast Guard (PCG) face challenges in manning Philippine waters.

Water Resources

Uncoordinated planning and implementation of programs and projects remain a major challenge in the water sector. The institutional set-up for the water resources subsector remains weak and fragmented due to the absence of a single lead agency to oversee overall planning, programming, and policy formulation based on updated, harmonized, and comprehensive data. The uncoordinated efforts of various players in the sector resulted in the unsustainable and inefficient management and utilization of the country's water resources.

Provision of water supply and sanitation projects has expanded. However, many households still lack access to level III water supply systems. As of June 2017, the number of connections within water district jurisdictions marginally increased to 4.16 million. Water districts have also desludged and/or treated a cumulative 322,588 cubic meters of septage as of 2017. Meanwhile, 849 subprojects or 41 percent of the total 2,058 subprojects for the 455 waterless communities under the *Sagana at Ligtas na Tubig sa Lahat* (SALINTUBIG) Program have already been completed as of 2017. In 2017 alone, 301 subprojects under SALINTUBIG were in various stages of development and implementation (127 or 44% under preparation, 122 or 44% undergoing detailed engineering and design, 42 or 10% undergoing procurement, and 10 or 2% undergoing construction), while only one (1) subproject was completed.

The government began the formulation of the PWSSMP aimed at improving access to water supply and sanitation (WSS). The master plan looks at, among others, the rationalization of available financing in the sector and the institutional framework to encourage more investments. In addition, the National Sewerage and Septage Management Program (NSSMP) had been amended to expand the coverage of subsidy and target beneficiaries.

The government is unlikely to meet its 2017 irrigation development target due to challenges in opening up new service areas and restoring/rehabilitating existing systems. The National Irrigation Administration (NIA) reported that irrigation service to support agricultural production increased but the target to irrigate a cumulative 1.78 million hectares (59%) of the total potential irrigable area by 2017 is unlikely to be met. As of third quarter of 2017, 1.75 million (58%) of the total area for irrigation has been developed. The government has recognized the following key challenges in irrigation development: (a) low water use efficiency in agriculture due to inadequate water control and hydraulic structures; and (b) poor maintenance

of irrigation structures and facilities because of NIA's limited capacity (e.g., manpower, financial resources). NIA is currently undertaking organizational strengthening and organizational structure review for efficiency and effectiveness in performing its mandate.

Flooding has been a constant issue and may become more severe due to the increasing frequency and intensity of flood occurrences caused by climate change. The lack of comprehensive sector data for planning and monitoring compounds the problem of uncertainty in terms of the probabilistic impacts of climate change. Nevertheless, the government strives to expand the protected flood-prone areas in the country by completing and updating the flood control and drainage masterplans and feasibility studies (FS) of projects in major river basins and principal rivers.

The government has completed flood and drainage plans¹ for 11 out of 18 major river basins. The preparation of the Davao River Basin flood and drainage plan and FS is currently ongoing, while the other six (6) river basins are being proposed for ODA.

With respect to big-ticket projects in the subsector, the Metro Manila Flood Management Program achieved an important milestone with the loan signing in December 2017, while the Cavite Industrial Area Flood Management Project was approved by the NEDA Board in June 2017.

Energy

The national household electrification rate reached 88.7 percent or 20.4 million out of 22.98 million households (HHs) as of June 2017. Actual house-wiring connection has been installed in a total of 33,062 HHs, of which 28,376 have already been energized as of August 2017. Moreover, the Nationwide Intensification of Household Electrification (NIHE) provided grant assistance fund to increase access to electricity services by eligible electrified HHs, in partnership with distribution utilities and local government units. To date, the Department of Energy (DOE) has approved 12 project proposals for 79,949 household beneficiaries.

As of December 31, 2017, the country's total installed and dependable capacity² has increased to 22,728 Megawatts (MW) and 20,515 MW, respectively. In 2017, a total of 835.70 MW of additional capacity, mainly coal and solar power plants, went into commercial operation, of which 392.60 MW was added in the Luzon Grid and 105.7 MW in the Visayas Grid. In Mindanao, installed capacity increased by an additional 337.4 MW.

Notwithstanding the additional capacities in 2017, security of energy supply to meet the growing demand is still a challenge. The DOE has identified a total of 8,018 MW and 8,990 MW committed and indicative capacities of power projects,³ respectively, of the private sector to be implemented from 2018 to 2025 to address the energy security concern. In addition, some policy mechanisms in the Renewable Energy Act have not yet been implemented. The government, through the issuance of Executive Order (EO) No. 30, s. 2017 creating the Energy Investment Coordinating Council (EICC), has initiated streamlining the permitting process to promote transparency and facilitate the smooth regulatory process for energy projects.

¹ Panay, Cagayan, Agno, Ilog-Hilabangan, Agusan (Upper), Bicol, Mindanao, Pampanga, Tagaloan, Cagayan De Oro and Pasig

² DOE List of Existing Power Plants as of 31 December 2017. Retrieved from: <https://www.doe.gov.ph/electric-power/list-existing-power-plants-december-31-2017>. Accessed on March 7, 2018.

³ DOE List of Private Sector-Initiated Power Projects as of December 31, 2017. Retrieved from: <https://www.doe.gov.ph/private-sector-initiated-power-projects>. Accessed on March 7, 2018.

The government continues to boost renewable energy (RE) utilization in generating power through new and emerging technologies. The cost of RE has also decreased significantly, leading to increase in RE interest and investments. However, new investments in power plants are sometimes not located at electricity demand centers and are inadequate for the demand. Nevertheless, 193 RE contract applications with potential capacity of 3,813.35 MW as of November 2017 were processed.

Several policies, rules, and regulations that support the implementation of critical roadmaps in the energy sector, aimed at attaining energy independence, implementation of power market reforms, and sustainability of all available energy sources, were put in place. Among these are the following:

- EO 30, s. 2017 creating the EICC which will streamline the regulatory processes and fast-track the implementation of major energy projects for power generation, transmission, and ancillary services needed to sustain grid stability and security. The EO further requires government agencies receiving applications for permits of energy projects to process them without awaiting the action of other government agencies within a 30-day period;
- Department Order No. 2017-04-0005 prescribing the new guidelines in the Processing of Applications for Renewable Energy Service/Operating Contracts which provides the procedural flow of evaluation of RE applications within a faster period;
- Department Circular No. 2017-05-0008 which provides the policies and guidelines of Performance Assessment and Audit for all power generation, transmission, and distribution systems and facilities that will be instrumental in the attainment of the secure, reliable, and affordable supply of electric power to support the economic growth of the country; and
- Department Circular No. 2017-11-0012 or the Philippine Natural Gas Regulation (PNGR) which will standardize the guidelines in the accreditation, operation, and maintenance of natural gas infrastructures and facilities, including supply importation and transportation. The PNGR aims to, among others, liberalize entry of investors/participants to the natural gas market and ensure adherence to international and Philippine health, safety, security, and environment standards.

Information and Communications Technology (ICT)

The country's digital connectivity has improved moderately with the private sector continuing to lead the development, yet it remains inadequate to meet the increasing demand in the sector. While average broadband speed increased from 4.3 megabits per second (mbps) in 2016 to 5.5 mbps in 1st quarter of 2017 and household internet access increased from 28.3 percent in 2016 to 39.1 percent in 2017, the Philippines has been continuously lagging behind its ASEAN neighbors.

To expand access of broadband services, President Rodrigo R. Duterte approved Republic Act No. 10929⁴ or the Free Internet Access in Public Places Act on August 2, 2017 which aims to provide public internet access points in key areas across the country. Nevertheless, the availability of broadband services is mainly concentrated in urban areas, thus marked disparity in digital infrastructure still exists in the country.

⁴ RA 10929: "An Act Establishing the Free Internet Access Program in Public Places in the Country and Appropriating Funds Therefor"
Source: <http://www.officialgazette.gov.ph/downloads/2017/08aug/20170802-RA-10929-RRD.pdf>

Critical roadmaps and masterplans that set the policy direction towards the development of the ICT sector have been affirmed by the President. These are the following:

- The National Broadband Plan (NBP) serves as blueprint for the development of the necessary digital infrastructure and modernization of the policy and regulatory framework aimed at addressing the perennial issues and challenges in the sector. The NBP envisions providing available, affordable, and quality broadband internet access across the country. In line with the goals of the NBP, the government and a private sector partner will jointly undertake the Luzon Bypass Infrastructure Project. Through this project, a cable network corridor will be established and cable landing stations will be provided for international submarine cables terminating in the Philippines to support the broadband needs of the national government agencies (NGAs). The landing party agreement for the said project was signed on November 15, 2017. The City Government of San Fernando (La Union) signed a Memorandum of Agreement (MOA) with the Department of Information and Communications Technology (DICT) for the project on December 5, 2017.⁵
- The Framework of the Digital Terrestrial Television Broadcasting (DTTB) Migration Plan guides the country's migration from analog to digital broadcasting. The plan targets the analog switch off in four to six years when the household penetration of DTTB reaches 95 percent in each service area, while the digital switch on was held February 14, 2017.
- The National Cybersecurity Plan 2022 lays down specific proactive strategies in ensuring safety, security, and resiliency of the country's digital infrastructure.

Efforts were initiated to streamline current government systems and ensure effective and efficient delivery of government frontline services to the public. The Philippines has embraced the importance of e-government through the continuous implementation of the Integrated Government Philippines Program initially launched in 2016. Several initiatives to streamline current systems to ensure effective and efficient delivery of government services have been introduced.

- The Government Network (GovNet) aims to interconnect all government offices to streamline coordination and increase efficiency in the delivery of services. Completed in 2016, GovNet connects 160 NGAs located in the National Capital Region and 15 agencies in Cebu City. GovNet was then expanded to the regional level with Regional GovNet Phase I, covering 317 agencies in seven (7) regions⁶ in 2017. Regional GovNet Phase II will cover eight (8) additional regions.⁷
- Adoption of the Philippine Government's Cloud First Policy that encourages government offices to adopt cloud computing as the preferred ICT-deployment strategy for administrative use and delivery of online services, optimizing the government ICT resources.
- Launching of the National Government Portal (NGP), a single gateway that unites online information and streamlines frontline services to the public.

⁵ Retrieved from: <http://www.sanfernandocity.gov.ph/sfcsite/index.PHP/en/archives/news-articles/287-city-gov-t-signs-agreement-with-dict-as-cable-landing-station-to-speed-up-ph-internet-connectivity>

⁶ Tuguegarao, Iloilo, Pampanga, Baguio, Legazpi, Palo-Leyte, and Butuan.

⁷ Zamboanga, Cagayan de Oro, Davao, Cotabato, Marawi, La Union, Batangas, and Cebu.

Social Infrastructure

The government continued to provide basic education facilities to support full implementation of the K to 12 Program. The allocation of resources for the construction of school buildings/new classrooms under the Basic Education Facilities Fund (BEFF) increased from ₱82.3 billion in 2016 to ₱118.78 billion in 2017 (i.e., 44% increase). In terms of physical output, the Department of Education (DepEd) has completed the construction of 24,625 classrooms from July 2016 to June 2017.⁸

To address bottlenecks in delivering the BEFF, the DepEd and the Department of Public Works and Highways (DPWH) signed a MOA on March 21, 2017 to improve coordination on joint validation of buildable space, classroom building types, project costs, and soil tests.⁹

Improving the quality and access to healthcare services remain a priority of the government. To guide the establishment and upgrading of health facilities throughout the country, the Philippine Health Facilities Development Plan (PHFDP) 2017-2022 was approved by the President on May 8, 2017. It identifies the gaps and needs for health facilities and ensures availability of quality health services throughout the country. To ensure access to safe and quality health care services and facilities, the Health Facilities Enhancement Program of the Department of Health (DOH) was allocated ₱21.9 billion in 2017 for the construction, rehabilitation, and modernization of 58 DOH hospitals, 16 drug abuse treatment facilities, and 126 other national government hospitals. This also include the construction of additional 2,528 barangay health stations (BHS) and upgrading of 510 BHS.

Solid waste management among LGUs remains a perennial issue. The high investment capital required to establish, operate, and maintain solid waste management (SWM) facilities remain a major bottleneck in complying with the provisions of RA 9003 or the Ecological Solid Waste Management Act. As of 2017, majority of barangays remain unserved by SWM facilities as most LGUs still have limited capacity to plan for and provide appropriate SWM services.

According to the Department of Environment and Natural Resources - Environmental Management Bureau (DENR-EMB), a total of 78 SWM plans of LGUs were approved by the National Solid Waste Management Commission (NSWMC), 167 open dumpsites were closed and rehabilitated from January to November 2017, and 169 materials recovery facilities (MRFs) were established in 2017, exceeding the physical target of 100 MRFs.

Moving Forward

Infrastructure development will remain among the top priorities of the government, thus, investments will be intensified to improve connectivity, address infrastructure backlogs, and enhance the country's productivity and growth potential. The continuous implementation of the proposed strategic measures identified in the Philippine Development Plan 2017-2022 will be pursued, with focus on the following strategies for the coming years:

⁸ Based on DepEd Accomplishment Report from July 2016 to June 2017.

⁹ Understanding Underspending in DepEd, October 2017, Issue 2

Increasing spending on public infrastructure

The government will adopt a shift from obligation-based to annual cash-based appropriations to strengthen the focus and accountability of implementing agencies, effecting quick delivery of programs and projects.

To attain infrastructure spending targets, government must pursue systematic and deliberate efforts to deliver effective and efficient infrastructure services from program/project identification to operations and maintenance (O&M), among others:

- Identification of programs and projects based on completed masterplans and roadmaps;
- Institutional strengthening and enhancement of the absorptive capacity of implementing agencies and development of their capacity to identify, develop, implement and operate, and maintain infrastructure programs/projects;
- Optimal utilization of the IPIF and PDRS Fund to ensure quality-at-entry of programs and projects for ICC approval;
- Conferment of equal priority to asset preservation/rehabilitation and new capital investments in programming and budgeting for infrastructure;
- Advance acquisition of right-of-way (ROW) and maximization of use of government lands in locating infrastructure projects;
- Revisiting the Government Procurement Reform Act and/or its Implementing Rules and Regulations (IRR) to ensure efficiency while maintaining check and balance in the procurement for infrastructure projects;
- Adoption of 24/7 construction of key infrastructure projects and geo-tagging of infrastructure projects to curtail ghost projects;
- “Hybrid approach” in financing infrastructure projects to fast-track project completion and explore comparative advantage of the private sector. In addition, Public-Private Partnership Knowledge Corners shall be established in each NEDA Regional Office to facilitate knowledge-sharing for LGUs, implementing agencies, and private partners in the regions;
- Amending the National Building Code to mainstream disaster risk resiliency in the design of infrastructure;
- Strengthening of the Infrastructure Cluster (IC) in monitoring infrastructure PAPs; and
- Operationalization of the PFMI Task Force to monitor the progress of IFPs and address operational and implementation issues encountered throughout their life cycle.

Implementing strategic infrastructure

Transport

The NTP shall remain the basis for planning, programming, implementation, and O&M of transport projects, guided by the NTP IRR which will operationalize the strategies and intended policy reforms.

Mobility of people and goods will continue to be prioritized over private vehicles. Along this line, the following strategies per mode of transport will be pursued:

- *Road-based Transport.* The Luzon Spine Network that will deliver high standard highways and expressways, as determined by the High Standard Highway Study for Mainland Luzon. This network of HSH and expressways will be expanded to the islands of Visayas and Mindanao. Furthermore, inter-island bridges will also be given priority to provide alternative modes of transport between islands,

especially in times of disasters. To help alleviate traffic congestion in urban areas/metropolis, initiatives such as improving route systems, putting up intermodal terminals, and implementing bus rapid transits in appropriate corridors will continue to be undertaken to ensure interconnectivity of different transport modes and land-uses.

Under the CMGP, the upgrading of the remaining 8,490 km of local road shall be completed by 2022.

Provision for pedestrian and other non-motorized transport facilities will be incorporated in the design of new roads. Elevated walkways, complete with the necessary conveyances, shall be put up in areas with limited road space.

- *Rail and Urban Transport.* The country's rail network will be expanded with the introduction of the Metro Manila Subway Project—the first subway system in the country, and the Mindanao Railway—the first rail network in Mindanao. With the adoption of the standard gauge policy, all rail projects will be interconnected both physically and operationally. Where appropriate, private sector expertise shall be considered in the operations and maintenance of mass transit facilities. Timely procurement and delivery of needed spare parts and equipment to maintain existing mass transit systems shall also be pursued.
- *Air Transport.* Improvements of capacities of existing airports and construction of new ones in accordance with applicable international standards will be continued to cope with increasing air traffic demand. Since the expansion of NAIA is constrained due to limited land space, upgrading of the Clark International Airport and/or construction of a new airport in GCR will be pursued, guided by an optimal airport strategy.
- *Water Transport.* To ensure reliable inter-island shipping, a stronger RoRo network will be established through port expansion, modernization, and sustainable O&M, together with upgrading of roads. Road access will also be improved to ensure seamless transport. With the opening of the Davao/General Santos–Bitung route, integration with the BIMP-EAGA and ASEAN shall be continued with other routes.

Improvements for regional fish ports including Sual, Iloilo, Lucena, Camaligan, Davao, and Zamboanga shall be implemented.

The Pasig River Ferry Convergence Program shall be pursued to ensure coordinated efforts in maximizing the use of the river, including as an alternative transport corridor by restoring the Pasig Ferry System.

- *Transport Safety and Security.* The creation of an independent body to investigate transport accidents and provide recommendations (backed by statistics and studies) for transport safety across the country will be a step forward in curbing the number of transport-related accidents. PCG will continue to complete its required fleet and manpower complement on the basis of its 15-Year Development Plan for more effective patrol and search and rescue missions.
- Further, modernization of all transport infrastructures by utilizing modern technology, such as global positioning system, global navigation satellite system, VMS, etc. will reduce human error and will help in monitoring, tracking, and guiding transport assets for a more seamless transportation.

Water Resources

The creation of a department-level apex body for water resources will be pursued to support a science-based and integrated basin-wide approach to the management of the country's water resources, with due consideration for the effects of climate change and the demands of future population growth. In parallel, pending the creation of such body, (a) a National Water Policy (NWP) which will institutionalize and pursue the overarching principles for water resource management and development in the country, and (b) the strengthening of the National Water Resources Board will be pursued. Masterplans for the seven (7) remaining major river basins will be completed using the integrated water resources management approach. Promotion of eco-efficient water infrastructure, including rainwater harvesting will be intensified in pursuit of water security.

- *Water Supply, Sewerage, and Sanitation.* Legislation creating the Water Regulatory Commission, an independent economic regulatory agency, will be pursued. A database will be developed initially through the PWSSMP which will be maintained to collect data for the planning and programming, including the consolidation and rationalization of all available fund sources for water supply and sanitation projects using the Unified Financing Framework (UFF). There is also a need to increase budget allocation to support water supply and sanitation projects across the country. To help avert water supply crisis in the capital, preparatory activities to develop a large water source in addition to the Kaliwa Dam needs to commence in the next few years. In the interim, construction of Aqueduct No. 7 will be undertaken to contribute to Metro Manila's water security.

The foregoing strategies are aimed at achieving 95 percent water supply access and 97 percent sanitation access for households by 2022. Pursuant to the Clean Water Act, sewerage and septage management systems will be implemented in highly urbanized cities and first class cities/municipalities under the NSSMP to minimize the adverse impacts of domestic waste water discharges on water quality and water resources in general.

- *Irrigation.* The Irrigation Development Master Plan will be formulated to account for recent developments such as agriculture sector policy (e.g., rice tariffication), availability of irrigable lands, and climate change (e.g., El Niño) as well as support for diversified, non-traditional, and high-value crop farming. The institutional development within NIA, specifically its core units, shall be prioritized to realize the desired results and targets for irrigation development. Irrigators' Associations and LGUs will be capacitated for effective water-saving farming systems, climate change adaptation measures, and management of communal irrigation system. Sustainability and disaster-resiliency of irrigation systems through adequate funds for O&M and improved eco-efficient design shall also be prioritized.

Big-ticket projects in the pipeline for the next few years include the Ilocos Norte Irrigation Project, the Panay River Basin Integrated Development Project, the Tumauni River Multipurpose Project, the Gregorio del Pilar Impounding Project, and the Bohol Northeast Basin Multipurpose Project.

- *Flood Management and Drainage.* The completion and updating of flood management plans across all river basins and funding support for the full implementation of the flood management and mitigation measures under said plans shall be undertaken. Construction and rehabilitation of flood mitigation structures incorporating upgraded engineering standards for design and O&M to cope with climate change are also necessary.

In addition, the government will include, among its IFPs, the Ambal-Simuay River and Rio Grande de Mindanao River Flood Control Projects as well as the Ipo Dam 3 to mitigate flooding in the provinces of Maguindanao and Bulacan, respectively.

Power

Access to secure and reliable energy will remain a priority of government to support inclusive economic growth.

- The Electric Power Industry Reform Act will be amended, particularly provisions that impede entry of new players which contribute to high cost of electricity and insufficient power supply.
- Through the EICC, a simplified and transparent permitting process will be developed to fast-track major energy projects.
- Efforts to advance RE development, including the implementation of the Renewable Energy Market (REM),¹⁰ establishment of the Renewable Portfolio Standard (RPS),¹¹ and Off-Grid Renewable Energy Development will be continued to achieve the Philippines' Intended Nationally Determined Contribution.
- Efforts to realize the vision of a *One Grid Philippines* through the Visayas to Mindanao Interconnection Project will be supported to allow flexibility in the country's power grid system through transfer of excess supply of power within the three (3) main grids.
- Assessment and audit for all power generation, transmission, and distribution systems and facilities shall be conducted to inform long-term planning.
- Timely completion and commissioning of transmission infrastructure and the continuous upgrading, rehabilitation, and expansion of existing transmission lines, substations, and other related facilities/priority projects as stipulated under the Transmission Development Plan shall be ensured.
- Philippine National Oil Company's Batangas Integrated Liquefied Natural Gas Project will be pursued to safeguard natural gas supply when the Malampaya Natural Gas Field becomes depleted in 2022. This is also in support of the country's aim to be the regional hub for liquefied natural gas in both ASEAN and East Asia.
- The NIHE will be fast-tracked to reach 100 percent household electrification by 2022. RE in rural households and missionary electrification will be encouraged to facilitate energization efforts and provide cheaper electricity. National Power Corporation-Small Power Utilities Group shall undertake the Limawasa Solar Photovoltaic with Energy Storage System-Diesel Hybrid Power Plant that will showcase a hybrid pilot project to replace diesel units upon successful implementation.
- Information and education campaigns will be intensified in pursuit of demand-side management by promoting energy efficiency and conservation measure to reduce peak demand.

ICT Infrastructure

With rapid technological development and increasing demand for ICT-based services, there is a need to review the existing laws, policies, and regulations and to propose new measures to enable competition in the ICT sector, including the strengthening of the National Telecommunications Commission. The following are priority strategies for specific services:

- Fast-track the completion of feasibility studies for the various components of the NBP to identify gaps and determine priority investments in broadband infrastructure;
- Leverage existing government broadband infrastructure assets, and pursue convergence programs and infrastructure-sharing initiatives to reduce construction costs;
- Identify suitable broadband deployment options;
- Continue to strengthen the country's e-government system to harmonize current ICT systems and frontline services, and support impending implementation of the national ID system;

¹⁰ REM facilitates the issuance, commercialization, and verification of compliance for the annual RPS requirement.

¹¹ RPS mandates power industry players to produce and source a certain percentage of electricity from RE sources.

- Provide capacity-building and information outreach programs to promote awareness among citizens on the benefits of broadband; and
- Ensure timely implementation of the country's migration to digital broadcasting.

Social Infrastructure

The government will continue to address the gaps in social infrastructure.

- *Education.* To address the requirements resulting from the implementation of the K to 12 Basic Education Program, the BEFF will be expanded to include the provision of quality classrooms, rehabilitation of existing classrooms, replacement of seats, and procurement of furniture/fixture for school laboratories. The capacity of DepEd to identify gaps and needs will also be enhanced to better allocate resources for classrooms and other facilities (e.g., improve methods on monitoring and utilizing current conditions of existing school facilities and site identification of school buildings). The need to decentralize more responsibilities to schools and their corresponding governing boards by strengthening their roles in infrastructure planning and project management will be assessed.
- *Health.* According to the PHFDP, 9,064 BHS and 2,289 rural health units (RHUs)/urban health centers (UHCs) will be established in the medium-term in order to attain its end-of-plan target of one (1) BHS per barangay and one (1) RHU/UHC per 20,000 population.

Table 19.1 Inventory of Existing, Ongoing, and Gaps in Health Facilities Requirements

FACILITY	EXISTING HEALTH FACILITIES	ONGOING CONSTRUCTION	HEALTH FACILITIES NEEDED
BHS	20,045	12,387	9,064
RHU/HUC	2,586	375	2,289

To fully realize the objectives of the PHFDP, the government will continue to develop policies and plans to ensure the functionality and sustainability of health facilities, including the necessary human resource requirements.

- *Housing.* The government will continue to prioritize the needs of informal settler families, especially those residing in dangerous areas and displaced by calamities.
 - » To unlock land for socialized housing, government-owned and controlled corporations and LGUs shall identify idle lands within their respective jurisdictions. The passage of the National Land Use Act shall also be pursued to rationalize allocation of land resources and minimize conflicts arising from competing land uses.
 - » Lease variants and other rights-based instruments, as a less costly approach in providing security of tenure, shall be recognized as possible alternatives for the underserved sector that cannot afford to secure freehold titles.
 - » Owners and developers of proposed subdivision and condominium projects shall develop an area for socialized housing, as required by the balanced housing provisions of the Urban Development and Housing Act of 1992 as amended by RA 10884.
 - » Prior to the creation of a national agency that will lead the implementation of government housing and urban development initiatives, the National Resettlement Policy Framework shall provide a proposed governance structure that will harmonize the responsibilities of the different national and key shelter agencies as well as affected LGUs to ensure that resettlement planning process is carried out.

- » Promotion of disaster-resilient housing and livable settlements will be adopted, with due consideration for rights-based principles, through the application of appropriate standards, technologies, and innovations.
- *Solid Waste Management.* The DENR-EMB, in coordination with the NSWMC and relevant stakeholders, will continue to pursue the adoption of alternative technologies, including waste-to-energy (WTE) technologies, as a solution to address the increasing volume of wastes in the country and its impact on climate change. To this end, DENR-EMB shall ensure the adoption of guidelines for all recent and future developments pertaining to the establishment and operation of WTE facilities in the country.

To help LGUs comply with the requirements of RA 9003, the government will operationalize the SWM Fund and assess the re-institutionalization of the national government-local government unit cost sharing scheme for SWM.

Major Infrastructure Programs/Projects/Activities

The government will ensure prioritization of the following Tier 2 projects contained in the Public Investment Program 2017-2022:

Table 19.2 Tier 2 Projects to Accelerate Infrastructure Development

PROJECT TITLE	IMPLEMENTING AGENCY	INDICATIVE TOTAL PROJECT COST (IN MILLION PESOS)	IMPLEMENTATION PERIOD
Transport			
Improving Growth Corridors in Mindanao Road Sector Project	DPWH	18,956.00	2019-2023
(Road) NAIA Intermodal Terminal	DOTr	2,000.00	2019-2022
Establishment of Philippine Railway Institute	Light Rail Transit Authority	1,249.93	2019-2022
(Aviation) Siargao Airport Development Project	DOTr	1,235.00	2019-2022
Water Resources			
Ilocos Norte Irrigation Project, Stage 2	NIA	14,994.04	2019-2026
Kabulan 2 Multipurpose Irrigation and Power Project	NIA	12,907.00	2019-2025
National Irrigation Sector Rehabilitation and Improvement Project II	NIA	11,820.50	2019-2025
ICT			
National Broadband Plan Implementation/Update	DICT	39,501.03	2019-2020
Energy			
Brooke's Point - Bataraza 69kV Transmission Line Project	National Power Corporation (NPC)	352.00	2019
Puerto Galera 69kV Substation Project	NPC	147.00	2019-2020
Pinamalayan Switching Station Project	NPC	126.37	2019
Social and Other Public Infrastructure			
Special Area for Agricultural Development	Department of Agriculture	20,940.64	2019-2022
Climate Resilient Integrated Development Project in Agrarian Reform Community Clusters	Department of Agrarian Reform	5,000.00	2019-2024

Recommendations

Table 19.3 Supplemental Strategies to Accelerate Infrastructure Development

RECOMMENDED STRATEGIES	IMPLEMENTING AGENCIES
<ul style="list-style-type: none"> Sustain the operation of PFMI Task Force and IC. Ensure completion of various sector masterplans (i.e., PTSMP and PWSSMP). 	NEDA
<ul style="list-style-type: none"> Ensure funding and support to various infrastructure sector projects (i.e., increase budget allocation to support WSS projects through UFF, funding of flood management projects, etc.). 	Department of Budget and Management
<ul style="list-style-type: none"> Pursue institutional development within NIA, specifically its core units, to realize the desired results and targets for irrigation development. 	NIA
<ul style="list-style-type: none"> Fast-track ROW acquisition to ensure timely implementation of projects. 	DPWH
<ul style="list-style-type: none"> Capacitate Irrigators' Associations and LGUs for effective water-saving farming systems, climate change adaptation measures, and management of communal irrigation system. 	Local Water Utilities Administration/ Department of the Interior and Local Government
<ul style="list-style-type: none"> Populate the project pipeline (based on PIP) to conduct required project preparation activities, i.e., conduct of feasibility studies, ROW acquisition. Ensure O&M of existing infrastructure assets and efficiency in various international and domestic gateways, i.e., airports and seaports. 	DOTr
<ul style="list-style-type: none"> Establish an integrated monitoring and tracking system to better determine and address infrastructure gaps. 	DepEd
<ul style="list-style-type: none"> Operationalize SWM Fund for LGUs. 	DENR
<ul style="list-style-type: none"> Fast-track the roll out of Free WiFi in Public Places Project. Ensure broadband access to unserved and underserved areas. 	DICT
<ul style="list-style-type: none"> Improve access to and quality of health facilities through provision of budgetary resources for pre-investment activities (e.g., including ROW acquisition, resettlement, and auxiliary services) to ensure that said facilities are well-developed, functional, and readily implementable. 	DOH
<ul style="list-style-type: none"> Streamline/fast-track the approval process of permits of energy projects through the EICC. 	DOE