PIPOL KONEK TECHNICAL WORKSHOP
& CONSULTATION WITH STAKEHOLDERS

Workshop Documentation

14-15 February 2019
Hotel Kimberly, Tagaytay city,
PHILIPPINES

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Executive Summary

The *Pipol Konek: Free Wi-Fi Internet Access in Public Places* is the Philippine government's flagship program that provides free internet access in public places throughout the country. Under the Republic Act (RA) 10929 or the 'Free Internet in Public Places Act', the program aims to promote knowledge-building among citizens and enable them to participate in the evolving information and communication systems. Pipol Konek hopes to install functional Wi-Fi services in 200,000 public places nationwide by 2026. However, various institutional and technical issues have marred the program implementation. As a result, the program has only installed Wi-Fi services in over 2000 public areas as of 2018.

To speed up the provision of free Wi-Fi services nationwide, the Department of Information and Communications Technology (DICT), the RA 10929's lead implementing agency, entered into an agreement with the United Nations Development Programme (UNDP) Philippine Country Office last September 2018. This DICT-UNDP partnership intends to expand the accessible free internet services in more than 6,000 public places in the next 18 months. The collaboration also expects the UNDP to organize and capacitate citizens in monitoring the different phases of Pipol Konek implementation. In this context, the UNDP and DICT agreed to undertake a two-day workshop to discuss key aspects of the partnership.

The workshop broadly aimed at building a common understanding of the Pipol Konek for both the UNDP and DICT staff who are involved in the partnership. Specifically, the activity's first part – the Technical Workshop – provided a space to the UNDP and DICT teams to: assess the program's implementation challenges as well as the existing knowledge base and gaps; identify areas for synergies; and determine the needed knowledge base to improve the program performance. The second part – Consultation Workshop – aimed at generating lessons from the experiences of other Pipol Konek key stakeholders (e.g. cable TV operators) and from other alternative modes of internet provision in underserved rural communities.

In assessing the implementation challenges, the Technical Workshop participants identified the following: a) resolving procurement issues – failure of bidding, lack of capacities, contract implementation delays; b) securing supplier permits; c) navigating local political dynamics and regulatory issues; d) resolving the internet service providers' (ISP) dependence on big telecommunication companies (Telcos) and the missing key network components; e) selecting sites; f) meeting the bandwidth requirements; g) exploring other financing arrangements and partnership modalities; h) paying attention to data and privacy concerns. To address these issues, the following steps were put forward: a) prioritizing LGUs receptive to partnership; b) exploring subsidy for CAPEX & OPEX using voucher (Wi-Fi4EU model); and c) developing participatory 'requirement assessment tool' for site selection & prioritization.

The Technical Workshop also enabled the participants to enumerate critical needs for capacity development interventions. To create an enabling environment for smooth program implementation, the participants stressed the need to review key Wi-Fi and IT security policies and to have a Joint Memorandum Circular (JMC) between the DICT and the Commission on Higher Education concerning the Wi-Fi installation in state colleges and universities (SUCs), among others. In terms of enhancing the organizational capacity, network integration and participatory assessment tool emerged as crucial needs. For individual capacity development, some activities identified were the vendors' training and program and network design seminar.

Besides identifying the capacity needs, the participants also produced three key outputs. The first was an operational framework for site acceleration. Drawn primarily from the UNDP's Chief Technical Consultant proposed diagram, the framework considers the presence of school computerization projects, live mPOPs, and "friendly" or cooperative LGUs as crucial factors in the site selection. Another output was the draft DICT-DILG (Department of the Interior and Local Government) JMC with identified roles and responsibilities for each agency. A final output was the Citizens' Checklist for Pipol Konek monitoring. The Checklist spells out the project phases and activities in which citizens can take part as independent monitors.

In the Consultation Workshop, several lessons emerged from the presentations of alternative modes of internet service provision. The FICTAP experience, for instance, highlighted the following issues: right of way, lack of backhaul, missing middle to last mile connections, and investment & payment issues. When it comes to community-managed networks, the presentations on the 'people-driven Pipol Konek' and VBTS-COCOMONETS underscored three critical factors: a) the maintenance community cellular networks, b) sustained LGU partnership; and c) the role of community groups and cooperatives.

Towards the end of the two-day workshop, the UNDP and DICT Teams agreed on undertaking the following immediate next steps: 1) finalizing the Project Document; 2) selecting the priority sites; 3) getting in touch with FICTAP and other players; 4) sharing of DICT data to UNDP.

Day 1, 14 February 2019, Thursday

Highlights of Day 1

Opening Remarks

ASec Alan A. Silor, DICT Assistant Secretary

Figure 1. DICT's ASec Alan Silor giving his welcome message

The technical workshop officially began at 8:47 AM with the opening remarks from Department of Information Communication and Technology's (DICT) Assistant Secretary for Information Structure Management Bureau and Other Special Concerns - Allan Silor. ASec Silor expressed his happiness that the DICT-United Nations Development Program (UNDP) project is becoming a reality after months of discussion that started in September 2018. He said the project is very good for the country and for the future because it connects and touches lives as it brings internet to all.

ASec Silor also shared that they had to complete many documents before this project gets implemented in the country. He then pointed out that this UNDP-DICT collaboration aims to make internet access available in additional 6,000 areas nationwide. While the provision of free Wi-Fi for identified centers nationwide has been a daunting task, ASEC Silor said that forging partnerships gives hope and direction that will chart the success of this endeavour.

After Asec Silor's opening message, Dr. Redento Recio asked Ms. Bernice Galang to lead an interactive exercise for everyone introduce themselves and share their expectations of the two-day event. Ms. Galang then invited everyone to form an oval as an initial step in the expectation setting. She used the Connectivity Web exercise to facilitate a round of introductions and sharing of workshop expectations. (Please refer to Annex 2 for the specific activity mechanics).

Some common expectations shared by the participants had to do with: a) having a better understanding of the project including its hurdles and problems, b) finding solutions to address the implementation problems, c) getting to know the team members and the counterparts from UNDP and DICT, and d) producing workshop outputs that will help expedite the project implementation.

Figure 2. Connectivity Web Exercise: The participants introducing their names and sharing workshop expectations

Welcome Remarks

UNDP Resident Representative Titon Mitra

After the Connectivity Web exercise, Dr. Recio called in the UNDP Resident Representative, Mr. Titon Mitra, to give his opening message.

Mr. Mitra began by thanking the DICT for allowing the UNDP to work with them. He said that the UNDP's partnership with the DICT is a new modality of work. Observing the situation in the Philippines where laws are particularly around the physical policy, physical spaces pose challenges. Capability and capacity remain flat as budget continues to rise every year. Mr. Mitra then noted that what the DICT needs to use is a system that works for a short term to accelerate their own expenditures. In return, however, the UNDP would like to work with DICT to enhance its own capabilities so that it may have its own when the project is done. Describing it as a partnership for a long time, he specified that the objective of the program is "to reach the last first."

A second key point Mr. Mitra shared was about how the digital divide is among the most significant issues facing the country; thus providing free Wi-Fi is really a challenge. While competition is not good, he noted, it brings innovation and flexibility. What is ironic, Mitra continued, is that data usage in the Philippines at nine hours per day is the highest in the world; yet close to 50 percent of the population has no access to the internet. He cited Marawi as one of the 5,000 locations in the country where the population could have access to the internet that can be provided digital payment platform.

Figure 3. Mr. Titon Mitra, UNDP's Resident Representative, delivering his opening message

Mr. Mitra said the problem can be fixed and everyone can have an opportunity to have a free Wi-Fi. He likewise pointed out the situation where the country has limited providers despite proliferation of 'providers'."

With respect to site selection, Mr. Mitra mentioned that the full target of 13,000 areas, a very small proportion out of the 60,000, is also an issue. He suggested considering a mix of low hanging fruit that will show very quick and tangible progress. Mr. Mitra also expressed his hope that the UNDP-DICT project can consolidate what has already been done. In addition, he said that the quality assurance of infrastructures of many of the impoverished municipalities can be hooked up to the internet in real time during disaster management in municipalities; the internet may then be used for transformative changes.

Work must be consolidated. Lesson must be learned in past experiences. The trick is in planning; procurement is less an issue, he added. As a final point, Mr. Mitra underscored the importance of planning in this UNDP-DICT partnership. He emphasized that the project can go beyond the provision of resources, but reiterated that the UNDP is a partner, not a service provider. He ended by saying that the project's collaborative design can lead to a wonderful success.

Before moving on to the next presentation, Dr. Recio, the workshop facilitator, summarized some expectations from the previous exercise. He then walked the participants through the workshop content and flow, emphasizing that the activity has two parts – the Technical Workshop and the Consultation Workshop. He briefly noted the key activities involved in each component. For a detailed copy of the workshop flow, please refer to Annex 1.

National Broadband Plan and Pipol Konek: Linkages and Dependencies

Presenter: Engr. Eric Toledo, DICT Program Manager

To situate the Pipol Konek program in the broader National Broadband Plan, Dr. Recio called on Engr. Eric Toledo, the Pipol Konek's Program Manager. Engr. Toledo described first the "whole picture" before discussing the national broadband. *For a copy of Engr. Toledo's presentation, please refer to Annex 3*. He specifically discussed the challenge in the last mile that has 13,000 sets being bidded and awarded. He said that should the LGUs go for it, the DICT will give them a share of the resources, the voucher or the money.

In sharing about a connectivity problem, Engr. Toledo said that seeking the services of PLDT and Globe Telcom is problematic so that the DICT has to come up with its own Wi-Fi services. He added that the agency has to come up with its own FOC backhaul assistance and that an international landing station must be set up and accelerated tower build-up must be done to come up with the last mile, accelerated mile and satellite overlay.

Further, Engr. Toledo said that last June 2018, a tripartite agreement among DICT, NGCP (National Grid Corporation of the Philippines, formerly NAPOCOR) was signed. The agreement was to make use of the dark fiber, the optical power ground wire (OPTGW). Instead of the domestic backhaul, he said that this NGCP OPGW will be used. He noted that there was previous MOA (Memorandum of Agreement) signed by Beneco, DICT and Transco. He also shared that there are on-going interconnection projects like a survey of submarine cable is in Samar and a marine survey in Mindanao.

Engineer Toledo further said the DICT will come up with Facebook two landing stations - La Union and Aurora (Baler), which will be connected via fiber optic network. He mentioned though that some problems may arise when the international submarine cable passes through the Luzon route and other parts of the Philippines.

As a final point, Engr. Toledo noted that the phone call construction is already completed at 100 percent. This construction is the backhaul of the La Union site and that the terrestrial network is starting to come out with all of the design and lay-out the ducts by the first quarter of 2019, he said.

When Engineer Toledo spoke about giving the LGUs a share of the resources in the form of voucher or money, Mr. John Garrity suggested to have a cost sharing with regards to CAPEX/OPEX. He added that the LGU can cover the last mile as well as the installation of the access points. The project can put on money on infrastructure and the backhaul, he added.

Engineer Toledo replied that if DICT will go to the last mile as well as the installation of the access points, they can put on money on their own infrastructure for the backhaul. Mr. Garrity said that in a situation where there is no other backhaul option for the LGUs, they may opt to have a satellite. Subsidy for this may be in the form of payment for the bandwidth that is available. He also commented that it will be a worthy activity should DICT focus on subsidizing the building during the last mile link from the Mpop; it is being done in other countries as well. He likewise specified that the only limitation is that building a public infrastructure takes a long time.

Engineer Toledo brought up the issue of LGU ownership of the project so that they can easily install and secure permits. He clarified though that installing the backhaul and securing the permit are two different things. He explained that securing permits is another problem in the process.

While explaining about the 82 percent completion of the modular facilities in the terrestrial network during the first quarter of 2019, Mr. Garrity asked about the plan of Pipol Konek to connect with bandwidth using DICT's own network. Engineer Toledo responded that the DICT is building the IP gateway which becomes the landing station in the La Union grid. Mr . Garrity asked why the NGCT is building the undersea cable in Luzon, Visayas and Mindanao. DICT is not aware of the business plan of

Henry Sy's family who seem to be building their own network and coming out with their own backhaul, according to Engineer Toledo. As to the Sy family's expanding rapidly of their own network in Luzon, Visayas and Mindanao, DICT can make use of it in the future , according to him.

Mr. Garrity asked about the agreement that DICT signed with USDA, grant from US government, that grants the hiring of technical advisers to build up procurement for the national backhaul as well as for the equipment intended to light up the NGCT. Engineer Toledo responded that the USTP will do the study for the national broadband network which is long term in three years. The NGCT is doing the plan for submarine cable for the undergrounds to back up the national broadband, he said.

Mr Garrity asked when would the NGCT be completely alive in terms ofr delivering bandwidth. Engineer Toledo explained there are two stages: DICT can already have the one terra should the data centers become landing stations; second is having the infrastructure. He noted that the next problem would be to light up the NGCT. The national broadband network has to Php 2 billion budget for the purchase of equipment in 2019.

Free Wi-Fi Programs across the World

Presenter: Mr. John Garrity, UNDP Chief Technical Advisor

After Engr. Toledo's presentation, Dr. Recio introduced Mr. John Garrity, UNDP's Chief Technical Advisor, to discuss some salient lessons from past and current free Wi-Fi programs in other countries, which are relevant to the Pipol Konek implementation

Mr. Garrity shared the experiences of some companies in the public sector providing free Wi-Fi around the world. For a copy of his presentation, please refer to Annex 4. Before dwelling on key lessons, he pointed out the need to think more about the issues and not compare nor contrast the companies in the public sector. To emphasize how internet connection has become important, Mr. Garrity cited a study indicating that 55 percent of the college students and 62 percent of the young employees cannot live without the internet. This data shows, he noted, that in the Maslow's hierarchy of needs, Wi-Fi seems to be at the lowest level of the pyramid, making it an essential stuff of life. Moreover, studies show that increased connectivity is directly proportional to increase in GDP.

Mr. Garrity shared that in France, Costa Rica and Greece internet access is enshrined in the constitution as a human right. In these countries, one-time subsidy is an example of support for wired broadband and there are fixed wired infrastructure buildings in the metropolitan areas. He explained that it is even stated in the UN Special Rapporteur for Human Rights Council in 2011 which states "ensuring universal access to the Internet should be a priority for all countries."

Mr. Garrity shared samples of one-time subsidy for wired broadband and cellular broadband. For the wired broadband, he cited the metro fiber optic ring for Monrovia, Liberia which has 50-50 investment between USAID and Google/CSquared. The project involved public subsidy to minimize the risk of private investment, connecting 53 government sites in 222-kilometer trunk router. For the cellular

broadband, Mr. Garrity shared the partnership between Inveneo and Orange for the campaign on Ebola recovery. The partnership was aimed at connecting 37 rural sites such as clinics and development organizations. USAID invested USD 750,000 for training of site managers and purchase of new CPE equipment. Orange invested another USD 750,000 for site upgrades and expansion. Aside from CAPEX for new rural sites amounting to USD 220,000 worth of infrastructure, there was also a USD 10,000 – worth of monthly OPEX.

Mr. Garrity also shared five examples of fully subsidized free Wi-Fi projects, namely: (1) WiFi4EU; (2) Free Wi-Fi for Africa; (3) Free Public Wi-Fi in Malaysia; (4) Free Public Wi-Fi in Malaysia; and (5) Free Public Wi-Fi in Indonesia. According to Mr. Garrity, WiFI4EU is a supranational program focused on free access to Wi-Fi in public spaces such as parks and libraries. EU provided vouchers for CAPEX subsidy for a maximum amount of EUR 15,000.00 and OPEX subsidy for Wi-Fi connections at the municipalities.

ISIZWE, the Wi-Fi connction program in South Africa is a tie-up between NGOs and LGU. Mr. Garrity said that both CAPEX and OPEX had public subsidies. The project has set-up 1,500 free internet zones, connected 2.7 M unique users. However, the program ended in June 2018 due to legal issues. The government of Malaysia provided free Wi-Fi access to students, other-abled individuals and elderly for all centers in 806 sites. Indonesia established more than 600 sites of free Wi-Fi.

There are also models of revenue-subsidized Wi-Fi access, according to Mr. Garrity, such as those existing in Africa, specifically, Kenya, Malawi and Tanzania, the Google-SMART partnership project in the Philippines, and Linkod Kabitenyo and Intelligent Boracay also in the Philippines.

Mr. Garrity highlighted the critical parameters for free Wi-Fi programs include site selection, bandwidth requirements, cost recovery model, network ownership model, and data and privacy considerations, if the program is expected to impact on cost per site, interest in participation and speed of deployment.

The participants expressed interest over the voucher-based subsidy, which according to Engr. Toledo can possibly be applied in the Philippines.

Request for Proposal (RFP) Process

Engr. Lawrence A. Pagal

In order to have a better understanding of the whole DICT RFP process, Dr. Recio called on Engr. Lawrence Pagal, Pipol Konek Staff, to explain the RFP's key elements and issues affecting the major phases.

Engr. Pagal's presentation (see Annex 5) focused on the status of Pipol Konek implementation. He said that the front haul construction has been completed and 84% of the modular IT facilitation (cable landing stations and repeater stations) has been constructed. He added that the construction of the terrestrial roadwork will commence during the first quarter of 2019. This will include the establishment of international cable landing stations to connect the Philippines to the international submarine cables

going to mainland Asia and North America, partnership with BCDA under the secure govnet project of DICT, and construction of two landing stations in Baler, Aurora and Poro Point, La Union.

In addition, Engr. Pagal discussed some challenges that PK has been facing. These include the following: (1) securing of supplier permits and authorization; (2) dependency of small IPs serving the remote area on the big Telcos for their internet transport; (3) the current business model of service providers where they tend to concentrate in areas where they already have commercialized point of presence (PoP); and (4) missing essential network company due to either unsuccessful bid or not deployed.

Defining Parameters and Co-Designing DICT Capacity Building Efforts

Presenter and Facilitator: Mr. Marsmath Baris, Jr., UNDP Program Coordinator

In this session, Mr. Marsmath Baris, a UNDP Program Coordinator, facilitated the identification of the knowledge, skills, arrangements that the DICT requires to speed up the Pipol Konek implementation. Building on the previous discussion on PK implementation issues, Mr. Baris also led the participants in pointing out the implementation issues that can be addressed by capacity development activities.

To emphasize the importance of capacity development interventions, Mr. Baris first discussed some key components for formulating capacity development agenda (please refer to Annex 6 for a copy of Mr. Baris' presentation). He touched on the current state capacity, as well as some project gaps and needs. He also clarified that capacity development is different from capacity building. Capacity building, Mr. Baris explained, refers to a situation whereby the target audience are in the process of acquiring competency. On the other hand, capacity development takes off from the existing competencies and improve from there.

Before proceeding to the workshop, Mr. Baris explained three aspects - an enabling environment, organizational level needs, and individual level needs - that will guide the identification of capacity development needs. During the workshop, the participants wrote down on metacards the different needs under each aspect. In terms of creating an enabling environment, the participants said that there is a need for Wi-Fi policy to be in place, including sanctions (blacklist/whitelist) of non-performing service providers. The participants also identified the importance of having a joint memorandum circular with CHED and the SUCs, and a policy on IT security.

Under the organizational level, the participants mentioned the need for the integration of network, business management process as a continuing capacity development, site coordination through the help of CSOs and developing of participatory assessment tool for site selection and prioritization. Organizational intervention were also mentioned such as educating LGUs on the benefits of PK project, quality management system training, capacity building for CSOs, and taking on the Wi-Fi 4 EU model on CAPEX and OPEX subsidy through voucher.

Figure 4. UNDP's Mr. Marsmath Baris discussing the components of Capacity Development Agenda Formulation

At the individual level, the participants identified skills on technical and integration, vendors' training and seminar, project 2 design and dimensioning, and cyber security training.

Day 1 Synthesis

Dr. Redento Recio

In his Day1 synthesis, Dr. Recio situated the different workshop sessions in the broader project management cycle with four components: a) Recognizing the Current Context; b) Revisiting the Direction; c) Determining Key Actions/Measures; and d) Sharpening Tools for Successful Implementation. (Kindly refer to Annex 7 for a copy of his synthesis presentation). The diagram below shows how the different workshop sessions relate to these project management components.

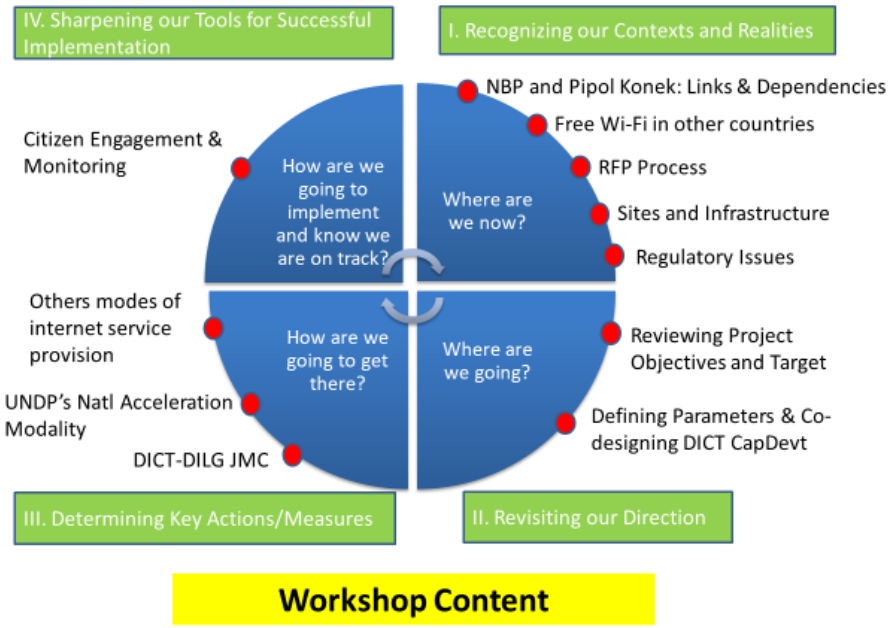


Figure 5. Situating the workshop content in program management cycle

Dr. Recio noted that the DICT's and UNDP's discussion of broad overview of the development, direction and expectations of the partnership represent a look back at the partnership's direction. He said that DICT Assistant Secretary Allan Sillor expounded about the realities on the ground. UNDP's Titon Mitra, for his part, gave his expectations and the results that the UNDP wants to see after the 18-month implementation of the project.

Dr. Recio further said that much of the discussion in the Technical Workshop revolved around the challenges that the DICT has been facing for almost three years now. He enumerated some issues that have to do with procurement concerns and processes - the failure of bidding, lack of capacities of some qualified bidders who are unable to deliver on time. He said that one pressing issue is about delivering the services on time. He also shared how some participants expressed the difficulty of dealing with the internal dynamics among local government officials as another vital concern.

Dr. Recio mentioned a common observation that the ISPs tend to be too dependent on paid posts. He added that it is also difficult for them to deliver the needed outputs, which that lead to the issue of missing key components in different areas. As a result, many installed amenities are not yet operational up until this time, he noted.

To address the challenges, Dr. Recio noted that some suggestions were also put forward. One suggestion was to look into the "low hanging fruit" such as prioritizing the LGUs receptive to the partnership. Another proposal, he mentioned, was the development of participatory assessment tool for site selection and prioritization. Lastly, Dr. Recio underscored that the Technical Workshop also enabled the participants to enumerate critical needs for capacity development interventions. To create an enabling environment for smooth project implementation, he said, the participants stressed the need to review key Wi-Fi and IT security policies and to have a Joint Memorandum Circular (JMC) between the DICT and the Commission on Higher Education concerning the Wi-Fi installation in state colleges and universities (SUCs), among

others. In terms of enhancing the organizational capacity, network integration and participatory assessment tool emerged as crucial needs. For individual capacity development, some activities identified were the vendors' training and project and network design seminar.

Day 2, 15 February 2019, Friday

Highlights of Day 2

Opening Session

Facilitator: Redento Recio

Ramdam Sampling. The second day started with a short breathing exercise led by Ms. Bernice Galang to calm the mind of the participants and get them ready for the day's discussion. To have a sense of the participants feelings and reactions from the first day's sessions, Dr. Recio facilitated an activity dubbed as "Ramdam Sampling". Some common feelings, reactions and thoughts that the participants shared were as follows: better understanding of the Pipol Konek program; discussion of the detailed implementation process and issues was helpful; hopeful about the UNDP-DICT partnership; better appreciation of the Pipol Konek staff have been doing for the program; looking forward to lessons to be learned from other cases of internet service provision. For a list of actual comments from the participants, please refer to Annex 8. *Ramdam* Sampling Feedback.

Questions and Clarifications from Day 1 Session – Dr. Recio asked the participation if they have 's questions and comments regarding the different points tackled from the previous day's sessions. Dr. Andrew Parker, a UNDP Staff, mentioned two aspects that were not fully nailed down. These were: (1) site selection criteria; and (2) bandwidth requirements.

In response, Engr. Toledo said that all municipalities are included although those with connectivity can be selected first. He noted that technical feasibility follows geographical selection. The DICT's main challenge is to produce the number of sites that can get connected. Both the Senate and Congress demand an increase in the number of sites connected. He also explained the project's other requirements and technical aspects like the required 512 bits per person per square meter, the need to ensure that the Wi-Fi is in public places and not in the government officials' rooms.

Dr. Recio asked the DICT Team about the basis of the 200,000 target by 2026. Engr. Toledo explained that the total figure consists of 56,000 schools, 40,000 barangay halls, plazas and other public spaces. He said there is a document indicating the breakdown of the 200, 000 target. With respect to the UNDP-DICT partnership, he mentioned that PHP1.3 billion has been allotted to install 6,000 free Wi-Fi by October 2019. There is an initial target of 500 municipalities, prioritizing those with infrastructure for bandwidth installation.

With regard to the required bandwidth, Mr. John Garrity said that there has to be balance between the law and realities. The minimum threshold of 2mbps may not be possible for some areas; yet the 512 is better than no service at all. Engr. Toledo affirmed Mr. Garriti's noted that IT still uses 256 until now although many people think it is ridiculous.

After discussing all questions concerning the previous day's sessions, Mr. Garrity presented a proposed framework for site prioritization using the diagram below:

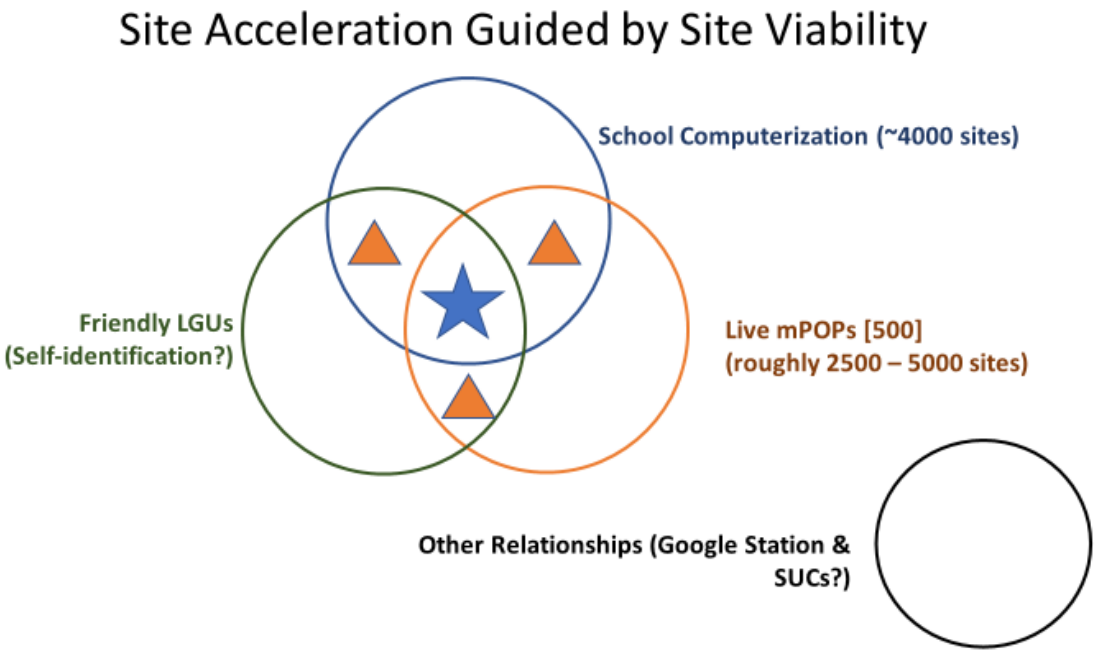


Figure 6. Framework for Site Acceleration

Using the diagram, the priority area will be where the three circles intersected (see blue star). Three elements must be present in the area for it to be selected: 1) the presence of school computerization which is in 4,000 sites; 2) friendly LGUs supportive of Pipol Konek; and 3) live mPOPs which is currently in 500 municipalities. Other factors may also be considered (see the circle on the side) such as the presence of partnership or relationship with google, state universities and colleges (SUCs) and other possible stakeholders.

In case the priority sites are exhausted, the intersections between two of three circles (see orange triangles), may also be considered in area selection.

Engr. Toledo suggested to add the national government agencies (NGA) into the picture. Dr. Parker shared that in the subset of friendly LGUs with live mPOPs, there will be a bunch of RHUs that can be reasonably easily connected. The focus, he said, should be on the access points, without any intention to exclude other facilities. Some participants noted that some RHUs are under the LGU but some are under DOH. The same thing is true with the SUCs, 367 of which are under CHED; however, there are LGU-managed schools such as the city colleges.

After addressing some concerns, both the UNDP and DICT staff agreed to adopt the framework for site selection.

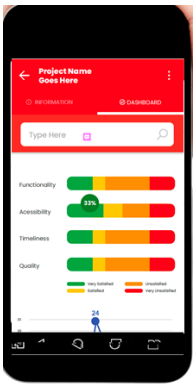
Citizen Engagement And Monitoring Quality of Internet Service
Presenter: Mr. Jonathan Hodder, UNDP Staff

This session aimed to explain the imperatives of citizen engagement for every phase of Pipol Konek implementation. The workshop to come up with a list of roles of citizen monitors will take place after the short input on the existing citizen monitoring application.

Mr. Hodder shared devLIVE, a mobile platform for government and citizens to collect and analyze data. It was developed to facilitate the collection of data for UNDP's project that were contracted out to national NGO/CSO networks; these national networks that are implemented through their member/network NGO/CSOs operating at the local level. Collecting data is a big challenge in this kind of set-up – first because it is paper based, it will take a long process to get the data ready for analysis; and second is the issue of data ownership and usage.

Development LIVE provides a new way of collecting data and a visualization platform for the citizens as well as the government. It allows greater transparency, accountability, and efficiency in implementing government projects in partnership with the citizens. It also generates a sense of ownership of the project among the people. DevLIVE is also adjustable according to the needs of any agency.

The application is easy to use and can be accessed offline through the mobile phones. It can also be accessed online through the desktop or laptop computers.



The mobile app has a dashboard that shows the rating on indicators such as functionality, accessibility, timeliness and quality. The data is visualized according to rate: green being very satisfied; yellow being satisfied; orange being unsatisfied; and red being very unsatisfied.

Mr. Hodder showed the features of DevLIVE including the login page, map, few survey questions, and feedback count pages. Through partnership with establishments, respondents can get some incentives for responding to the survey.

DevLIVE provides feedback to projects implemented by three agencies: DILG, DepEd, DBM. Details of coverage are as follows:

Agency	Programme	Coverage
DILG	Assistance to Municipalities Conditional Matching Grant to provinces	1,300+ Municipalities 5,000+ Projects 78 Provinces 320+ Projects

DepEd	K to 12 Computerization Programme	14 Provinces 300 Schools
DBM	Project DIME	78 Projects

There are three levels by which citizen monitoring is incorporated: (1) site validation readiness and baseline; (2) installation of equipment; and (3) quality and impact.

Open Forum

Mr. Hodder affirmed that the application can be modified, as per Engr. Toledo's clarification, but it will require some budget from the PHP 1.3B.

There are also three levels of access implemented by SSID: level 1 is click through; level 2 would require a registration; and level 3 is PKI or certificates.

Workshop

Based on the inputs of Mr. Hodder, the participants were asked to identify the different activities under three phases:

1. Site validation and readiness
2. Installation
3. Quality and Impact Assessment

The participants were divided into three groups, each one to work on each of the phases. Each group assigned a reporter to share their workshop outputs.

Group 1. Site validation and readiness

Activities under site validation and readiness	Citizen Participation	Activity Description
Site inspection (existing building, status of building -- for renovation? Vacated for 1 year?; conduit; power availability; availability of racks; availability of space for equipment)	✓	Assist in determining necessary requirements for site installation
Availability of telco and infrastructure	X	Technical in nature
Coordinates/ Distance from the nearest distribution network	X	Technical in nature
Current market situation (price per Mbps)	X	Technical in nature
Political affiliation*	✓	Determine if there's any political conflict with the LCE

Activities under site validation and readiness	Citizen Participation	Activity Description
Population/ Number of prospective users	✓	Get average number of people congregating in the area; regular monitoring
Current use of internet (education, social, e-commerce)	✓	Get general perception of internet use in the community/ site
Policy/regulation (usage/ operations/ working hours)	✓	Determine if there's limit as to the Wi-Fi service will be made operational (e.g., will be turned off after office hours, etc.)
Identify focal person and site coordinator and their contact information	✓	Get name, designation and contact info
Internet provider in the area and type of internet connection (DSL, LTE)	✓	Get citizen feedback on what type of internet connection they have

Note that except for the technical aspects, citizen participation are required in all activities that the participants identified under the first phase.

Group 2. Installation

ACTIVITIES	CITIZEN PARTICIPATION	SPECIFIC ACTIVITY
Identification of sites	✓	Recommendation of sites
Determining location of Access Points	✓	Reommending locations for Access Points based on their observations on which areas people congregate the most
Determining link and comm. box locations	**X**	Too technical, involves sensitive information
Integration and acceptance, including sites with existing networks	✓	Reporting of any disturbances caused during and after installation (e.g. loud noises)
Operations and Maintenance	✓	Reporting of issues encountered

Engr. Toledo asked whether the acceptance for site and link plans would only require citizens' participation or the users' perspective on the site. He informed the group that DICT usually goes to the site with the provider to witness the testing. One thing that has to be ensured, he said, is that the committed internet rate (CIR) of 2mbps will be there.

Dr. Ocampo posed the possibility of having data analoguing source feedback. This can be installed in the mobile where citizen participation can be directly linked to a site where they can download the app. Engr. Toledo affirmed this, adding that an access point can be provided for the last mile where testing for users' experience can be done. There will be several questions to assess the site.

Group 3. Quality and Impact Assessment

ACTIVITIES	Citizen Participation	✓: Describe the Activity x: explain why
Daily Operations (User Experience)	✓	✓: This is the usage of the service. User describes how the user experience is.
Periodic Inspection of Quality of the Installation	✓	✓: periodic reports on the physical installation including cabling
Location of Service (Accessibility to the Service)	✓	✓: are the citizens/users able to access the service for majority of the day or is the location limited such as principal's office, mayor's office, etc.
Availability of Power	✓	✓: some sites shut down during weekends or after office hours however these sites are meant to operate 24x7; the users must report on this
Request for Access Points	✓	✓: users request for access points in the area. This is to possibly provide weight upon selection of sites.
Disaster Management	✓	✓: availability of service during or after the disaster including reporting on the duration of down and of the restoration of the service
Information Gathering and Pooling	✓	✓: this would allow users to report and nominate possible beneficiary sites; confirmation of several information is provided including validation of coordinates, foot traffic/enrollee; inputs for the roadmap of the program implementation and policies/guidelines

DICT and DILG Joint Memorandum Circular Standardizing/Harmonizing LGU Requirements from Internet Service Providers

Facilitators: Ms. Bernice Galang and Dr. Redento Recio

In this session, Ms. Galang asked the participants to form two groups, which would spell out the major roles and expected outputs that should appear in the proposed DICT-DILG JMC. The first group was tasked to work on the duties and responsibilities of DICT in relation to Pipol Konek project. The second group was assigned to come up with a list of duties and responsibilities for DILG related to Pipol Konek project. The groups were given 30 minutes for discussion. Each group assigned a reporter to share the workshop outputs in the plenary. Dr. Recio facilitated the reporting and open forum part.

Workshop Outputs (Please refer to Annexes 9 and 10 for complete outputs). The first group worked on the duties ad responsibilities of the DICT based on the existing Joint Memorandum Circular with the Department of Education – JMC No. 01, series of 2018. As stated in the proposed DICT-DILG JMC, the DICT will remain the project owner and lead agency to carry out the implementation. As such, it will provide the project framework and standard. Part of its responsibilities is managing the technical staff

and service providers to ensure that project implementation is up to the set rules and regulations. The DICT shall also be on top of post installation activities such as monitoring and evaluation, and maintenance of equipment.

The second group worked on the duties and responsibilities of the DILG. As project partner, the DILG's main duty is to advocate to the LGUs the importance of the project, harmonize the efforts between DICT and LGU, provide a safe working environment to DICT authorized persons and entities, and in general, encourage the LGU to cooperate and actively participate in program implementation. LGU cooperation also means facilitating the issuance of permits and licenses as per RA 11032, otherwise known as the Ease of Doing Business and Efficient Government Service Delivery Act of 2018.

Open Forum. Some of the issues/challenges that surfaced during the discussion include:

- **Difficulty in securing permits**. It is usually the service provider that encounter difficulties related to securing permits.
- **Non-standardized surety bond**. A case in point is the DICT experience in Zamboanga. Engr. Toledo shared that they were to install optic fiber for 56 government agency buildings. Before they were allowed to dig 5 kilometers for the installation, they were asked PHP10M cash. As requested, they were allowed to give surety bond instead. Despite having DPWH permit for excavation, DICT could not start without the permit from the LGU.
- **Non-cooperative LGUs**. Dr. Recio raised the possibility of lobbying with the DILG to include participation in the Pipol Konek project as one of the indicators in the Seal of Good Locl Governance (SGLG) award to incentivize their cooperation. There is a bragging right accompanying the seal of good local governance plus the million peso reward for complying. Mr. Hodder and Dr. Ocampo affirmed the fact that LGUs comply positively with DILG mandated programs. In provinces where there is very good governance like Albay and Quirino, everything is done quickly. In response, Ms. Besinga, DILG-Bureau of Local of Local Government Development (BLGD) Program Officer, said that it is possible to include WI-Fi access as one of the SGLG indicators.
- Dr. Ocampo observed that the Pipol Konek is oriented on new installation. He asked whether there are Memorandum of Understanding (MOUs) in areas where there are existing infrastructure. Engr. Pagal shared that in the case of Quezon City, DepEd has an existing talks with the LGU for network an fabric optic. Engr. Toledo shared the situation in Cavite where PLDT is charging huge amount for internet connection. Cavite LGU collaborated with DICT with memo approved for IP international. However, the big problem now is how to connect the whole of Cavite up to Diliman which is now subject for bidding.
- Coping with maintenance is a potential challenge in the future. With 200,000 Wi-Fi connections, the DICT will not be able to cope up with maintenance. There has to be agreement with the local entities for maintenance like in the case of Cavite.

Technical Workshop Summary
Redento Recio

After the open forum on the proposed DICT-DILG JMC, Dr. Recio briefly reviewed the highlights of Day 1 sessions, which focused on identifying the challenges in implementing Pipol Koek project. The second day focused on how to achieve the goals and targets. The diagram below summarizes the outputs from the one-and-a-half day activity.

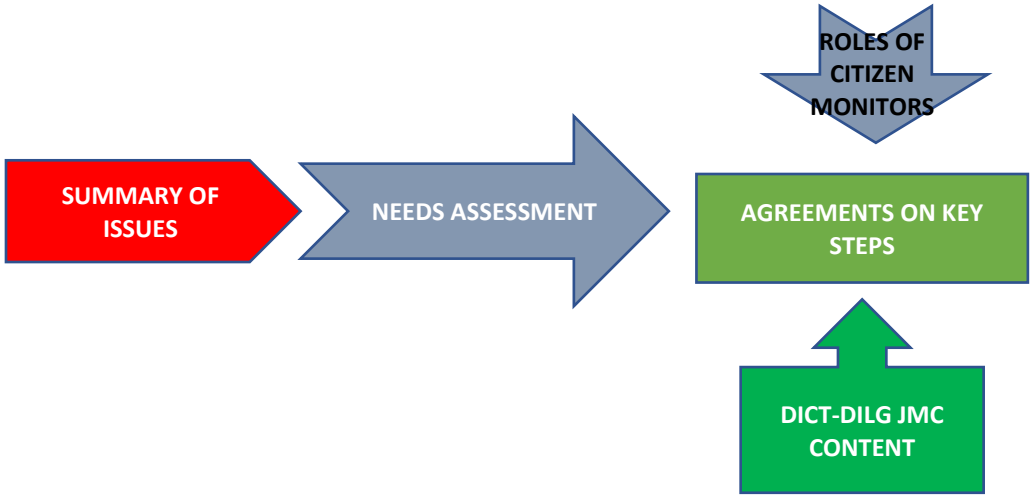


Figure 7. Technical Workshop Outputs

Besides assessing the key implementation issues, Dr. Recio pointed out how the participants also reached some agreements like site acceleration framework, sharing of important documents, proposed content of the DILG-DICT JMC, and the involvement of citizens in monitoring the various phases of Pipol Konek implementation

Consultation Workshop

Facilitator: Dr. Redento Recio

Dr. Recio opened the consultation workshop by asking the participants to introduce themselves as there were new guests from the community-managed programs, academe, businesses and other government agencies. The participants said their name, agency/company and their work in the organization.

UNDP National Acceleration Modality and the Pipol Konek Project

Presenter: Mr. Jonathan Hodder

Mr. Hodder explained that the way that UNDP has traditionally worked in the Philippines was providing resources to the government to implement programs. This modality is commonly used in countries with little or no resources. He noted that the national budget of the Philippines has been more than double. With the Pipol Konek project, DICT will be transferring funds to UNDP so that the latter can implement the program on the ground, while at the same time increasing the capacity of DICT in program implementation. As clarified in the morning session, one of the urgent tasks of UNDP is selecting priority sites.

There were no questions raised regarding Mr. Hodder's presentation, thus, the session moved on to the next topics.

Opportunities and Modes of Providing Internet Service: The FICTAP Experience

Presenter: Engr. Ruben Cortes, FICTAP President

Engr. Cortes opened his presentation (see Annex 11 for his slides) by sharing that the Federation of International Cable TV and Telecommunications Association of the Philippines or FICTAP is presently celebrating its 20th anniversary. He said they are proud to have provided free connectivity to public schools where elementary school teachers and pupils can access the internet. They are glad to have been strengthening the middle mile and the last mile.

He also shared the challenges that they have been encountering. One is the right of way where huge amount is being charged to them for the use of poles. The price has been standardized now at PHP 420,000 per year per pole although some of them still pay at PHP 120,000 per year per pole. Presently, the National Electrification Administration (NEA) is backing them up. Another challenge is the lack of backhaul to be able to connect to the core since their strength is on the last mile. FICTAP recommends that the government put up POPs at the provincial level – or better still, at the congressional district level. On this note, Engr. Toledo affirmed that the DICT's mandate is to have POP in all 81 provinces, but the challenge is actually in the municipalities. Opportunities related to this is the POP at the capitol of Vigan. If this could be adopted at the provincial level to reach out to the last mile, the other mPOPs would be easier for the TV cable operators.

In the middle of Engr. Cortes' presentation, Mr. Garrity threw a question of on sub-contracting FICTAP. Engr. Cortes explained that they are not qualified to bid as they lack the requirement – specifically,

having the single big contract. They need to form a sort of consortium or partnership with big telcos. The telcos should be doing the middle mile, but apparently, they sub-contract this to small players such as TV cable operators. The TV cable operators are supposed to be working on the mPOP level. A case in point is conneting mPOP to rPOP in Surigao which is a 100-150 kilometer distance. Connecting this using the facility of telco will mean losing money for small operators.

Further, Engr. Cortes also discussed the following issues: bandwidth cost; investments to upgrade infrastructure; slow payment; adoption and investment of new technology; and low project cost . With respect to new technology, he clarified that FICTAP is using unlicensed frequency on the radio and though they have done a lot of research on tv white space the investment is quite high. To illustrate his point on the issue of low project cost, Engr. Cortes cited a barangay which is 10 kilometers away from the municipality and will give us 2,000 per month. For such revenue, he noted, we need to invest a lot – people, infrastructure, technology, maintenance costs.

Engr. Toledo said that it would have been better to contract it out with small player as it will lower the cost. DICT would like to help the TV cable operators by deploying them as anchor. There are 3,000 radio equipment that are not solely for Pipol Konek, which can be used for other things. However, if DICT pays for the equipment, the ownership will be theirs naturally. Thus, it cannot be used for monetization. The strength of the TV cable operators is reaching out to the remote areas which DICT recognizes. If DICT subsidizes CAPEX, the ownership will be theirs; this is why they would rather focus on OPEX.

Engr. Toledo said that even during the beginning of the project, the intention of involving TV cable operators has been there, thus, the series of meetings. In the end, they cannot bid because of the limitations. UNDP has more flexibility in terms of partnership. Engr. Cortes admitted that Pipol Konek is a hard but a noble project. He is hoping that the project can reach more people especially in the remote areas, but to do this, there has to be changes in the policy environment. He does not want to repeat their experience in Cavite where towers have already been constructed but the permit remains pending for a year now. Payment comes also very slow because COA will audit not the infrastructure but the Wi-Fi connection itself.

With regard to securing LGU permits, Engr. Cortes said that it is usually a stress-free life until the issue on the pole in Tarlac came up a month ago. He said that FICTAP needs help on the joint pole agreement (JPA), with POPs at the provincial instead of regional level. Regarding cost distribution, Engr. Cortes said that 60 percent goes to infrastructure while 40 percent goes to human resource and rentals.

Before Engr. Cortes ended his talk, Mr. Garrity expressed his appreciation for having the discussion with FICTAP. As everybody has pointed out, the coming phase is going to be different. He is hoping that the cable TV operators will participate in the project.

It was also made clear that small and medium cable operators may treat the Pipol Konek sites as one of their subscribers. To do this, they have to put up a parallel infrastructure such as a separate access point. It is clear to the operators that they are not supposed to utilize the clients of Pipol Konek. They also need to have a different backhaul and possibly set up multiple SSIDs, one of which can be used for business, the other can be used for free Wi-Fi connection. They also need to ensure that there is a

dedicated line for Pipol Konek, and not to pass through the Pipol Konek bandwidth. There is also a possibility that cable operators would invest anew for prepaid Wi-Fi access.

Community Managed Network System

Presenter: Dr. Roel Ocampo, UP College of Engineering

In his brief presentation, Dr. Ocampo emphasized the tradition of *bayanihan* as a core principle in the community-managed network system. The UP College of Engineering made a study from the technical, economic and social points of view in building small private connectivity in an area within UP campus in Diliman. He said that the project dealt with pooling resources and sharing the privately paid DSL with strangers as a way of providing free Wi-Fi. The mechanism had to ensure though that sharing the bandwidth does not slow down the individual subscriber's own use of internet. Dr. Ocampo encouraged the DICT to entertain the idea of a similar model which he said is also happening in Spain, Argentina, India, and Mexico.

The Village Base Station: Connecting Communities through Mobile Networks (COCOMONETS)

Presenters: Ms. Claire Barela and Prof. Josephine C. Dionisio, UP Diliman

Prof. Josephine Dionisio began their presentation by clarifying that COCOMONETS (see Annex 12) is a partnership between the UP College of Engineering (CE) for the technical aspect and the College of Social Sciences and Philosophy (CSSP). CE is in charge of technical customization to fit into the needs of the community managed and sustained framework. She added that CSSP is in charge of ensuring that the technology is appropriate, that it will redound to the envisioned social development of the area.

Prof. Dionisio highlighted the importance of partnership, which is a key factor in setting up the village base station. Through partnerships, she mentioned the following gains that they were able to achieve:

- **Reduce the number of permits and expedited the process**. To be able to do this, they assigned one person solely for securing of permits.
- **Ensure sustainability of the project**. Prof. Dionisio said that it required educating the members of the cooperative on the business side of the project to ensure its sustainability. Presently, there are businesses in the community related to the mobile access – selling of loads, mobile phone accessories, phones, and repair shops. She said that these sources of additional income for the community provides the foundation for sustaining the project, especially because many of them have stake in the project.
- **Access to sites**. A site in one barangay is owned by an individual who wanted the project to pay for infrastructure installation. The mayor studied the law and used an article in the LGC to be able to allocate land use for the project, explained Prof. Dionisio. She explained that this is one of the key outcomes of the partnership that the project was able to establish.

Half-way into their presentation, Prof Dionisio noted that COCOMONETS can only provide call and text; but it can be a spring board for internet service and as a conduit to reach the last mile. From the project's experience, Prof. Dionisio pointed out that women are the ones taking charge of the project;

they were the ones attending the training. She said that the women are not afraid of technology for areas near and far from Metro Manila; they are the ones maintaining the solar power.

Understanding the community is another key factor to ensure technological fit. Prof. Dionisio cited Aurora, a typhoon prone area, as a case in point. To ensure that the tower will not get damaged during typhoon, they set up a one that can easily fold up like an umbrella.

Moreover, the Level of unity and organizational cohesiveness is another key factor with regard to priorities in decision-making. Prof. Dionisio related that during typhoon Ompong, two communities reacted differently to the situation. The first community, recognizing that communication is vital during the situation, did not fold up the tower. The other community folded the tower to keep it safe. The project learned that cohesiveness of the organization is decisive – the more cohesive the organization, the more that they are open to communication and the more that they are able to make decisions – such as risking the tower to keep the communication during calamity. The other community is just concerned about personal accountability instead of the needs of the community.

The project had to partner with Telco to keep up with the timeline. UP is trying to set up a dialogue with DICT to help them in the advocacy to propose for spectrum allocation that would provide a more enabling environment not only for SMEs but also for community-managed enterprise. Access to frequency and license is one hurdle.

They are also supportive of going beyond commercial provision on access to communication. While it also has to be economically or commercially viable for the stakeholder, it has to be clear as well in its social service component in the arena of similar initiatives. This is referred to as social enterprise – providing service, not just for profit.

According to Prof. Dionisio, COCOMONETS has a social impact research component to cull the lessons from the experience and see how it can be replicated. This will have a quantitative and qualitative type, the first one for the social network expansion and the latter to determine how peoples' lives have changed since the towers were put up.

After the presentation, some participants asked questions. Below are the answers provided by Prof Dionisio and Ms. Barela:

- On capital expenditure (CAPEX) - Since the source of power is solar as the initial CAPEX, there is no recurring costs. During continuously raining days, the LGU agreed to tap on their power;
- On VSAT cost - The site is connected to a server where they pay around PHP 20,000 a month for VSAT (around USD 400).
- On project collaborators - The project is funded by CHED and the procured equipment were issued to UP. UP signed the acceptance receipt (ARE). After the project, it would be transferred to the LGU who will in turn have the responsibility and accountability for the equipment. As an indicator of the willingness, one barangay passed a resolution allocating an amount for the repair and maintenance of the equipment even prior to the transfer.
- On LTE - There is an ongoing research on the possibility of LTE from the current 2G.

After the quick open forum, Mr. Garrity shared their work with Orange in West Africa. The tower cost USD 200,000 but is now lowered to USD 10,000. On his question regarding Wi-Fi deployment, Prof. Dionisio explained that this does not have to be done by UP itself. There is a mother MOA between UP and the LGU, and a child MOA between the LGU and the community. Engr. Toledo said that they will try to put up mPOP capitalizing on the existing tower.

As a final concern, Atty. Patula asked about the community development process to make them receptive and capable of handling the project. Prof. Dionisio said that the area is difficult to reach and for safety purposes, they can only go there in certain times of the year. It usually takes six months to prepare, coinciding with the acquisition of permits and equipment. Some areas are declared as ancestral domain. The research team had to secure NCIP permit. It helped if it is a government-initiated project, after a year – otherwise, it could have been longer.

Immediate Next Steps

After the session on other internet service providers and alternative models, Dr. Recio reminded the participants that one key expectation raised the previous day is the listing down of immediate next steps after the workshop. He said that some of these steps were already identified in the previous sessions. Mr. John Garrity then shared for him these critical next steps include: 1) Finalizing the project document; 2) Selecting priority sites; 3) Getting in touch with FICTAP and other players; 4) Sharing of DICT data to UNDP. Engr. Toledo and other DICT Team members agreed that these are the things they will work on after the workshop.

RAMDAM Sampling

Dr. Recio asked representatives from both UNDP and DICT to share their general feeling about the workshop. On behalf of DICT, Engr. Toledo expressed his confidence that the partnership with UNDP can come up with a lot of numbers. He said that the bottom line of the partnership revolves around the government's limitations concerning procurement processes. Since the UNDP does not have to go through the Philippine government's procurement system, he noted that the UNDP is in a better position to help in expediting the project implementation.

On behalf of UNDP, Mr. Garrity shared that the two-day workshop provided them with a lot of opportunities. He shared the feedback that he shared with his UNDP colleagues that the two-day session has been fruitful. The UNDP staff appreciate the candid feedback from DICT staff as well as the amount of work and all the efforts that they have put into the project. He also thanked DICT for trusting the UNDP to do the project. He ended by saying he felt that there is now a real partnership building between the two agencies.

Workshop Synthesis

Dr. Redento Recio

Dr. Recio began his synthesis (see Annex 14 for his slides) by reviewing the workshop objectives, which included the following: a) to level off on the participants' understanding of the Pipol Konek Program; b) to get them familiar with the project's purpose, objectives, design and features; and to facilitate discussions on building strong support, deepening stakeholder engagement, and expanding areas for

synergies**.** He then framed the topics in the two-day session using four key themes: (1) recognizing the context and realities affecting the Pipol Konek project implementation; (2) revisiting the direction and parameters of the project; (3) determining the key actions and measures to make sure that program goals are achieved; and (4) sharpening the needed tools for successful implementation. (For a copy of the synthesis presentation, please refer to Annex_). This can be better summed up in the diagram below.

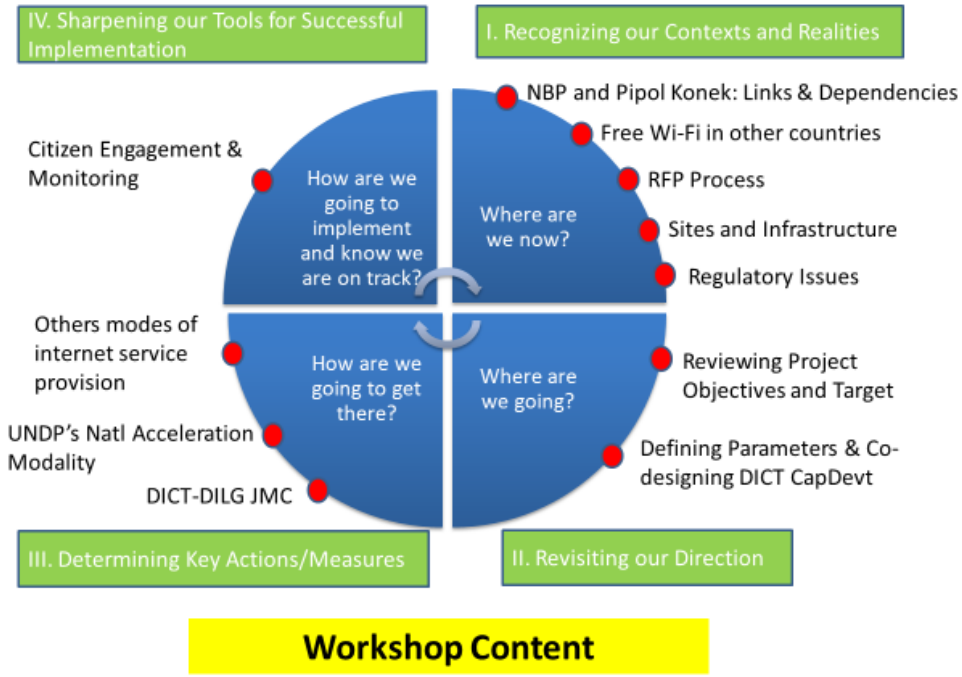


Figure 8. The workshop content as situated in key project management cycle components

The first part focused on understanding the details of Pipol Konek project – its goals, targets, level of implementation, and the challenges that impede its progress. It also included the aim of the UNDP-DICT partnership on Pipol Konek: to fast-track the free Wi-Fi installation nationwide. The main targets revolve around the provision of internet services in more than 6,000 public places nationwide and the capacity development of citizens who will monitor the delivery and installation of internet connection.

With respect to the realities affecting Pipol Konek, Dr. Recio mentioned the following challenges: a) addressing procurement issues – failure of bidding, lack of capacities, contract implementation delays; b) securing supplier permits; c) navigating local political dynamics and regulatory issues; d) resolving the ISPs' dependency on big Telcos and the missing key network components; e) selecting sites; f) meeting the bandwidth requirements; g) exploring other financing arrangements and partnership modalities; h) paying attention to data and privacy concerns

Figure 9. Dr Redento Recio, the workshop facilitator, synthesizing the highlights of the two-day workshop.

To address the abovementioned challenges, some key steps were considered: a) prioritizing LGUs receptive to partnership; b) exploring subsidy for CAPEX & OPEX using voucher (Wi-Fi4EU model); and c) developing participatory 'requirement assessment tool' for site selection & prioritization

Capacity development needs on three areas to be in place to ensure that targets will be met. One area that needs capacity development is providing an enabling environment that will smoothly fulfill Pipol Konek. This includes review of Wi-Fi policies, signing of JMC with CHED on Wi-Fi in SUCs, and IT security policy. Organizational capacity building such as network integration and participatory assessment tool were also identified. In terms of individual capacity development, some needs identified were the vendors' training and project and network design seminar. (For a detailed list of capacity needs, please refer to Annex _).

Moving on to the key actions, Dr. Recio pointed out the main outputs from the workshop. These included: a) operational framework for site acceleration; b) draft DICT-DILG joint memorandum circular, and c) citizens' checklist for Pipol Konek monitoring. He also shared some key lessons emerging from the presentations of alternative modes of internet service provision. Based on the FICTAP experience, Dr. Recio noted that it is crucial to address the following issues: right of way, lack of backhaul, missing middle to last mile connections, and investment & payment issues. When it comes to community-managed networks, as captured in the 'people-driven Pipol Konek' and VBTS-COCOMONETS presentations, three factors are critical: a) the maintenance community cellular networks, b) sustained LGU partnership; and c) the role of community groups and cooperatives.

Dr. Recio ended his synthesis by reminding everyone that all the key workshop outputs - summary of issues, needs assessment, site acceleration framework, Citizens' checklist, draft DICT-DILG Joint Memorandum Circular - should contribute towards achieving three long-term goals: digital inclusion, local economic growth, and citizen participation.

ANNEXES

Annex 1. Workshop Flow
Annex 2. Connectivity Web Instructions
Annex 3. NBP-Pipol Konek Implementation Strategies
Annex 4. Free Wi-Fi Programs across the World
Annex 5. Pipol Konek Procurement Process
Annex 6. Defining Parameters and Co-Designing DICT Capacity Building Efforts
Annex 7. Day1 Synthesis
Annex 8. *Ramdam* Sampling Participants' Feedback
Annex 9. Proposed Responsibilities of the DICT
Annex 10. Proposed Responsibilities of the DILG
Annex 11. Opportunities and Modes of Providing Internet Service: The FICTAP Experience
Annex 12. The COCOMONETS Project
Annex 13. Workshop Synthesis